DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

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1		PANEL INTRODUCTION
2	Q.	Would members of the Environment, Health and Safety Panel
3		("Panel") please state their names and business
4		addresses?
5	Α.	Venetia Lannon, 4 Irving Place, New York, NY 10003 and
6		Anita Ma, 31-01 20 <sup>th</sup> Avenue, Astoria New York 11105.
7	Q.	By whom are you employed and in what capacity?
8	Α.	(Lannon) I am employed by Consolidated Edison Company of
9		New York, Inc. ("Con Edison" or the "Company") where I
10		hold the position of Vice President, Environment, Health
11		and Safety ("EH&S").
12		(Ma) I am employed by Con Edison where I hold the
13		position of Director, EH&S Field Services & Remediation.
14	Q.	Please briefly outline your educational and business
15		experience.
16	Α.	(Lannon) I joined Con Edison in April 2021. Prior to
17		joining the Company, I was Vice President at Matrix New
18		World Engineering, with market development
19		responsibilities including climate adaptation services
20		with a focus on nature-based systems for waterfront
21		facilities, green infrastructure, and renewable energy.
22		Before joining the private sector, I spent 20 years in

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1 public service, most recently as former Governor Cuomo's 2 Deputy Secretary for the Environment. In this capacity, I 3 served as environmental policy advisor to the Governor 4 and his cabinet and oversaw the operations of the state's environmental agencies, including the Department of 5 Environmental Conservation ("DEC"), the Office of Parks б 7 Recreation & Historic Preservation, the Environmental 8 Facilities Corporation and the Adirondack Park Agency.

9 Previously, I was appointed by former Governor Cuomo 10 as Regional Director for the DEC, overseeing 200 staff 11 and all aspects of the DEC's work in New York City. 12 Prior to that, I held several positions working for the City of New York, as a Senior Vice President of the New 13 14 York City Economic Development Corporation ("EDC") and as 15 Deputy Director of the Recycling Bureau at the New York 16 City Department of Sanitation, was responsible for the 17 composting program. I hold a Bachelor of Arts degree from Vassar College and a Master's degree in Public 18 Administration, focusing on environmental policy, from 19 20 Columbia University.

(Ma) I joined Con Edison in 1989 and have held positions
of increasing responsibility in a variety of operating
and support positions including: Management and Assistant

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1 Engineer Intern, Associate Engineer A in Construction, 2 System Engineer at Astoria Generating Station, Account 3 Executive in Manhattan Energy Services, Engineer in 4 Energy Management, and various positions within Electric 5 Operations including General Manager in Central Energy Services and General Manager in Manhattan Electric б 7 Operations. In November 2016, I assumed the duties of 8 Director, EH&S Field Services. In May 2020, EH&S 9 Remediation merged with EH&S Field Services. Since May 10 2020, I have responsibilities for both departments, which include Laboratory Services, Response & Planning, 11 12 Asbestos Response and the Company's Site Investigation 13 and Remediation ("SIR") Program. The added 14 responsibility for EH&S Remediation in 2020 includes the 15 management of a diverse set of remediation programs, 16 including manufactured gas plant and manufactured gas 17 storage holder ("MGP") Sites, Superfund Sites, Underground Storage Tanks, Appendix B Sites (Historic 18 19 Fuel and Dielectric Oil Spills), and real estate sites. 20 I hold a Bachelor of Science degree in Mechanical Engineering from Columbia University and a Master of 21 22 Science degree in Management from Rensselaer Polytechnic 23 Institute.

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1	Q.	Have any members of the Panel previously submitted
2		testimony to the New York State Public Service Commission
3		("Commission")?
4	Α.	(Lannon) No.
5		(Ma) No.
6		SUMMARY OF TESTIMONY
7	Q.	Please summarize your testimony.
8	Α.	Our testimony focuses on the following EH&S-related
9		activities and their projected costs: SIR Program
10		activities that are mandated by law, agreements,
11		regulations, consent orders, permit requirements, and
12		environmental due diligence. In particular, we describe
13		Con Edison's program for the investigation and
14		remediation of MGP Sites. We also discuss Superfund
15		sites for which Con Edison is responsible, as well as the
16		requirements of the Appendix B section of the November
17		1994 Consent Order between Con Edison and the DEC, as
18		modified by the December 2006 Consolidated Consent Order
19		("Appendix B"). In addition, we address the Resource
20		Conservation and Recovery Act ("RCRA") corrective action
21		requirements of the hazardous waste management facility
22		operating permit that was initially issued by the DEC in
23		May 1994 and subsequently renewed in March 2001 and July

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1 2008 for the Company's Polychlorinated Biphenyl ("PCB")/Hazardous Waste Storage Facility at its Astoria 2 3 Site. The Company has submitted a permit renewal and it 4 is under review by the DEC. We discuss underground storage tank ("UST") sites, which the Company must 5 address under Federal and New York State regulations. б We 7 also discuss other sites with known or potential 8 contamination that Con Edison is addressing. In total, 9 Con Edison expects to spend approximately \$61,870,000 for 10 these SIR Program activities during the Rate Year 11 (January 1, 2023 through December 31, 2023) and 12 \$45,728,000 during the Linking Period (the five quarters 13 from October 1, 2021 through December 31, 2022). We 14 explain the steps the Company takes to control and 15 mitigate its SIR Program costs, and we detail the process 16 for site investigation and remediation, including the 17 development of work plans, Company and contractor 18 staffing for the Company's SIR Program, and the Company's 19 internal controls. We also address the Company's compliance with the Commission's rate case filing 20 21 requirements. 22 SIR PROGRAM

23 Q. Please provide an overview of Con Edison's SIR Program.

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1 Α. Con Edison has a comprehensive ongoing program for 2 managing its SIR sites and verifying that required 3 remedial response measures (investigations followed by 4 any necessary remedial action) are properly performed for sites that have been contaminated by past releases of 5 hazardous wastes and hazardous substances, including б 7 petroleum products, from Con Edison's and its predecessor 8 companies' facilities and/or operations. This program 9 encompasses the following types of sites, each of which 10 is discussed more fully below: (1) MGP Sites; (2) 11 Superfund Sites; (3) oil and dielectric fluid spill sites 12 subject to the investigation and cleanup requirements of 13 Appendix B; (4) the areas of the Astoria Site subject to 14 the RCRA corrective action requirements imposed under the 15 DEC's hazardous waste management facility operating 16 permit for the Company's PCB/Hazardous Waste Storage 17 Facility at that site; (5) UST Sites; and (6) other sites 18 with known or potential contamination that Con Edison is 19 addressing and that do not fall under the aforementioned 20 five programs.

Q. Please describe the Company's SIR programs and projects.
A. The Company's SIR programs and projects are described in
the sections of our testimony concerning MGP Sites,

б

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1		Superfund Sites, Appendix B Sites, the Astoria
2		PCB/Hazardous Waste Storage Facility, UST Sites, and
3		Other Sites.
4	Q.	Are the costs and schedules presented in your testimony
5		and exhibits for the Company's SIR programs subject to
6		change?
7	Α.	Yes. They are projections based upon the best
8		information available to the Company at the time they
9		were made regarding the extent of the investigation and
10		remediation likely to be required for the Company's SIR
11		sites. As is the case for any projection, the SIR-
12		related costs and schedules presented in our testimony
13		and exhibits are subject to change due to various types
14		of contingencies, including: variation between
15		anticipated and actual remedial investigation ("RI") $% \left( $
16		results; the discovery of different or more extensive
17		contamination during pre-design investigations ("PDIs")
18		or remedy implementation; delays in applicable regulatory
19		review/approval processes; changes to anticipated
20		remedies due to regulatory agency, community, or affected
21		landowner concerns and changes in projected future land
22		use; delays in obtaining required federal, state, and/or
23		local agency permits for remedy implementation; access

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1		and cooperation issues with affected property owners for
2		the implementation of investigation or remediation
3		activities; and unanticipated field conditions and/or
4		force majeure events, including currently unanticipated
5		delays that could stem from the ongoing COVID-19
6		pandemic. The Company internally reviews and evaluates
7		its projected schedules for its SIR programs at least
8		annually and more frequently for active projects. The
9		Company's SIR cost projections are reviewed internally
10		and updated as necessary, but at least quarterly.
11		MGP SITES
12	Q.	Before describing Con Edison's investigation and
13		remediation efforts for its MGP Sites, please provide a
14		brief background on Con Edison's and its predecessor
15		companies' former MGPs.
16	A.	MGPs provided energy in the form of combustible gases of
17		varying composition to municipal street lighting systems
18		and to homes and businesses in cities and towns across
19		the more densely populated regions of the United States.
20		In the case of the areas served by Con Edison and its
21		predecessor companies, MGPs operated from the late 1820s
22		through the early 1960s. The earliest of these plants
23		produced illuminating gases from whale oil and/or rosin.

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1 The plants constructed during and after the 1830s 2 converted coal (oven gas) or a combination of coke or 3 coal, oil and water in the form of steam (carbureted 4 water gas) into a gas product that could be used for 5 lighting, cooking, and heating. There were more than 250 MGPs in New York State and an estimated 3,000 to 5,000 in б 7 the United States prior to these plants becoming obsolete 8 due to the construction of natural gas pipelines and 9 large electric generating stations. Holder stations were 10 used for the storage of manufactured gas that had been produced at MGPs. They consisted of large storage tanks 11 12 (holders) of varying composition and design.

Q. What are the present environmental concerns related toMGP Sites?

Manufactured gas production was a complex process that 15 Α. 16 entailed the handling and storage of significant 17 quantities of feedstock materials, by-products, and 18 residuals that contain organic and inorganic chemical 19 constituents that are now considered to be hazardous 20 substances under federal and New York State laws and 21 regulations and that, when released to soil, groundwater, 22 or waterways, may pose a threat to human health or the 23 environment. The materials of primary concern at MGP

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1 Sites include carbureting oils, scrubber oils, coal tar, 2 coal tar-related emulsions and sludges, and gas 3 purification wastes. At manufactured gas storage holder 4 sites, these materials include oils (which were used in 5 hydraulic systems as lubricants or to maintain airtight seals between holder tank bases, bellows and shells) and б 7 coal tar (which at times condensed out of stored 8 manufactured gas or was used to maintain airtight seals 9 between holder tank bases, bellows, and shells).

Q. Please describe the DEC's level of activity regarding MGP
 Sites.

12 Α. The DEC continues to require New York State's investor-13 owned utilities to investigate and, when necessary to 14 protect human health and the environment, undertake 15 remedial response actions for the sites of their or their 16 predecessors' former MGPs. Most New York State utilities have entered into administrative consent orders ("ACOs"), 17 or cleanup agreements with the DEC under which the 18 19 utilities have agreed to address their MGP Sites. In 20 some cases (such as Con Edison), these ACOs or cleanup agreements cover multiple sites. Under the DEC's MGP 21 22 program, investigations and/or remedial action work have 23 been undertaken or are planned at more than 200 former

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MGP Sites across the State. The DEC's MGP program is 1 grounded in a federal initiative to address former MGP 2 3 Sites throughout the country. The New York State 4 Department of Health ("DOH"), which works with the DEC in evaluating the results of MGP Site investigations and 5 determining the need for remedial response actions for б 7 them, views the primary goal of these investigations as 8 assessing potential human exposure to MGP-related 9 contaminants.

# Q. Please provide the background for Con Edison's MGP SIR Program.

12 Α. Con Edison and its predecessor companies formerly 13 produced gas and maintained storage holders for 14 manufactured gas at 51 MGP Sites located throughout 15 Manhattan, the Bronx, Westchester County, and western 16 Queens, New York. Many of these sites are now owned by parties other than Con Edison and have been redeveloped 17 18 by their new owners for other uses, including schools, 19 residential and commercial developments, public parks, 20 and hospitals. The DEC requires the Company to investigate and, if necessary, develop and implement DEC 21 22 and DOH approved remedial action plans for all of its and 23 its predecessor companies' confirmed MGP Sites, which

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1		presently include 34 MGP Sites and 17 storage holder
2		sites. Of these 51 sites, only 16 are still owned in
3		whole or in part by the Company. In addition, most of the
4		sites have been subdivided into separate properties, with
5		different owners. As a result, the 51 sites currently
6		comprise more than 150 different properties.
7	Q.	Has a listing been prepared of the former MGP Sites that
8		the DEC is requiring Con Edison to investigate and, if
9		deemed necessary by the DEC and/or the DOH, to implement
10		remedial action plans?
11	A.	Yes. The table entitled "CONSOLIDATED EDISON COMPANY OF
12		NEW YORK, INC. MGP SITE LISTING" provides a listing of
13		those sites, the current or contemplated use of the
14		sites, and the required investigation and remediation
15		activities that have been completed for these sites as of
16		December 31, 2021.
17	Q.	Was this exhibit prepared under your direction or
18		supervision?
19	A.	Yes, it was.
20		MARK FOR IDENTIFICATION AS EXHIBIT (EHS-1)

Q. Please describe the Company's agreements with the DEC forthe cleanup of the Company's former MGP Sites.

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1 Α. On August 15, 2002, Con Edison entered into a cleanup 2 agreement with the DEC under the DEC's Voluntary Cleanup 3 Program ("VCP") to conduct investigations and, if 4 necessary, DEC/DOH-approved remediation at 45 of the 51 MGP Sites listed in Exhibit (EHS-1) (the "2002 5 Agreement"). Of the remaining six sites listed in that б 7 exhibit, two sites were added to the 2002 Agreement after 8 the Company had entered into the 2002 Agreement - East 9 14<sup>th</sup> Street Gas Works (Stuyvesant Town) Site in January 10 2003 and Hastings-on-Hudson Gas Works Site in September 11 2007. The remaining four sites are covered by either individual cleanup agreements with the DEC (Tarrytown and 12 13 White Plains Gas Works Sites), an individual DEC consent 14 order (Farrington Street Holder Station Site), or the 15 RCRA corrective action requirements of the previously 16 discussed DEC hazardous waste management facility 17 operating permit (Astoria Site).

Due to the large number of sites covered by the 2002 Agreement, the DEC and the Company agreed on a prioritization strategy under which MGP Sites that were the location of schools or residential properties would be investigated first. Other priority sites besides schools and residential properties can and have surfaced

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primarily as a result of proposed redevelopment projects
 by present property owners or subsurface construction
 activities. The Company and the DEC reassess these
 priorities as sites are completed.

5 In 2017, the DEC notified the Company that, as an administrative matter, all cleanup agreements under the б 7 VCP statewide, including the 2002 Agreement, would be 8 terminated in 2018 and transitioned into an alternative 9 DEC oversight program. As a result, Con Edison entered 10 into an Order on Consent and Administrative Settlement effective July 23, 2018 with the DEC ("2018 Agreement"). 11 12 As with the 2002 Agreement, the 2018 Agreement covers the 13 investigation and, if necessary, DEC/DOH approved 14 remediation of the Company's MGP Sites. Those sites for 15 which Con Edison successfully completed a remedy and 16 received a No Further Action ("NFA") determination from 17 the DEC under the 2002 Agreement are not included in and 18 are not affected by the 2018 Agreement. Similarly, MGP 19 Sites, or portions of sites, that had been taken into the 20 New York State Brownfield Cleanup Program ("BCP") by individual property owners or were otherwise covered by a 21 22 program other than the 2002 Agreement, are not included 23 in the 2018 Agreement. For those sites with ongoing

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investigation and remediation work, all prior DEC
 approvals of work plans or work completed under the 2002
 Agreement remain valid. The table in Exhibit \_\_ (EHS-1)
 identifies the current DEC oversight program for each MGP
 Site or portion of an MGP Site.

What is the current status of Con Edison's MGP Program? б Q. 7 Α. Because of the significant progress Con Edison has made 8 investigating and, when necessary, remediating its MGP 9 Sites, of the 47 MGP Sites covered under the 2002 Agreement, only 13 MGP Sites, portions of 6 MGP Sites, 10 11 and 3 offsite areas (associated with the East 21st Street 12 Site, Pelham Site, and Hunts Point Site) remain to be completed under the 2018 Agreement. Under other 13 14 regulatory programs described earlier in this testimony, 15 2 additional MGP Sites remain in the Company's 16 Remediation Program (Farrington Street Holder Station under its own Consent Order and Astoria MGP under the 17 RCRA program). In addition, 2 MGP Sites (Hunts Point MGP 18 19 (onsite only) and Ludlow MGP) and a portion of a third 20 MGP Site (E. 11th Street MGP) were transferred out of the 21 2002 Agreement and into the BCP to be addressed by the 22 property owners.

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1		The status of each of Con Edison's MGP Sites as of
2		November 9, 2021 is summarized in an exhibit entitled,
3		"CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
4		PROJECTION OF MGP SITE ACTIVITIES".
5	Q.	Was this exhibit prepared under your direction or
б		supervision?
7	Α.	Yes, it was.
8		MARK FOR IDENTIFICATION AS EXHIBIT (EHS-2)
9	Q.	What does this exhibit show?
10	Α.	As discussed above in this testimony and indicated in
11		Exhibit (EHS-2), Con Edison has made significant
12		progress in investigating and, when found to be
13		necessary, remediating its 51 MGP Sites. To date, based
14		on investigations performed and, as necessary,
15		remediation, the DEC has issued site-wide NFA
16		determinations for 26 MGP Sites (one of which was
17		completed under the BCP by the property owner), NFA
18		determinations for 2 onsite areas, and NFA determinations
19		for portions of 5 sites. Long-term operation,
20		maintenance and monitoring of remedies by the Company
21		will be ongoing at 16 of the sites or portions of the
22		sites (encompassing 72 properties) that have received NFA
23		determinations. For two additional sites (Rye Gas Works

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and Hastings-on-Hudson Gas Works - 8 Washington Avenue), 1 the DEC's review and approval of the Environmental 2 3 Easement application and Site Management Plan ("SMP"), 4 already submitted by the Company, are anticipated to be 5 the final steps remaining prior to NFA determinations. The investigation and, if necessary, remediation of б 7 the outstanding 15 MGP Sites, 3 offsite areas, and 8 portions of 6 sites in the Company's Remediation Program 9 (collectively encompassing 68 properties) will take 10 several years to complete. Through the end of December 31, 2021, at a minimum, site characterization study 11 ("SCS") or RI work plans, covering all or portions of the 12 13 remaining MGP Sites have been submitted to the DEC.

14 Remediation work at sites where such action is deemed 15 necessary by the DEC and DOH based on the results of the 16 investigation work performed, will take longer to 17 complete. At some sites, the remediation may not be 18 completed until after the buildings and structures 19 present on the sites are demolished.

The status of the required SIR activities for the 68 properties is as follows: site characterization studies or RIs are ongoing at 28 properties and remediation is currently required at 22 properties, including pre-design

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1		investigations and design activities, with remediation
2		commenced at Pemart Avenue Former MGP. The remedial
3		action at the Pemart Avenue Former MGP Site Operable Unit
4		1 ("OU-1") began in the fourth quarter of 2021 and is
5		expected to be completed mid-2022. Establishment of
б		institutional controls (deed restrictions or
7		environmental easements and site management plans) are
8		currently necessary for 18 properties.
9	Q.	What specific MGP Site investigation and remediation
10		activities does the Company expect to conduct during the
11		Rate Year?
12	Α.	During the Rate Year, the Company plans to: (1) conduct
13		supplemental investigations at several sites where
14		additional information is required to characterize and
15		delineate MGP-related or gas holder station-related
16		contamination, (2) proceed into the remediation phase at
17		those sites where investigations have found that remedial
18		action is warranted and sufficient information exists to
19		determine the appropriate remedy, and (3) complete site
20		characterization studies at one site where such
21		investigations have not yet been completed.
22		Additionally, we expect to conduct remedial action
23		planning activities for several other sites. Exhibit

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EHS-2 identifies the current projection of activities at
 each of these MGP sites.

3 Do you expect the Company to continue to conduct similar Ο. 4 MGP Site investigation and remediation activities during 5 the Linking Period, Rate Year and two subsequent years? Yes, but it is expected that the number of sites being б Α. 7 investigated will decrease during that period and the 8 number of sites for which remedial planning/design 9 activities or remediation work is performed will 10 increase.

11 Q. What role does the DEC play in decisions relating to the 12 scheduling of investigation and remediation activities 13 for Con Edison's MGP Sites?

14 In order to coordinate work flow and resources with the Α. 15 DEC, under the 2002 Agreement, the Company was required 16 to submit by November 15<sup>th</sup> of each calendar year for DEC 17 approval a proposed schedule for the development and 18 filing of draft investigation and remediation work plans 19 during the following calendar year. Under the 2018 20 Agreement, although not specifically required to do so, 21 the Company has submitted and plans to continue 22 submitting a proposed schedule to the DEC at least 23 annually by November 15<sup>th</sup>. The Company also submits to

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1 the DEC three-year site-specific projections of its planned activities for each of its MGP Sites, including 2 3 the MGP Sites formerly covered by the 2002 Agreement and 4 now covered by the 2018 Agreement. The projected 5 schedule for the first year is presented on a quarterly basis and the projected schedule for the second and third б 7 years is presented for the entire year. These 8 projections are also presented by work task type, such 9 as: site characterization, RI, remedial planning, and 10 remedial action implementation. The purpose of these projections is two-fold. First, they serve as a critical 11 12 planning tool for the Company so that it can proceed with its required SIR activities in an orderly manner and make 13 14 appropriate provision for the services and resources it 15 needs to meet its obligations under the 2018 Agreement. 16 Second, it provides the DEC with a workflow estimate that 17 allows the DEC to best manage its resources.

Q. Has Con Edison submitted its proposed schedule of 2022
work plan submissions and its projected schedule of MGP
site activities to the DEC for the period 2022 - 2024?
A. Yes. The Company made this submittal to the DEC on
November 9, 2021. A copy is provided as EXHIBIT \_\_ (EHS2)

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1	Q.	Has the Company prepared a table comparing the projected
2		calendar year 2021 MGP site activities specified in its
3		October 30, 2020 submittal to the DEC under the MGP
4		Agreement to the MGP Site activities actually performed
5		in 2021?
6	Α.	Yes. A copy of this table is provided as an exhibit
7		entitled, "CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
8		2021 MGP SITE ACTIVITIES AND VARIATION FROM PROJECTIONS".
9	Q.	Was this exhibit prepared under your direction or
10		supervision?
11	Α.	Yes, it was.
12		MARK FOR IDENTIFICATION AS EXHIBIT (EHS-3)
13	Q.	What does this exhibit show?
14	Α.	Exhibit (EHS-3) shows for each active MGP Site
15		covered in the projected schedule the Company submitted
16		to the DEC in 2020 for calendar year 2021 the
17		investigation/remediation activities projected in the
18		schedule, whether there was any variation or anticipated
19		variation as of December 31, 2021 from the projected
20		schedule (yes or no), and the reason(s) for any such
21		variation.

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1	Q.	What were the primary reasons for the variations between
2		the projected activities and the activities actually
3		completed during calendar year 2021?
4	Α.	Variations were due to: a third-party property owner's
5		several month delay in granting access, which has now
6		been provided and has allowed a major MGP project to
7		proceed in 2021; changes in anticipated timing for an MGP
8		remediation project to be performed at the Company's
9		Astoria facility in conjunction with a capital
10		improvement project that originally had been planned for
11		2021 and is now expected to begin in mid-2022; extended
12		timing associated with a complex permitting process for a
13		river sediments remediation project, which is now
14		expected to commence in 2022; remedial design revisions
15		that were necessary to address DEC comments, resulting in
16		an MGP remediation originally expected to start in late
17		2021 being re-scheduled to 2022; and a deed restriction
18		pending final property owner approval.
19	Q.	Has the Company discussed the schedule variations
20		identified in Exhibit (EHS-3) with the DEC?
21	A.	Yes. Based upon discussions with the DEC, it is our
22		understanding that the DEC is satisfied with the progress
23		Con Edison has made implementing the SIR activities

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1		required for its MGP Sites. Of course, the DEC may
2		comment on or recommend changes to our projected
3		activities table, in which case Con Edison will evaluate
4		the DEC's comments and recommendations and make any
5		appropriate changes.
6	Q.	What are the costs included in the Linking Period and
7		Rate Year for MGP Sites?
8	A.	The estimated costs for the Linking Period are
9		approximately \$25.0 million and for the Rate Year are
10		approximately \$41.6 million.
11	Q.	Has the Company prepared a table identifying the
12		projected MGP Program expenditures and activities during
13		the Linking Period and the Rate Year?
14	A.	Yes. A table is provided as an exhibit entitled
15		"CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. SIR
16		PROGRAM COST PROJECTIONS FOR THE LINKING PERIOD AND RATE
17		YEAR (2023)."
18	Q.	Was this exhibit prepared under your direction or
19		supervision?
20	A.	Yes, it was.
21		MARK FOR IDENTIFICATION AS EXHIBIT (EHS-4)

22 Q. What does this exhibit show?

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1	Α.	Exhibit (EHS-4) provides a summary of quarterly cost
2		projections for the Linking Period and Rate Year for each
3		Con Edison remediation program and site and a brief
4		description of the projected activities for each site
5		with projected expenditures during each of these time
6		periods, including projected expenditures and activities
7		for the MGP Sites.
8		SUPERFUND SITES
9	Q.	What types of sites are covered by Con Edison's Superfund
10		Site investigation and remediation program?
11	Α.	Con Edison's Superfund Program covers the following
12		categories of sites:
13		• Third-party-owned sites to which Con Edison shipped
14		hazardous substances or waste for treatment,
15		storage, or disposal and for which Con Edison has
16		been designated a potentially responsible party
17		("PRP") for the investigation and remediation of
18		site contamination by the United States
19		Environmental Protection Agency ("EPA"), DEC, or
20		another government environmental agency pursuant to
21		the federal Comprehensive Environmental Response,
22		Compensation and Liability Act ("CERCLA") or
23		comparable state statutes, including statutes that

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1		impose liability for the costs of investigating and
2		cleaning up oil spills;
3		• Sites formerly owned by Con Edison and for which
4		the current site owners assert claims against Con
5		Edison for investigation and remediation costs
б		pursuant to CERCLA or comparable state statutes;
7		and
8		• Sites (whether or not owned by Con Edison) at which
9		Con Edison is required to conduct cleanup work
10		because of releases of oil, dielectric fluid, PCBs,
11		or hazardous substances from its or its predecessor
12		companies' equipment, facilities, or operations.
13	Q.	What is the status of the Superfund Program?
14	A.	Con Edison has managed 31 Superfund sites under its SIR
15		Program. These include six sites for which Con Edison is
16		not part of a group of PRPs and 25 where Con Edison was
17		or presently is part of a group of PRPs. Of the six
18		Superfund Sites for which Con Edison is not part of a
19		group PRPs, the DEC has issued NFA determination for two
20		sites; remediation has been completed and an NFA is
21		expected for one site; remediation has been completed and
22		post-remediation operation, maintenance and monitoring
23		("OM&M") activities are being implemented at two sites

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1		(one of which is currently subject to a supplemental
2		investigation); and supplemental investigation is
3		expected to be conducted at one site.
4		Of the 25 sites where Con Edison is part of a group
5		of PRPs, seventeen have been closed out and are inactive
6		with no additional costs anticipated, and eight remain
7		active.
8	Q.	What are the costs included in the Linking Period and
9		Rate Year for Superfund Sites?
10	Α.	The expected costs for the Linking Period are
11		approximately \$3.1 million and for the Rate Year are
12		approximately \$4.1 million.
13	Q.	Has the Company prepared a table identifying the
14		projected Superfund Program expenditures and activities
15		during the Linking Period and the Rate Year?
16	Α.	Yes. The table provided in Exhibit (EHS-4) shows for
17		each active Superfund site covered in the projected
18		schedule the Company portion of anticipated expenditures
19		for the stated activities.
20	Q.	Please discuss the Company's anticipated investigation
21		and remediation activities during the Linking Period or
22		Rate Year for its Superfund Sites with anticipated costs
23		over \$100,000.

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1	Α.	The	following activities are anticipated during the
2		Link	ing Period or Rate Year at the Company's Superfund
3		Site	s with projected costs over \$100,000 in either or
4		both	of those periods:
5		1.	Maspeth Substation Site: Con Edison sold this site
6			in 1996. Subsequently, oil containing elevated
7			levels of PCBs was found floating on the groundwater
8			table beneath the site's former outdoor transformer
9			yard area. Con Edison began remediating PCB-
10			contaminated soil in 2005 under a Voluntary Cleanup
11			Agreement ("VCA") with the DEC, including removal of
12			PCB-contaminated soil and groundwater monitoring.
13			In January 2012, the DEC issued a limited liability
14			release to the Company, requiring continued
15			groundwater monitoring and, if necessary, oil
16			recovery, in wells located outside the former
17			substation property. During 2018, the DEC directed
18			Con Edison to undertake an additional investigation
19			and remediation related to residual non-aqueous
20			phase liquid ("NAPL") more recently detected in off-
21			site wells. In response, Con Edison conducted a
22			supplemental investigation off-site to identify
23			potential remaining preferential pathways for

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1		contaminant migration. Based on the results of this
2		investigation and DEC feedback, Con Edison will
3		perform a pre-design investigation to delineate
4		permeable soil layers and assess preferential
5		pathways for the migration of NAPL. The results of
б		this investigation will be used to identify and
7		evaluate remedial alternatives and enable the DEC to
8		select a remedy to address the NAPL and associated
9		impacted soils in the off-site area. Until the DEC
10		selects a remedy, Con Edison will continue to
11		conduct routine groundwater monitoring and
12		reporting. The Company estimates that it will spend
13		approximately \$150,000 during the Linking Period for
14		implementation of the pre-design investigation and
15		remedial selection and design process. If the DEC
16		remedy selection and the design proceed on the
17		currently anticipated timetable, the Company
18		anticipates spending approximately \$275,000 during
19		the Rate Year to implement the remedy and perform
20		routine groundwater monitoring and reporting. Upon
21		receipt of an NFA determination from the DEC, the
22		monitoring wells will be decommissioned.
23	2.	Gowanus Canal - On March 2, 2010, the EPA added the

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1 Gowanus Canal in Brooklyn (the "Canal") to its 2 National Priorities List ("NPL") of Superfund sites. 3 Before the site was listed, in August 2009, Con 4 Edison received an EPA Notice of Potential Liability 5 and Request for Information regarding its and its predecessors' operations at three facilities that б 7 are located adjacent to or near the 1.8 mile Canal: 8 the Third Avenue Yard, the Gowanus Substation and 9 the Gowanus Gas Turbines Site (which the Company 10 sold in 1999). The EPA has identified 35 parties, 11 including Con Edison (which EPA has indicated has 12 facilities that may be a source of PCBs at the site) and four federal entities, as PRPs. 13

14 In September 2013, the EPA issued a Record of 15 Decision ("ROD") that documented the agency's final 16 decision on the scope and type of remediation 17 required. EPA selected a remedy for the site that includes dredging and disposal of some contaminated 18 19 sediments and stabilization and capping of 20 contamination that will not be removed. At that 21 time, EPA estimated the cost of the selected remedy 22 to be approximately \$506.1 million (and has 23 indicated the actual cost could be significantly

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1 higher).

In 2014, the EPA issued orders to Con Edison 2 and the other PRPs (with the exception of the 3 4 federal PRPs) to be jointly and severally 5 responsible for the performance of the remedial 6 design, which is currently estimated to cost 7 approximately \$112 million. EPA stated that it 8 expected National Grid to perform the remedial design under the order and for the other PRPs, 9 including Con Edison, to help fund the work. 10 In 2019, 20 PRPs, including Con Edison, 11 12 concluded a binding allocation process before a 13 neutral allocator to determine each PRP's share of 14 the liability for the remedial design costs on a 15 confidential basis. Because the final remedial 16 design allocation percentage assigned to the Company 17 during this binding allocation process is lower than 18 the interim share that the Company had been funding 19 since 2015, the Company was credited approximately 20 \$3,862,000. This "true-up" credit was provided to 21 the Company during the period 2019 - 2021 in the 22 form of credits against biennial remedial design 23 assessments and cash refunds. Going forward, Con

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1 Edison anticipates receiving assessments for the 2 remedial design work based on its final allocated 3 share. 4 In 2019, EPA issued a Unilateral Administrative Order (the "Bulkheads UAO") to 25 5 PRPs, including the Company, which was subsequently 6 7 amended and requires the PRPs to: (1) design and 8 perform bulkhead structural support work, including 9 associated access dredging, along certain portions 10 of the upper reaches of the Canal; and (2) complete 11 the design work for bulkhead structural support along certain portions of the middle part of the 12 13 Canal. The EPA has estimated that implementation of 14 this Bulkheads UAO will cost approximately \$25 15 million, although the actual cost may be higher. 16 In 2020, the EPA issued a Unilateral

17Administrative Order (the "RTA-1 UAO") that requires18six PRPs, including the Company, to initiate the19remedial action work in the upper reaches of the20Canal (in an area designated as Remediation Target21Area 1 ("RTA-1")) following the completion of the22bulkheads upgrade in RTA-1. The EPA currently23estimates that this work will cost approximately

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1	\$125 million, although the actual cost may be
2	higher, and require about 30 months to complete. In
3	November 2020, the PRPs began implementation of the
4	work required under this order. Cleanup in other
5	areas of the Canal is not addressed by this order.
б	Going forward, Con Edison expects to
7	contribute to the remedial design work based on the
8	final remedial design allocation percentage assigned
9	to the Company through the binding allocation
10	process in 2019. With respect to the remedial
11	action work (including under the Bulkheads UAO and
12	RTA-1 UAO), there has been no formal allocation
13	process or agreement reached to date regarding the
14	Company's allocation percentage. In 2021, the
15	Company contributed to the remedial action costs
16	based on its 2019 remedial design allocation
17	percentage and may continue to do so going forward
18	until such time that it has a basis to do otherwise.
19	Therefore, at this time, Con Edison projects that it
20	will incur costs during the Linking Period and the
21	Rate Year for its allocated share of the remedial
22	design costs, a share of the remedial action costs
23	based on its remedial design allocation percentage,

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1		and costs for ongoing outside consultant and legal
2		support. During the Linking Period and Rate Year
3		the Company estimates that it will incur
4		approximately \$2.3 million and \$3.5 million,
5		respectively.
6	3.	Newtown Creek - Newtown Creek is a 3.8 mile long
7		water body on the border between Queens and
8		Brooklyn. It is a tributary of the East River and
9		itself includes five branches (or tributaries) along
10		its 3.8-mile reach. The EPA designated Newtown
11		Creek a Superfund site in September 2010 to address
12		extensive pollution stemming from a long history of
13		adjacent industrial operations (many involving oil
14		and gas refineries and petrochemical businesses,
15		among other historical industries).
16		To date, the EPA has identified 20 PRPs with
17		respect to the site, including Con Edison. The
18		Newtown Creek PRP Group, consisting of Phelps Dodge,
19		Texaco, BP, National Grid, and ExxonMobil, has been

20 conducting the RI and Feasibility Study ("FS") of 21 the site under EPA's oversight pursuant to an 22 Administrative Settlement Agreement and Order on 23 Consent with the EPA since July 2011.

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1	In May 2012, Con Edison received a request for
2	information from the EPA under Section 104(e) of the
3	federal Superfund statute (CERCLA) requesting
4	information concerning Company facilities and
5	activities within 1,000 feet of Newtown Creek and
6	its tributaries that may have resulted in spills or
7	releases of hazardous substances into the Creek.
8	The information request identified two Con Edison
9	facilities of interest: the "11 <sup>th</sup> Street Conduit
10	Facility" (a utility tunnel that traverses the
11	Creek), and the Brooklyn head house of the tunnel.
12	The Company submitted its response to the EPA's
13	information request on October 5, 2012. The EPA
14	served similar information requests on dozens of
15	other parties at that time.
16	In June 2017, Con Edison, along with 7 other

17named parties, received a Notice of Potential18Liability pursuant to CERCLA from the EPA. EPA's19Notice generally alleged that Con Edison may be20liable for releases of hazardous substances from the2111<sup>th</sup> Street Conduit Facility and Brooklyn head22house, and from other electrical distribution23infrastructure located within the Newtown Creek

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1	sewershed. Following receipt of the EPA notice
2	letter, the Newtown Creek PRP Group contacted Con
3	Edison and other named parties regarding possible
4	participation in the RI/FS for the site. In 2020,
5	Con Edison submitted comments to the EPA on the
6	Newtown Creek PRP Group's Draft RI Report,
7	particularly with respect to factual and technical
8	errors in the Report, and updated data gathered by
9	the Company, pertaining to the nature and limited
10	volume of effluent from the permitted discharge
11	point for the $11^{th}$ Street Conduit Facility. While
12	the Newtown Creek PRP Group continues to develop the
13	RI Report in consultation with EPA, the current
14	schedule anticipates completion of a Feasibility
15	Study for the site during 2023 or 2024 and issuance
16	of the EPA's Record of Decision selecting a remedy
17	for the site several years thereafter.

18 On a separate track, the Newtown Creek PRP 19 Group proposed to EPA a potential early action 20 remedy that would involve the targeted removal of 21 contamination "hot spots" from surficial sediments 22 in the first two miles of the Creek. In 2019, the 23 members of the Newtown Creek PRP Group entered into
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1	an Administrative Settlement Agreement and Order on
2	Consent governing a Focused Feasibility Study of
3	this potential remedy. The members of the Newtown
4	Creek PRP Group also contacted Con Edison and other
5	PRPs in connection with this potential early action
6	remedy. In 2021, after the EPA's technical review
7	and consultation with stakeholders, the EPA
8	determined that the selection of an early action
9	remedy should be deferred pending completion of the
10	studies on the whole Creek.

During the Linking Period and Rate Year the Company expects that it will incur costs of approximately \$148,000 and \$160,000, respectively, to evaluate factual and legal issues in response to the EPA notice letter and to continue evaluating the Company's potential responsibility for contamination at the site.

18 4. <u>Third Avenue Yard</u>: In 1925 a Con Edison predecessor
19 Company purchased a 6.77 acre lot in Brooklyn. The
20 lot has been used since then as a utility service
21 center and work out yard for electric operations.
22 Beginning in 1996, Con Edison investigated and
23 remediated various portions of the property under

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1 the DEC's UST, spills, and remediation programs. In October 2016, at the DEC's suggestion, Con Edison 2 3 submitted an application to enter the Third Avenue 4 Yard into the BCP so that Con Edison could 5 investigate and, if necessary, address any remaining contamination at the property through a single DEC б 7 program that would provide environmental closure for 8 the entire property. In March 2017, the DEC 9 executed a Brownfield Cleanup Agreement ("BCA") with 10 Con Edison for the entire Third Avenue Yard 11 property.

12 During 2018 and 2019, Con Edison completed an 13 RI and prepared and submitted an RI Report to the 14 DEC, which the DEC approved in December 2020. In 15 March 2021, the DEC approved a Supplemental RI Work 16 Plan. The field investigation for the Supplemental RI was initiated in June 2021. Based on the lack of 17 18 historic documentation/knowledge on the storage of 19 PCBs within the on-site warehouse, the DEC requested 20 chip sampling of the concrete floor of the building. 21 The first floor chip sampling took place in November 22 2021. Both the second floor concrete sampling for 23 PCBs and the remaining SRI field investigation is

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1		scheduled for first and second Quarter 2022 with a
2		draft report to the DEC in fourth quarter 2022.
3		The Company estimates that it will spend
4		\$265,000 during the Linking Period and \$175,000
5		during the Rate Year for this site.
6		APPENDIX B SITES
7	Q.	Please explain the requirements that the 1994 DEC Consent
8		Order, as amended by the 2006 Consolidated Consent Order,
9		imposes upon Con Edison for "Appendix B" sites.
10	A.	Appendix B addresses spills and leaks of "petroleum
11		products" from the Company's fuel oil storage tanks, No.
12		6 fuel oil pipeline system, high-pressure pipe-type
13		electric feeders, and other types of oil-filled
14		equipment. For sites at which such spills and leaks
15		occurred, Con Edison is required to complete an
16		investigation and remediation process pursuant to
17		procedures and specifics set out in Appendix B. For each
18		of those sites, the first step in the process is for Con
19		Edison to identify the specific response measures that it
20		implemented at the site when it first became aware of the
21		release. If the DEC is satisfied that those completed
22		measures are sufficient to support a determination on its
23		part that no further action is required under the New

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1 York Environmental Conservation Law and Navigation Law, the DEC will close out the spill. For sites for which 2 3 the DEC is unwilling to make such a finding, Con Edison 4 must either conduct additional cleanup work, additional 5 investigation work, or both. The 2006 Consolidated Consent Order streamlined the administrative aspects of б the Appendix B program to conform to the DEC's current 7 8 guidance and eliminated reference to sites that had 9 already been closed out. It did not reduce the number of 10 sites that remained to be addressed and did not 11 materially affect priorities and projected costs. How many sites are covered by Appendix B? 12 Ο. Appendix B covered a total of 85 historical oil spill 13 Α. 14 sites (not including the Appendix B site associated with 15 the Astoria Site, which is addressed separately herein). 16 At many of the sites, more than one spill occurred. Some of the sites are Con Edison facilities, although most 17 sites are street locations where there were leaks from 18 19 the Company's fuel oil pipelines or dielectric fluid-20 filled equipment or feeders. What is the current status of the sites covered by 21 Q.

22 Appendix B?

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1 Α. As of December 31, 2021, 63 sites have been determined by 2 the DEC to require no further action. Additionally, 3 seven sites have been transferred with divested 4 properties, with the new owners of the affected 5 properties assuming responsibility for the required investigation/cleanup work. As a result, there are 15 б 7 open Appendix B sites, which are being addressed in 8 accordance with a DEC-approved Appendix B site 9 prioritization schedule, as reflected in the 2006 10 Consolidated Consent Order. Investigation and 11 remediation activities at the Astoria Site, which 12 includes an Appendix B site, are being performed under 13 the Astoria RCRA corrective action requirements of the 14 DEC hazardous waste management facility operating permit 15 for Con Edison's PCB Waste Storage Facility at the 16 Astoria Site. Accordingly, the Astoria Site is not 17 included in the 15 open Appendix B sites noted above. Please identify the open Appendix B sites that Con Edison 18 Q. 19 must address under the 2006 Consolidated Consent Order. The open Appendix B sites are listed in Exhibit \_\_ (EHS-20 Α. 5), entitled, "CONSOLIDATED EDISON COMPANY OF NEW YORK, 21 22 INC. LISTING OF OPEN APPENDIX B SITES," which also

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- specifies the location, DEC-approved priority, and status
   of each site as of December 31, 2021.
- 3 Q. Was that exhibit prepared under your direction or 4 supervision?
- 5 A. Yes, it was.

6 MARK FOR IDENTIFICATION AS EXHIBIT (EHS-5)

- Q. Please discuss the Company's anticipated investigation
  and remediation activities during the Linking Period and
  Rate Year for its Appendix B sites.
- As indicated in Exhibit \_\_\_ (EHS-5), the Company has 10 Α. 11 submitted investigation work plans to the DEC for 13 of 12 the 15 remaining open sites. These 13 sites are either 13 actively undergoing investigation and/or remediation, 14 such as product recovery, or will have investigation or 15 remediation work started as soon as the DEC approves the 16 Company's proposed work plans for those activities. The 17 Company presently projects that many of these 18 investigations will be partially or completely performed 19 during the Linking Period and Rate Year. With respect to 20 the two other remaining open sites, which are associated with the former operation of two fuel oil pipelines, the 21 22 Company expects to prepare investigation work plans 23 during the Linking Period and Rate Year. The ultimate

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1		timing of the Appendix B projects depends on the findings
2		of the ongoing and planned investigations and the status
3		of DEC review and approval of work plans and reports.
4	Q.	Do you expect the Company to continue to conduct similar
5		Appendix B Site investigation and remediation activities
6		during the Linking Period and Rate Year?
7	A.	Yes.
8	Q.	What are the expected Linking Period and Rate Year costs
9		for the Appendix B sites?
10	Α.	The expected costs for the Linking Period and Rate Year
11		are approximately \$3.1 million and \$1.8 million,
12		respectively (excluding the Appendix B Site located on
13		the Astoria Site, which is described in the next
14		section).
15	Q.	Has the Company prepared a table identifying the
16		projected Appendix B expenditures and activities during
17		the Linking Period and the Rate Year?
18	A.	Yes. The table provided in Exhibit (EHS-4) shows, for
19		each active Appendix B site covered in the projected
20		schedule, the planned activities and projected associated
21		costs during the Linking Period and Rate Year.

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1		ASTORIA SITE
2	Q.	Please describe the nature of the investigation and
3		remediation program for the Astoria Site.
4	A.	On May 1, 1994, the DEC issued Con Edison a hazardous
5		waste management facility operating permit for its
6		PCB/Hazardous Waste Storage Facility at the Astoria Site.
7		The DEC subsequently issued renewal permits on March 2,
8		2001 and July 7, 2008. A permit renewal has been
9		submitted and is under review by the DEC. One of the
10		conditions of this permit is to investigate and, if
11		necessary, remediate, several Solid Waste Management
12		Units ("SWMUs") and Areas of Concern ("AOCs") at the
13		Astoria Site, including those with potential MGP
14		residuals. These areas also encompass an Appendix B site
15		with several spills at the Astoria Site, which is one of
16		the remaining open sites identified in the December 2006
17		Consolidated Consent Order between Con Edison and the
18		DEC. The Company has investigated spills and several
19		SWMUs and AOCs at the Astoria Site, including the site's
20		North Storage Yard, Pipe Yard, Blue Dog Lake, Southwest
21		Storm Sewer, Central Waste Treatment Facility, East Yard,
22		Eastern Parcel, Former Pond Area, Athletic Fields, and
23		former MGP operating areas. Con Edison has performed

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1 interim corrective measures ("ICMs") at the Astoria Site 2 pursuant to DEC-approved work plans to: (1) recover oil 3 from groundwater; (2) line a brick sewer that had 4 provided a pathway for oil to enter the East River; (3) remove contaminated soil or install a clean soil cover in 5 various areas of the site's Athletic Fields; (4) remove б 7 coal-tar contaminated soil from certain areas of the 8 site's Pipe Yard, including measures in response to 9 periodic coal tar seeps; (5) remove wastewater and sludge from two former manufactured gas holder tanks that were 10 converted into neutralization, chemical precipitation and 11 12 sedimentation facilities for the treatment of boiler 13 chemical cleaning and other wastewater containing 14 suspended solids and heavy metals; (6) install, operate 15 and maintain a storm sewer treatment system to treat 16 groundwater that infiltrates into the sewer from April 17 2010 through January 2014 during the replacement of the Outfall B storm sewer conveyance pipe; (7) remove soil 18 contaminated with PCBs and other substances in the North 19 Storage Yard and unpaved areas around the Transformer 20 21 Repair Shop; and (8) encapsulate PCB-containing soil by 22 constructing a containment wall in an area near the

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- Transformer Shop to prevent the soil from running off
   into a storm sewer.
- Q. Please discuss the Company's anticipated investigation
  and remediation activities during the Linking Period and
  Rate Year at its Astoria Site.

During the Linking Period and Rate Year, the Company б Α. 7 expects to do the following work at the Astoria Site: 8 (1) Finalize bid specifications and initiate the DEC-9 approved ICM and repaving of the East Yard to address 10 PCB-contaminated soil, in coordination with the capital 11 improvement project to pave the East Yard and install 12 improved drainage structures; (2) Build on its completion 13 of pre-design investigations at the Pipe Yard and Blue 14 Dog Lake AOCs and submittal of the PDI reports during the 15 beginning of the Linking Period by conducting the 16 associated feasibility studies and initiating the remedial design for these two AOCs; (3) Continue to 17 18 implement oil recovery ICMs at various SWMUs and AOCs; 19 and (4) Continue to perform operations, maintenance and 20 monitoring of remediated areas.

Although other MGP-related activities are not
currently anticipated during the Linking Period or Rate
Year, they may occur depending on the findings of an

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1 additional MGP investigation that is expected to be 2 completed during the Linking Period and as required by the DEC. 3 4 What are the expected Rate Year SIR costs for the Astoria Q. 5 Site? The expected SIR costs for the Linking Period are б Α. 7 approximately \$11.0 million and for the Rate Year are 8 approximately \$13.1 million. 9 Did you prepare a table of the projected Astoria Site Q. 10 activities and estimated expenses during the Linking 11 Period and Rate Year? 12 Α. Yes. The planned activities and associated costs during 13 the Linking Period and Rate Year are listed in Exhibit \_\_\_\_ 14 (EHS-4). 15 UST SITES 16 Q. Please summarize the regulatory requirements applicable 17 to the Company's UST Program. 18 Con Edison's underground storage tanks are regulated Α. 19 under both EPA and DEC regulations. EPA's regulations at 20 40 CFR 280 ("Technical Standards and Corrective Action 21 Requirements For Owners and Operators of Underground 22 Storage Tanks (UST)") require UST owners and operators to 23 investigate known or suspected releases from their UST

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1 systems and, if necessary, to remediate the contamination caused by those releases under the direction of the 2 3 implementing state agency (the DEC in New York). New 4 York State regulations require UST owners and operators 5 to report known or suspected releases from their UST systems and to address such releases to the DEC's б 7 satisfaction. Both EPA and the DEC have issued quidance 8 documents describing these requirements. Although the 9 Company is not under a formal agreement (e.g., an ACO 10 with the DEC) to investigate/remediate these sites, it is 11 obligated to do so under these federal and New York State 12 regulatory requirements.

# 13 Q. How many UST sites has the Company investigated and/or 14 remediated?

A. Since the Company's UST program began in the late 1990s,
the Company has investigated and/or remediated a total of
44 UST sites.

Q. Of these 44 sites, how many has the Company completed?
A. As of December 31, 2021, the Company has completed, and
the DEC has issued NFA determinations for, 39 sites.

Q. How many UST sites are currently being addressed underthe Company's UST Program?

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1 Α. Of the five remaining UST Sites, two sites (Third 2 Avenue Yard and Rye Service Center) are being addressed in conjunction with work under other SIR programs 3 4 (Superfund and MGP, respectively), and the Company is 5 investigating or remediating the three other remaining б sites under the UST Program. At one site (Atlantic Avenue Service Center) the USTs have been removed, and 7 the Company remediated soil containing residual petroleum 8 9 during the Linking Period via in-situ chemical oxidation 10 ("ISCO"), with subsequent short-term groundwater 11 monitoring to document the effectiveness of the remedy 12 ongoing. At a second site (Newtown Substation), the 13 Company anticipates conducting a PDI during the Linking 14 Period to assess further and develop a remedy for 15 residual light non-aqueous phase liquid ("LNAPL"). The third UST site, (357 Tuckahoe Road, Yonkers, New York) 16 17 has been remediated by a third-party former operator and, 18 based on groundwater monitoring results, the Company has 19 submitted a report to the DEC recommending closure. 20 During the Linking Period, the Company anticipates 21 finalizing and resubmitting a groundwater monitoring 22 report to address DEC comments and seeking an NFA 23 determination from the DEC for this site.

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1	Q.	Have you prepared a table identifying projected
2		activities at UST sites and associated costs during the
3		Linking Period and Rate Year?
4	A.	Yes. The planned activities and projected associated
5		costs during the Linking Period and Rate Year are listed
6		in Exhibit (EHS-4).
7	Q.	How much does the Company project it will spend on UST
8		sites during the Linking Period and Rate Year?
9	A.	The Company projects that it will spend: \$599,000 during
10		the Linking Period; and \$305,000 during the Rate Year.
11	Q.	Do you expect the Company to continue to conduct similar
12		UST site investigation and remediation activities over
13		the next five years?
14	A.	Yes, the Company currently ancitpates conducting a PDI at
15		the Newtown Substation UST site during the Linking Period
16		and subsequently developing a remedy to address LNAPL.
17		The Company expects to seek NFA determinations from the
18		DEC for the other two remaining UST sites that are
19		managed under the UST Program (Atlantic Avenue and 357
20		Tuckahoe Road) during the Linking Period or Rate Year.
21		OTHER SITES
22	Q.	Are there sites in the Company's SIR Program that are not
23		included in the programs described above?

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- 1 A. Yes.
- Q. Please identify those sites for which the Company
  projects that it will incur costs during the Linking
  Period and the Rate Year.
- 5 A. These other sites include six former substations,
- б Dielectric Fluid Spill Sites that are not included in the Appendix B program (described further below), one former 7 8 generating station (Richmond Terrace), one former Public 9 Utility Regulating Station ("PURS"), and one active 10 substation (Hudson Avenue East Substation) that was added 11 to the SIR Program in 2021 due to the discovery of 12 elemental mercury contamination related to historial 13 operations on the property predating the Company's 14 ownership. All these sites have projected costs during 15 the Linking Period and the Rate Year.

16 Q. Please describe the Dielectric Fluid Spill Sites.

A. Dielectric fluid is pumped through the Company's pipetype transmission feeder cables for cooling. Most of
these fluids consist of synthetic oils containing
alkylbenzene and alkylbenzene/polybutene mixtures,
although some contain some amount of mineral oil. As
discussed previously, historical Con Edison dielectric
fluid spills are being addressed under the Appendix B

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1 program. However, some more recent spills, which the Company cleaned up by excavation and disposal of impacted 2 3 media (e.g., soil, sediment) to the extent feasible, but 4 require long-term groundwater monitoring and/or fluid 5 recovery, are being addressed under the SIR program. During the Linking Period and Rate Year, the Company will б 7 continue to conduct monitoring and product recovery and 8 address residual contamination from these spills. 9 Q. Please describe the recent discovery of mercury 10 contamination at the Hudson Avenue East Substation. 11 Α. Con Edison owns and operates the Hudson Avenue East 12 Substation located at 164 John Street in Brooklyn on a parcel of land approximately 1.1 acres in size. As an 13 14 active substation, electrical distribution equipment is 15 installed throughout this property, including overhead 16 and underground electric utility lines and associated 17 structures. In August 2021, while excavating a trench in preparation for installation of a new electrical feeder, 18 19 a subterranean historic brick and concrete wall 20 associated with operations that pre-dated Con Edison's ownership of the property was discovered below ground. 21 22 Shortly after being exposed, silver beads were observed 23 on the subterranean wall, and were confirmed to be

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1 elemental mercury. In coordination with the New York 2 City Department of Environmental Protection and the DEC, 3 stockpiled materials that had already been extracted from 4 the excavation area were properly prepared, transported 5 and disposed at a licensed off-site facility as mercurycontaminated waste. Pending further investigation of the б 7 source and extent of mercury associated with the 8 subterranean wall, which may be part of an underground 9 structure, the excavation was lined with a geotextile 10 layer and backfilled with clean fill as an interim 11 measure.

12 Ο. What is the believed source of the mercury contamination? 13 Α. The mercury contamination is believed to pre-date Con 14 Edison's ownership and operation of the property. Prior to Con Edison's acquisition, the property and the 15 16 surrounding areas had a long history of various industrial 17 uses dating back to the late 1800s through the mid-1900s that may have used mercury, including paint, varnish and 18 19 shellac manufacturing. Con Edison acquired the property 20 in 1966 and subsequently redeveloped it into the electrical substation. Based on records and information, 21 22 the substation has not used, stored or released mercury.

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1	Q.	What are the anticipated next steps for delineating and
2		addressing the historical mercury discovered underground
3		at the Hudson Avenue East Substation?
4	Α.	Presently, pending further assessment, an area of
5		approximately 760 square feet associated with the
б		historical underground structure, is considered to be an
7		area of concern potentially contaminated with elemental
8		mercury. This area is located within the northwest
9		corner of the Property near the west access gate. Con
10		Edison is currently working with the DEC to finalize an
11		approach for investigating and, if deemed necessary by
12		the DEC, remediating the elemental mercury within the
13		area of concern. In general, the currently anticipated
14		steps would include a historical records search, an SCS
15		and associated reporting, and development of an Interim
16		Remedial Measure ("IRM"). In late 2021, Con Edison
17		completed the historical records search and conducted
18		some non-intrusive delineation, including geophysical and
19		mercury-vapor surveys. In early 2022, Con Edison
20		anticipates submitting a draft SCS Work Plan to the DEC
21		for review. It is presently anticipated that both the
22		draft SCS Work Plan would be finalized and implemented
23		and an IRM would be developed and implemented during the

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1 Linking Period. At this time, the Company estimates that 2 it will spend approximately \$900,000 to investigate and 3 remove the historic subsurface structure and soil 4 containing elemental mercury. Depending on the actual 5 results and timing of this investigation and remediation work, no remedial work may be needed during the Rate б 7 Year. It is uncertain at this time what, if any, 8 instituational or engineering controls may be necessary 9 following the completion of this work. 10 Have you prepared a table describing the projected Q. 11 activities and associated costs for these additional 12 sites during the Linking Period and Rate Year? 13 Α. Yes. The projected costs and activities during the 14 Linking Period and Rate Year are listed in Exhibit \_\_\_\_ 15 (EHS-4). 16 How much does the Company project it will spend on these Q.

17 additional sites during the Linking Period and Rate Year? 18 A. The Company anticipates that it will spend approximately 19 \$3.0 million during the Linking Period and approximately 20 \$980,000 during the Rate Year.

21

### SIR PROGRAM PROJECTED EXPENDITURES

Q. How much does the Company expect to spend during theLinking Period and the Rate Year for its SIR Program?

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1	Α.	For the Linking Period, the total expenditure for these
2		programs is projected to be approximately \$45.7 million.
3		For the Rate Year, the Company projects an expenditure of
4		approximately \$61.9 million for its SIR Program.
5	Q.	Has the Company estimated projected SIR costs for any
6		time periods after the Rate Year?
7	A.	Yes. As discussed by the Company's Accounting Panel,
8		while the Company is not proposing a multi-year rate
9		plan, in addition to providing projections for the Rate
10		Year, the Panel also provides projected expenditures for
11		the two years following the Rate Year in this proceeding.
12		The Company projects SIR costs to be approximately \$54.0
13		million from January 1, 2024 through December 31, 2024
14		and approximately \$10.3 million from January 1, 2025
15		through December 31, 2025. All projected costs (for the
16		Linking Period, Rate Year, and two subsequent years) are
17		rounded to the nearest \$100,000.
18	Q.	Has an exhibit entitled "CONSOLIDATED EDISON COMPANY OF
19		NEW YORK, INC. SITE INVESTIGATION AND REMEDIATION
20		EXPENDITURES (\$ X 1000) FOR THE LINKING PERIOD (October
21		1, 2021 through December 31, 2022) RATE YEAR (January 1,
22		2023 through December 31, 2023) and TWO SUBSEQUENT TWELVE

23 MONTH PERIODS BEGINNING JANUARY, 2024 AND THROUGH

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DECEMBER 31, 2025 BASED ON November 30, 2021 COST
 PROJECTIONS)" been prepared under your direction or
 supervision?

4 A. Yes.

5 MARK FOR IDENTIFICATION AS EXHIBIT (EHS-6) Has the Company summarized the SIR Program cost б Q. 7 projections for the Linking Period and Rate Year? 8 Α. Yes. Exhibit \_\_\_ (EHS-4) includes a summary of quarterly 9 cost projections for the Linking Period and Rate Year for 10 each Con Edison remediation program and site and a brief 11 description of the projected activities for each site 12 with projected expenditures during each of these time periods. Exhibit \_\_\_(EHS-6) provides a summary of cost 13 14 projections for the Linking Period, Rate Year and next two twelve month periods by program. 15

16 Q. How did you determine the projected expenditures? 17 The projections are based on forecasted spending levels Α. 18 for investigation or remediation-related activities that 19 are expected to be required as part of these programs 20 during the Linking Period and the Rate Year. They are 21 based on best estimates by the Company's project managers 22 in conjunction with support teams such as Central 23 Engineering Estimating and the Company's environmental

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1 and engineering consultants. These cost projections are updated on at least a quarterly basis to reflect newly 2 3 acquired information and changes in the status of the 4 sites. As previously discussed, the Company reviews and 5 evaluates projected schedules at least annually and more frequently for active projects. Cost projections for the б 7 Linking Period, Rate Year and the following twelve month 8 period (2024) largely reflect planned significant 9 remedial construction activities for that time period. 10 The cost projections for the next twelve month period 11 (2025) largely reflect anticipated remedial planning and 12 remedial design activities in preparation for the next phase of significant remedial construction work in later 13 14 years.

Q. What factors could cause revisions in projected schedulesand estimated costs?

17 A. The projected schedules and estimated costs presented in 18 our testimony are subject to change based upon design and 19 construction-related contingencies, which may include 20 regulatory review, approval schedules, permitting 21 processes, and access/cooperation issues with property 22 owners, results of site investigations, unanticipated 23 field conditions and/or force majeure events, including

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1		currently unanticipated delays that could stem from the
2		ongoing COVID-19 pandemic. Delays in a project may
3		result in acceleration or substitution of other projects.
4	Q.	Has an exhibit providing more detailed information on the
5		basis of the Company's forecasted SIR Program
6		expenditures been prepared under your direction or
7		supervision for sites listed in Exhibit (EHS-7) with
8		projected expenditures of at least \$1 million during
9		either the Linking Period or the Rate Year?
10	A.	Yes, that exhibit is entitled "CONSOLIDATED EDISON
11		COMPANY OF NEW YORK, INC. SIR COST PROJECTION ADDITIONAL
12		INFORMATION ON SITES WITH PROJECTIONS OVER \$1 MILLION IN
13		THE LINKING PERIOD OR RATE YEAR (PROJECTED COSTS UPDATED
14		AS OF NOVEMBER 30, 2021)"
15		MARK FOR IDENTIFICATION AS EXHIBIT (EHS-7)
16	Q.	Are there any existing or anticipated insurance proceeds
17		available to off-set SIR expenses?
18	A.	Possibly. In December 2014, the Company received a first
19		interim payment of 15% of its \$6,840,000 claim
20		(\$1,026,000) in the Home Insurance Company liquidation
21		proceeding pending in New Hampshire Superior Court for
22		losses associated with the Company's MGP Sites. The
23		Company received a second interim payment of 10% of its

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1		claim (\$683,995) in August 2016 and a third interim
2		payment of 5% of its claim (\$341,998) in April 2019. The
3		Company does not presently know how much more, if any, it
4		will recover on its claim against The Home Insurance
5		Company. Future recoveries, if any, will be determined
6		during the course of the liquidation proceeding by the
7		Insurance Commissioner for the State of New Hampshire,
8		acting as liquidator.
9	Q.	Do you expect to receive any other insurance proceeds
10		that could off-set SIR expenses?
11	A.	Except as described above, the Company does not currently
12		anticipate receiving any other insurance proceeds.
13	Q.	Are there any existing or anticipated third-party
14		contributions available to off-set SIR expenses?
15	A.	Yes, pursuant to a confidential settlement agreement with
16		UGI Utilities, Inc. ("UGI"), UGI is required to pay a
17		portion of the Company's future costs for two of the
18		three Yonkers MGP Sites. From time to time, the Company
19		requests payments from UGI as costs are incurred at the
20		two Yonkers MGP Sites.
21	Q.	Is there any SIR-related litigation that could affect SIR
22		expenses?

23 A. No.

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1		SIR PROGRAM COST SAVING EFFORTS AND PRACTICES
2	Q.	What is the purpose of this section of your testimony?
3	Α.	This section describes the Company's efforts and
4		practices to operate a cost-effective SIR program.
5	Q.	What steps has Con Edison taken to control its site
б		investigation and remediation costs and liabilities?
7	A.	Con Edison has taken several actions and continuously
8		evaluates potential new ways to control its SIR costs and
9		liabilities while also working safely and efficiently to
10		complete the remediation work in cooperation with the
11		DEC. These actions include:
12		• Development of Cost Effective Remedies - When
13		permissible under applicable laws and regulations,
14		Con Edison pursues remediation objectives with
15		regulatory agencies based on the present and
16		contemplated future use of sites, so that the
17		remedies selected by the agencies are not more
18		stringent than necessary for such uses. For
19		example, if the present and contemplated future use
20		of a site is for industrial or commercial purposes,
21		the Company attempts to negotiate remediation
22		requirements that are consistent with such uses,
23		rather than the more stringent remediation

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1	requirements that would apply at sites with
2	residential uses. When desirable, cost effective,
3	and permissible under applicable laws and
4	regulations, Con Edison attempts to negotiate
5	remediation work plans with regulatory agencies and
б	third-party property owners that rely in whole, or
7	in part, on post-remediation engineering or
8	institutional controls in order to avoid more
9	costly remediation to "unrestricted use" standards.
10	In addition, when investigation results show that
11	remediation may not be necessary to protect human
12	health or the environment, the Company advocates
13	its position to the regulatory agencies that
14	remediation requirements should not be imposed
15	unnecessarily. Below are some examples of the
16	Company developing cost effective remedies in
17	coordination with the DEC or property owners:
18	o <u>Pemart Avenue MGP Site OU-1</u> : The Company's
19	Pemart Avenue MGP Site includes two operable
20	units ("OUs"). OU-1 covers the upland areas,
21	and the DEC-selected remedy is a landside
22	excavation remedy. The OU-1 geography and
23	neighborhood pose a number of distinct

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1 challenges for the remedy. First, there are buildings nearby, including an over 100 year 2 3 old brick building to the south. Second, the 4 topography is varied, with a steep bank to the 5 east (NYS Route 9) and underlying bedrock within the OU-1 excavation area that undulates 6 7 and slopes relatively steeply from the north to 8 south and east to west. Third, the site has a 9 shallow groundwater table approximately 6 feet 10 below grade generally discharging to the Hudson 11 River, which means that excavation involves working below the watertable and removing 12 13 water-saturated soils. Lastly, the site is in 14 a mixed commercial and residential area, with a 15 transient lodging center very nearby to the 16 north that operates 24 hours/7 days per week. 17 Due to the proximity of this shelter, the DEC 18 highlighted the need for odor and vapor 19 controls during excavation. To address these 20 complexities in an efficient and cost-effective 21 manner, the Company designed the remedy to use 22 Liquid Supported Excavation. This is an 23 excavation technique (sometimes referred to as

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1	piano key excavation) in which cement-bentonite
2	slurry serves as liquid excavation shoring
3	while impacted soil is excavated through the
4	slurry. The slurry provides a hydrostatic
5	force on the trench wall that serves as the
б	primary stabilizing force supporting the
7	saturated soils. A sufficient amount of slurry
8	is maintained within the removal cell during
9	the excavation to provide excavation support.
10	Some slurry is then left to harden in place to
11	serve as the soil replacement. This excavation
12	technique facilitates impacted or saturated
13	soil removal without the need for expensive
14	dewatering or conventional excavation support
15	systems (such as sheeting and shoring), while
16	reducing odors and vapors. Residual slurry on
17	excavated soils also helps to stabilize
18	saturated soil for transportation and off-site
19	disposal as it cures. The end result of this
20	technique's usage is complete soil removal over
21	the excavation area with a low-strength and
22	low-permeability slurry fill material. In
23	addition to addressing the odor control

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1		concerns raised by the DEC, this method
2		provides other advantages for the site-specific
3		conditions of OU-1, consisting of water control
4		(little to no dewatering needed), reduced risk
5		of damaging historic structures (less
б		vibrations), and faster project construction.
7		Costs are generally lower than, or at least in
8		line with, other excavation support methods,
9		and there are significant other productivity
10		and project benefits due to a shorter schedule
11		along with the decreased impact on the local
12		stakeholders. The DEC agreed with this
13		approach and approved its use at this site.
14	0	Atlantic Avenue Service Center USTs: The
15		Company used the former USTs at its Atlantic
16		Ave Service Center to store and dispense
17		gasoline and diesel fuel for its fleet
18		vehicles. Following the Company's closure and
19		removal of these USTs in accordance with
20		applicable DEC and EPA regulations in 1998, it
21		was found that residual petroleum remained in
22		soil affecting groundwater quality. As
23		required by the DEC, Con Edison performed

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1 routine groundwater monitoring and reporting for 21 years that showed the concentrations of 2 3 petroleum compounds in groundwater steadily but 4 very slowly decreasing. In order to eliminate 5 the need and cost for ongoing long-term monitoring and reporting, Con Edison developed 6 7 an ISCO remedy to expedite treatment of the 8 residual petroleum without the need for costly 9 excavation, soil and liquids disposal, and 10 backfilling. The DEC reviewed and approved 11 this approach in 2021. During late 2021, Con Edison effectively implemented the ISCO 12 13 treatments with post-remedy monitoring expected 14 for the next two years to evaluate groundwater 15 conditions. It is anticipated that the ISCO 16 treatments will result in the expedited and 17 permanent closure of the UST spills at the 18 Atlantic Avenue property.

Pre-Remedial Design Investigation and Treatability
 Studies - When appropriate, the Company performs
 PDIs to fill data gaps in order to develop cost effective remediation work plans and specifications
 for regulatory agency approval and for competitive

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1	bidding. In addition, where appropriate,
2	treatability or pilot studies are performed to
3	demonstrate the applicability of proposed remedies
4	before they are designed and implemented. Examples
5	include:
6	o <u>Pemart Avenue MGP Site</u> : During 2018 and 2021, a
7	PDI was conducted at the Pemart Avenue MGP site
8	to assess the potential impacts of groundwater
9	on the remedial excavations. In addition, this
10	PDI was used to better define the extent
11	(vertical and horizontal) of the remedial
12	excavation and assist in determining the
13	proximity of the excavation to existing
14	buildings. By accounting for field conditions
15	in advance, and better targeting the areas for
16	excavation, the Liquid Suppported Excavation
17	design was completed, resulting in what is
18	expected to be a more cost-effective remedial
19	construction project.
20	o <u>Maspeth Substation Site</u> : In an effort to
21	develop a cost-effective permanent remedy for
22	the soil containing residual oil at this Site,

Con Edison has developed a PDI scope of work

23

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1	which will use an innovative drilling
2	investigation method that includes a cone
3	penetrometer ("CPT") integrated with an oil
4	interface probe ("OIP"). The CPT contains
5	sensors that allow continuous vertical mapping
б	of soil lithology to identify permeable and
7	impermeable layers. These technologies are
8	used to define the environmental conditions of
9	the site, while simultaneously collecting
10	geologic, hydrogeologic, and information on
11	separate-phase product (oil). This is important
12	in developing a map of the more permeable
13	intervals at which residual oil may occur. The
14	OIP measures, in real time, the occurrence of
15	residual oil. Integration of the information
16	from the two components of this drilling method
17	allows for an efficient understanding of where
18	oil resides and will be instrumental in
19	developing a focused and cost-effective
20	remedial approach. Also, unlike traditional
21	drilling methods, during use of the CPT/OIP, no
22	soil cuttings are generated, eliminating a
23	waste stream.

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1 •	Seeking Permit Flexibility - As applicable, the
2	Company seeks appropriate variances from permit
3	requirements to achieve project efficiencies. For
4	example, in connection with the Flushing Creek
5	dredging project, typical permit requirements would
б	have required the suspension of remedial
7	construction activities and demobilization at the
8	beginning of the fish spawning season until the end
9	of the season when activities could have resumed.
10	The Company obtained a variance from the DEC and
11	United States Army Corps of Engineers to allow for
12	installation of a silt curtain in advance of the
13	fish spawning season. This allowed the work to
14	continue uninterrupted without impacting the fish.
15	With this variance, the Company avoided the added
16	costs and delays associated with demobilization and
17	remobilization around the spawning period.
18 •	Forensic Analysis and Background Level
19	Determinations When appropriate, Con Edison
20	performs forensic analysis of soil, sediment and
21	product (e.g., oil, gasoline, coal tar) to

differentiate contamination associated with Companyoperations or spills from contamination that may

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1	have been caused by others. The forensic analysis
2	may involve fingerprinting the type of material
3	present (e.g., MGP waste, various forms of
4	petroleum) or different formulations of PCB
5	mixtures. When appropriate, the Company also
6	performs sampling outside the suspected area of
7	concern to determine site-specific background
8	levels of contaminants for the DEC's consideration
9	in its determination of the required scope of
10	remediation. The Company has used this approach
11	successfully, for example, at the Flushing Creek
12	Site, to demonstrate that impacted media were not
13	impacted by Con Edison's operations. If Con Edison
14	had not performed the forensic analysis for the
15	Flushing Creek site, the Company believes that the
16	DEC would have required the Company to remediate a
17	far larger area and volume of the sediment in the
18	Creek. Con Edison estimates that the cost of such
19	additional remediation of the larger sediment area
20	and volume would have exceeded \$10 million.

Evaluating Alternative Work Methods - For remedial
 construction projects, as appropriate, Con Edison
 evaluates potential alternative cost-efficient

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1	means and methods to meet the DEC's requirements.
2	At the Flushing Creek site, completed in 2018, the
3	DEC-approved remedy included the dredging and
4	removal of sediments containing elevated
5	concentrations of PCBs and placement of a clean
6	cover. The work area for this site posed many
7	logistical challenges due to very constrained
8	access for traditional excavating equipment and
9	watercraft, such as barges and barge-mounted
10	excavators. Therefore, a more cost-effective
11	dredging method using an amphibious excavator was
12	selected with the DEC's approval. This alternative
13	equipment was able to readily maneuver within the
14	dredge area, and the duration of the work was
15	substantially reduced.

16 Combining Remediation with Site Redevelopment/ • 17 Construction - Whenever possible, Con Edison seeks 18 to achieve cost savings by coordinating remediation 19 work that requires soil excavation with the 20 excavation work being performed by site developers 21 as part of construction projects. By implementing required remediation work in conjunction with 22 23 property owners' construction projects, Con Edison

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1	minimizes its expenditures by sharing or
2	allocating, as appropriate, with property owners
3	the costs of activities common to both the
4	remediation work and the construction work, such as
5	sheeting and shoring, excavation dewatering,
6	excavation labor, soil transportation and disposal,
7	and back-filling. The following are several
8	examples:
9	o The Hunts Point Gas Works is the location of an
10	approximately 204-acre former MGP that Con
11	Edison operated in the Hunts Point section of
12	the Bronx from 1926 until 1961. In 1968, Con
13	Edison sold the former grounds of the MGP to
14	the City of New York (the "City"). The City
15	has leased large portions of the site for use
16	as the Hunts Point Cooperative Food Market and
17	is seeking to lease additional sections of the
18	site for similar use. The MGP investigation
19	and remediation activities for most of the site
20	are being managed on the City's behalf by the
21	EDC. As discussed in more detail in
22	Exhibit(EHS-7), Con Edison and the City have
23	entered into multiple agreements whereby Con
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1		Edison has agreed to reimburse the City for
2		certain costs incurred implementing DEC-
3		approved MGP investigation and remediation
4		programs for certain parcels of the Hunts Point
5		site. This approach allows for the
6		investigation and remediation to be conducted
7		in a more cost-effective manner, since the
8		City, as owner and landlord, can coordinate
9		some of this work with redevelopment projects
10		and tenant activities at the Hunts Point
11		peninsula.
12	0	At Appendix B, Site 70, site investigation
13		field work was coordinated with a New York City
14		contractor that was installing a substantial
15		water main in the same roadway as the spill
16		site. The City contractor agreed to allow Con
17		Edison's EH&S Remediation team and its drilling
18		subcontractor to work within its existing
19		traffic control area, and under its existing
20		New York City Department of Transportation
21		roadway opening permit. Because the City
22		contractor already had removed the paving and
23		excavated soil to an appropriate depth, the Con

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1		Edison contractor had direct access to
2		subsurface soil to complete the required
3		sampling. By coordinating in this manner, Con
4		Edison avoided costs for traffic control, road
5		opening permits, geophysical surveys, hand
б		digging to verify subsurface utilities and the
7		need to deploy a mechanized drill rig.
8	0	Another recent example occurred in 2019 in
9		connection with two parcels associated with the
10		West $18^{th}$ Street MGP Site. The Company
11		conducted its site investigation work under the
12		2002 Agreement and confirmed that MGP
13		contamination was found within underground gas
14		holders beneath an existing paved parking lot.
15		Once a developer purchased the parcels and
16		entered them into the BCP, Con Edison
17		coordinated with the developer to combine its
18		development work with the removal of MGP
19		contamination within the remnant gas holders.
20		This resulted in reduced remediation costs by
21		combining the remediation with excavation work
22		being performed as part of the development
23		project.

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1	0	In the offsite coastal areas associated with
2		the East $11^{th}$ Street MGP Site and East 21st
3		Street MGP Site on the lower east side of
4		Manhattan, designated for each site as OU-2
5		(East River sediments), the City is in the
б		process of implementing a project to protect areas
7		vulnerable to coastal flooding, especially in the
8		wake of Superstorm Sandy and sea level rise
9		associatd with global climate change. In
10		particular, the City is constructing significant
11		storm mitigation structures, which are
12		collectively referred to as the East Side Coastal
13		Resiliency ("ESCR") project. The design of the
14		ESCR project includes a subsurface barrier wall
15		along the East River to help limit flooding to the
16		area. For the nearby East $11^{th}$ Street and East
17		$21^{\text{st}}$ Street MGP Sites, while the DEC has not yet
18		formally selected a remedy for the OU-2 offsite
19		area, a likely component would involve the
20		installation of an underground barrier wall along
21		the East River to cut off possible coal tar
22		product movement into river sediments.
23		Recognizing an opportunity for efficiencies by
24		coordinating the planned ESCR construction and the

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1 offsite MGP remedy, Con Edison and the ESCR design 2 team have coordinated with the DEC on the design 3 of an ESCR barrier wall that would simultaneously 4 function for flood mitigation and MGP coal tar 5 containment. To serve this dual purpose, the DEC 6 has required that the depth of a portion of the 7 ESCR barrier wall adjacent to the MGP sites be 8 extended beyond what is required by the ESCR 9 floodwall design; that sheet piles and joints 10 along the deep underground portion of this barrier 11 wall be sealed with a coal tar compatable sealant; 12 and that coal tar recovery wells, which Con Edison 13 will operate, be installed along the barrier wall 14 in conjunction with the ESCR project. Because 15 this barrier wall is an integral part of the ESCR 16 project and will be constructed as part of that 17 work, Con Edison is not the primary designer or 18 constructor of the barrier and will not bear the 19 total costs for these efforts. Rather, it is 20 anticipated that Con Edison will reimburse the 21 City for those incremental costs paid by the City 22 for the ESCR team's design and construction 23 efforts to incorporate the DEC-required MGP remedy 24 comoponents into the ESCR barrier wall project.

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1 The Company also coordinates remediation work with 2 construction work at Company sites, where possible, to 3 help minimize overall costs. For example, at the Rye 4 Service Center, the Company combined the MGP 5 remediation and UST closure activities with a capital project to upgrade the fuel station on the property, б 7 resulting in efficiencies in both cost and schedule. 8 Both projects required excavation within the same area 9 of the property. Therefore, the Company performed the 10 excavation component of the MGP and UST remedies first to remove contaminated soil. The capital project then 11 12 proceeded in the clean excavation area to install new 13 USTs and an associated filling station, including 14 backfilling and site restoration. By coordinating in this manner, the remediation project did not bear the 15 16 costs for site restoration. To achieve similar 17 savings at the Company's Astoria facility, the Company is combining the Astoria East Yard remediation field 18 19 work with a planned capital project to re-pave the 20 Astoria East Yard. This coordinated approach is 21 anticipated to decrease remediation costs while also 22 reducing operational impacts at the Astoria site.

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1 •	<u>Reuse of Excavated Materials</u> - Whenever feasible
2	and acceptable to the DEC and DOH, the Company
3	reuses excavated soil and stone as backfill at
4	remediation sites. Historically, such reuse
5	resulted in cost savings at several remediation
6	sites. Although material reuse has not been
7	appropriate for more recent projects, the Company
8	continues to consider it and its potential cost
9	savings for Company remediation projects.
10 •	<u>Cost-Effective Investigations</u> - When appropriate
11	and acceptable to the DEC, Con Edison incorporates
12	"step-out" procedures in its SCS and RI work plans.
13	These procedures allow Con Edison's project manager
14	and the DEC's project manager to expand the scope
15	of an investigation while field work is being
16	performed and helps eliminate remobilization and
17	multiple rounds of investigations and reporting.
18	Broadening the scope of investigation while field
19	work is in progress also helps minimize the need to
20	prepare additional work plans and conduct
21	subsequent rounds of investigation.
22 •	Competitive Procurement - The Company competitively

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bids all remediation projects, retains qualified

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1	contractors, performs third-party bid check
2	estimates and follows its comprehensive procedures,
3	including remediation contractor management
4	protocols, so that project work is performed
5	properly and cost effectively.
б •	Engineering/Constructibility Reviews - In an effort
7	to optimize bid documents for complex projects
8	( <i>i.e.</i> , those projects that may be using new
9	technology, are multi-engineering disciplined, or
10	require special considerations due to the property
11	use or layout), Con Edison has employed third-party
12	engineering consultants to review draft remediation
13	plans and specifications. For each remediation
14	project, internal constructibility reviews are
15	conducted with the Construction Management ("CM") $$
16	group and EH&S Remediation project manager.
17 •	<u>Bundling Similar Work into One Contract</u> - Bundling
18	similar remediation work into one contract helps
19	provide both cost savings and efficiencies. For
20	example, in April 2020, the Company competitively
21	bid and bundled under a single contract routine
22	groundwater monitoring and reporting at several
23	similar legacy spill sites. This helped streamline

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1	and coordinate field events and provide for
2	consistent reporting. Following a similar
3	approach, monitoring wells which can be
4	decommissioned after receipt of an NFA or after the
5	DEC has determined that such wells are no longer
6	needed at such sites, were bundled across multiple
7	sites and competitively bid under a single contract
8	in March 2021.
9 •	<u>Maintaining Experienced Staff</u> - Con Edison
10	continues to staff the EH&S Remediation Department
11	with experienced and dedicated employees. All
12	members are engineers or scientists and hold
13	bachelor's or master's degrees. The team
14	collectively reflects over 175 years of experience
15	in the field of remediation, with experience in the
16	utility, chemical, laboratory, manufacturing,
17	petroleum, transportation, mining, and construction
18	sectors. These seasoned engineers and scientists,
19	many recognized as subject matter experts, serve as
20	project managers and work closely with qualified
21	consultants and contractors to develop and
22	implement work plans and specifications, consistent
23	with applicable government agency requirements.

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1	The Company also has a specialized Construction
2	Department that manages remedial construction
3	contractors. Construction staff is specially
4	trained to perform constructability reviews of
5	remedial design plans and specifications, to manage
б	these types of contracts and contractors, and to
7	oversee the contractor's field work. In some
8	situations, internal constructability reviews are
9	augmented by engineering consultants (other than
10	the ones preparing the design). Use of experienced
11	in-house staff provides Con Edison with the
12	capability to plan proactively for anticipated
13	project challenges and to handle effectively and
14	timely respond to unexpected conditions or issues.
15 •	<u>Participation in External Organizations</u> - Con
16	Edison actively participates in national and state
17	industry forums and research organizations, such as
18	the MGP Consortium, the Utility Solid Waste
19	Activities Group ("USWAG") Remediation & Response
20	Committee, the Environmental Energy Alliance of New
21	York ("EEANY"), and the Electric Power Research
22	Institute ("EPRI"), so that it obtains the benefit
23	of other utilities' experience and knowledge and

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1	its in-house staff keeps abreast of evolving
2	regulatory requirements and technical developments
3	in the remediation industry. Con Edison supports
4	activities of these organizations that have direct
5	impact on pending and future remediation projects.
6	In one case, Con Edison supported a study that
7	helped answer questions about the use of in-situ
8	stabilization ("ISS") in sediments, which could
9	provide a substantial cost-saving remedial
10	alternative for addressing contaminated sediments
11	as compared to the more traditional remedy of
12	sediment dredging. In another, the Company was the
13	prime participant in an EPRI study to develop risk-
14	based Total Petroleum Hydrocarbon ("TPH") Soil
15	Cleanup Objectives ("SCOs") for dielectric fluids
16	typically used in pipe-type electrical transmission
17	feeders, because the DEC did not have any SCOs for
18	TPH. During this study, EPRI and Con Edison worked
19	closely with the DEC to develop the work scope and
20	discuss the study results. Con Edison submitted
21	the EPRI Report to the DEC, which approved EPRI's
22	recommended SCOs for these fluids. These SCOs are
23	now used in the Appendix B Program described

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1	earlier in our testimony. The Company's research
2	and development department funded the costs for
3	participating in these two EPRI studies. In
4	addition, some of these organizations (e.g., USWAG,
5	EEANY) comment on regulatory proposals to obtain
б	more reasonable, more flexible, and less costly
7	requirements. Examples include EEANY's comments on
8	the DEC's past proposed Part 375 regulations,
9	including SCOs; EEANY's discussions with the DEC on
10	the bioavailability of MGP waste constituents in
11	sediments; EEANY's development of a statewide
12	indoor air database at MGP sites to support a
13	demonstration that indoor air should not be a
14	concern at MGP sites; and USWAG's submittal of
15	information to the EPA to support continuation of
16	the hazardous waste exemption for MGP waste that
17	fails the Toxicity Characteristic Leaching
18	Procedure ("TCLP") for benzene. This hazardous
19	waste exemption allows MGP waste that fails the
20	TCLP for benzene and does not exhibit any other
21	hazardous waste characteristics to be disposed of
22	as non-hazardous waste at thermal treatment
23	facilities instead of being disposed of as

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1	hazardous waste at much more expensive hazardous
2	waste incinerators. USWAG and other industry
3	groups have been instrumental in convincing the EPA
4	to allow certain UST wastes that fail the TCLP for
5	only benzene to be managed as non-hazardous waste.
б	As a result, the DEC has adopted the EPA exemptions
7	for MGP and UST remediation waste in its
8	regulations or guidance. The EPA exemptions and
9	DEC guidance have resulted in significant savings
10	in MGP and UST site remediation costs.
11	Furthermore, USWAG and other industry groups were
12	successful in convincing the EPA to defer land
13	disposal restriction treatment standards for PCBs
14	for hazardous waste soil in most cases. The DEC
15	has adopted EPA's deferral, which has allowed some
16	hazardous waste soil with PCBs to be landfilled
17	instead of incinerated, resulting in significant
18	cost savings. Currently, the Company anticipates
19	participating in an EEANY working group to examine,
20	and potentially comment on, amendments that the DEC
21	recently proposed in December 2021 for Part 375's
22	environmental remediation provisions.

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1 •	Insurance Cost Recovery - Con Edison puts its
2	excess liability insurance carriers on notice of
3	demands by the EPA and the DEC that the Company pay
4	for or implement site investigation and remediation
5	work. It also pursues indemnification of the costs
6	of such work with its excess liability insurance
7	carriers. The Company has received insurance
8	reimbursement payments totaling more than \$17
9	million from its excess liability carriers since
10	1998. When necessary and appropriate, the Company
11	pursues litigation against insurance carriers that
12	deny or reserve coverage for such costs. To date,
13	the Company's litigation efforts against its excess
14	liability insurance carriers (and those of other
15	potentially responsible parties for sites) for the
16	Company's Superfund sites have resulted in
17	settlement proceeds of approximately \$6.5 million.
18	For MGP Sites, the Company's insurance litigation
19	(which included an appeal by Con Edison to the New
20	York Court of Appeals for the Tarrytown MGP site
21	litigation) has resulted in settlement proceeds of
22	more than \$45.2 million. As noted previously
23	above, other than potential liquidation

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1	distributions for The Home Insurance Company, no
2	other insurance recovery for the SIR program is
3	anticipated at this time.
4 •	Liability Transfers and Claims for Indemnification
5	- Con Edison attempts, where possible, to transfer
б	environmental liability for future remediation
7	costs in agreements with third parties in
8	connection with the sale of real property or other
9	assets and seeks indemnities for such future
10	liabilities. For example, in November 2014, Con
11	Edison tendered a claim for costs that Con Edison
12	had expended in connection with a feeder-related
13	dielectric spill (known as Appendix B, Site No. 38)
14	to the party which had purchased the feeder in
15	1999. After discussions with the purchaser about
16	the costs Con Edison had expended and the sale
17	agreement's allocation of liabilities related to
18	the feeder, the purchaser agreed to reimburse Con
19	Edison fully for the past cleanup costs and assume
20	full responsibility for any future cleanup costs.
21	More recently, in 2019, the Company sold the
22	properties that comprised the former Kent Avenue
23	Generating Station in Brooklyn to a third-party.

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1	Under the contract of sale, the third-party
2	purchaser assumed responsibility for all ongoing
3	operation, maintenance and monitoring ("OM&M") $% \left( \left( {{{\left( {{\left( {{\left( {{\left( {{\left( {{\left( {$
4	associated with the remedy that Con Edison had
5	implemented at the site, including compliance with
6	the SMP.
7 •	Identification of Other PRPs - Con Edison attempts
8	to identify other PRPs and, when appropriate,
9	attempts to recover investigation or remediation
10	costs from such entities. For example, Con Edison
11	instituted CERCLA response cost contribution
12	litigation against the successor in interest to
13	UGI, the Philadelphia-based utility holding company
14	that during the late 1800's held controlling
15	interests in the local companies that operated most
16	of the MGPs in Westchester County including three
17	MGPs in Yonkers. The judicial determinations in
18	that proceeding allowed the Company to obtain a
19	settlement with UGI (requiring UGI to pay a portion
20	of the Company's future costs for two of the three
21	Yonkers MGPs). In addition, the Company attempts
22	to identify other potential contributors of
23	hazardous substances for EPA's use in identifying

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1	other PRPs at Superfund sites with anticipated very
2	large remediation costs. For example, the Company
3	worked with EPA to help identify several potential
4	contributors of hazardous substances to the Gowanus
5	Canal Superfund Site.
б •	Participation in PRP Groups - Con Edison generally
7	participates in Superfund site PRP Groups to (a)
8	encourage them to negotiate consent decrees and
9	orders with the government that equitably allocate
10	liability among all financially viable PRPs; (b)
11	seek efficiencies by sharing certain common
12	expenses with other PRP Group members, such as for
13	environmental consultants; and (c) when warranted,
14	institute CERCLA cost contribution actions against
15	recalcitrant PRPs. Most recently, the Metal Bank
16	Superfund Site PRP group successfully challenged a
17	claim for natural resource damages asserted by both
18	the State and Federal natural resource trustees
19	("Trustees"), resulting in a November 2021
20	agreement by the Trustees to settle a claim they
21	originally valued at \$8.35 million, for \$950,000.
22	In addition, at both the Gowanus Canal and Newtown
23	Creek Superfund Sites, the Company has been working

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1 with groups of PRPs to share the costs of environmental consultants to evaluate common 2 3 technical issues and potential allocation of 4 responsibility. Finally, at the Pure Earth Superfund Site, the Company worked with a group of 5 PRPs to share the costs of a project coordinator б 7 and a remedial contractor to successfully complete 8 a remedial action required pursuant to a 2020 EPA 9 Administrative Settlement Agreement and Order on 10 Consent for Removal Action.

11 TSDF Audits - To help minimize the risk that it • 12 will become a PRP at newly listed Superfund sites, 13 Con Edison has established a list of acceptable 14 waste treatment, storage and disposal facilities 15 ("TSDFs") and periodically reevaluates that list. 16 Any new TSDF must be approved by the Vice President 17 of EH&S before it is used. The Vice President 18 grants such approvals only after the proposed new 19 facilities are determined to be necessary (e.g., to 20 meet increased capacity needs for disposal of a 21 particular waste type or to provide significant 22 cost savings) and meet acceptance criteria (e.g., 23 robust waste acceptance procedures, solid record of

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1	compliance with regulatory requirements, adequate
2	spill/release prevention systems in use, low
3	potential for groundwater/soil contamination). All
4	proposed new TSDFs are first evaluated by a
5	steering committee with representatives of EH&S and
б	other Company operations, which makes
7	recommendations to the Vice President of EH&S.
8 •	Due Diligence in Property Transfers - To help
9	minimize the potential that property transfers
10	might result in significant SIR costs, the Company
11	extensively evaluates properties for prospective
12	sale and purchase to identify potential
13	environmental risks using environmental site
14	assessment procedures. For example, the Company
15	was considering purchasing property for a new
16	substation. EH&S staff's review of available
17	records determined that, due to perchloroethylene
18	releases from a dry cleaner, the property was a
19	listed State Superfund Site. As a result of this
20	evaluation, the Company decided not to purchase the
21	property and thereby avoided potential liability
22	and expensive remediation costs. As described in
23	the "Other Sites" section of this testimony, Con

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1		Edison actively assesses the conditions of its
2		properties, and when necessary, remediates
3		properties before a prospective sale to help
4		minimize potential ongoing environmental
5		liabilities.
6		SIR PROGRAM PROCESS AND INTERNAL CONTROLS
7	Q.	What is the purpose of this section of your testimony
8		concerning the Company's SIR Program process?
9	Α.	This section describes each step in the Company's SIR
10		Program process, from the start of investigation to the
11		implementation of remedies approved by the appropriate
12		regulatory agencies. It explains the Company's
13		management practices and bidding processes as part of the
14		Company's efforts to operate a cost-effective SIR
15		Program.
16		Investigation Process
17	Q.	Please describe the process that Con Edison follows for
18		the investigation of its SIR Program sites.
19	Α.	The SIR Program Process is divided into four basic phases
20		which start with project initiation and conclude with
21		final site closure issued by the governing regulatory
22		agency. The processes that are implemented during each
23		of these phases are described below for the MGP Sites,

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followed by application to the other SIR programs. The
 basic phases of the SIR process are similar for the MGP
 and other SIR programs.

4 The Company begins the SIR Program Process with a 5 paper study to determine if there are recognized environmental conditions that are likely to exist and 6 7 require further investigation. In most situations, due 8 to the historic operations of the sites, this study is 9 conducted as the first part of the investigation. The 10 process is governed by Con Edison's 2018 Agreement (and, 11 previously, the 2002 Agreement), and the ACOs and BCAs that Con Edison has entered into with the DEC for sites 12 not covered by the 2018 Agreement (collectively, the "MGP 13 14 Agreements"). Depending on the conditions encountered at 15 a site and the results of each investigation, the process 16 may include multiple rounds of investigations. Each step of the process is subject to the review and approval of 17 the DEC and DOH and must be conducted consistent with 18 19 applicable regulations, guidance and policies. То 20 facilitate the development of its site investigations, 21 Con Edison conducts detailed historical reviews of its 22 and its predecessor companies' operations at each of its 23 MGP Sites. The results of these reviews enabled the

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1 Company and its consultants to pinpoint the locations of the gas production/purification equipment, 2 3 feedstock/residual processing and storage facilities, and 4 other areas of potential concern at each MGP Site. This allows the Company's investigation sampling efforts to 5 focus on these locations. In addition, Con Edison has б 7 prepared a DEC-approved Citizen Participation Plan 8 ("CPP") for its MGP Program that was updated under the 9 2018 Agreement. The CPP describes the procedures that 10 Con Edison will follow to communicate to interested 11 citizens and elected officials about the investigation 12 and remediation activities that the Company is required to undertake for its MGP Sites under its MGP Agreements. 13 14 The Company modifies the CPP to address site-specific 15 circumstances as required by the DEC.

16 The Company also performs investigation and remediation projects for other types of SIR Sites. 17 For federal Superfund sites, the procedures, policies, 18 19 regulations, and guidance documents that the Company must 20 follow are specified in the ACOs and consent decrees that 21 the Company has entered with the EPA. For New York State 22 Superfund sites and Appendix B sites, the required 23 process and protocol are governed by Con Edison's BCAs

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and ACOs with the DEC. For the Astoria Site, the 1 procedures and protocols are governed by the DEC 2 3 operating permit discussed earlier in this testimony and 4 the DEC regulations implementing RCRA. For UST sites, 5 the required procedures and protocols are specified in EPA and DEC regulations and guidance. For other SIR б 7 sites, the required procedures and protocols are 8 specified in DEC regulations and guidance.

9 While there are some differences in the specific 10 investigation process for each of these types of sites, 11 the goal of the process applicable to each such site is 12 the same - the scope of the investigation will 13 characterize and delineate the nature and extent of a 14 site's contamination with sufficient specificity to 15 support a determination by the DEC, DOH, and/or EPA as to 16 whether remediation is necessary to protect human health 17 and/or the environment from the risks posed by the contamination and, if remediation is needed, to assess 18 19 and determine the scope of the required remediation activities. 20

For sites with no government involvement or only partial government involvement (*i.e.*, many of the sites included in the Other Sites category), the Company makes

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1 decisions concerning site investigation and remediation in compliance with the inventory of best practices for 2 3 SIR programs. The Company pursues cost-effective 4 remedies based on the current use and contemplated future 5 use or re-use of the sites and their zoning, considering applicable regulations, guidance, and potential health б 7 and environmental impacts, with the goal of readying 8 these properties for sale and minimizing potential long-9 term environmental liabilities for the Company.

10 The first step of the investigation process under 11 the MGP Agreements is to conduct a DEC-approved SCS, which is a subsurface investigation to evaluate whether 12 13 there is evidence of historical MGP-related contamination 14 in the soil, soil vapor, or groundwater at a site. DEC-15 approved SCS work plans focus on site areas that were the 16 former locations of MGP structures that produced or stored feedstock or residual materials capable of causing 17 18 environmental contamination. These structures include 19 ammonia wells, condensers, gas holders, oil and coal tar 20 storage tanks, relief holders, and tar wells. The 21 Company identified the locations of these types of 22 facilities as part of the detailed historical review it 23 performed before entering into the 2002 Agreement with

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the DEC. As required by the DEC and DOH, a draft SCS 1 work plan must include site background information, 2 3 including the known/suspected locations of former gas 4 production and storage structures, prior investigation 5 findings, if any, and the proposed work scope (e.g., soil boring and test pit locations, soil vapor sampling, б 7 groundwater monitoring well installation, air monitoring, 8 and laboratory analytical requirements).

9 Based upon the historical information that the 10 Company has compiled for the manufactured gas production 11 and/or storage operations formerly conducted at an MGP Site and the input and guidance provided by the Company's 12 13 EH&S site project manager, Con Edison's environmental 14 consultant prepares a draft work plan for the Company's 15 review. The Company's EH&S site project managers 16 actively communicate with the DEC and DOH site project 17 managers and the Company's consultants during the 18 preparation of draft SCS work plans. Such communication 19 increases the likelihood that the draft plans will meet 20 the DEC's and DOH's requirements, as well as the 21 Company's expectations. After making any revisions based 22 on the Company's EH&S site project manager's review, the 23 Company submits the draft SCS work plan to the DEC for

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its review and approval. The DEC will solicit input from
 the DOH.

Once the draft work plan has been approved by the DEC and DOH, the SCS field work may begin. A fact sheet is typically prepared for distribution to appropriate stakeholders prior to the start of the SCS fieldwork.

7 For sites no longer owned by Con Edison, the Company 8 must obtain the property owner's consent in the form of 9 an access agreement before the SCS fieldwork commences. 10 The negotiation of access agreements for these sites can 11 be a challenging and time-consuming process due to the 12 nature of the operations currently being conducted on 13 them, such as schools, hospitals, apartment building 14 complexes, public parks, and commercial businesses. Access agreements for such sites typically include 15 16 provisions specifically developed so that the SCS field 17 work does not unduly interfere with on-going site operations. 18

19 Upon the completion of the SCS fieldwork, the 20 Company submits a report to the DEC and DOH for their 21 review and approval. Depending on the findings of the 22 SCS, these agencies will determine which of the

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- 1 following three steps is the most appropriate for a
  2 site:
- No further action is required because there is no
  evidence of MGP-related impacts that warrants
  further investigation or remediation;
- Additional investigation is required to better
   characterize and delineate the nature and extent of
   the MGP-related impacts present on and around the
   site; or
- Remediation is necessary to address the MGP-related
   impacts that have been sufficiently characterized
   and delineated, and the Company must proceed with
   the development/evaluation of remedial

14 alternatives.

15 An RI refers to the second and subsequent rounds of 16 investigation beyond the SCS. More than one round of on-site investigation and, in some cases, off-site 17 investigation may be necessary to define the 18 19 contamination with a sufficient degree of certainty to 20 support the assessment of potential remedial 21 alternatives and the development of a Remedial Action 22 Work Plan ("RAWP") incorporating the remedial activities 23 that the DEC and DOH deem appropriate. The RI process

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1		is similar to that for SCSs, with community outreach
2		and, when the work is done at a third party-owned
3		property, access agreement negotiations. RI work plans
4		must be approved by the DEC and DOH.
5		After the RI fieldwork and sample analyses are
6		completed, the Company submits a draft RI report to the
7		DEC and DOH for their review and approval. Based on the
8		results of the RI, these agencies will make one of the
9		three determinations specified above in our discussion
10		of the SCS process.
11		Remediation Determinations
12	Q.	Under what circumstances does the DEC and DOH typically
13		require the remediation of site contamination?
14	A.	The DEC and DOH require remediation when they determine
15		that the contamination present at a site presents a
16		current or potential future significant threat of harm to
17		public health and/or the environment or is necessary to
18		meet statutory or regulatory goals and objectives. This
19		determination is made based on the results of the SCS
20		and/or RI for a site. Regarding potential public health
21		impacts, DOH will consider whether potential complete
22		exposure pathways have been identified at the site during
23		the investigation work.

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1	Q.	Do the DEC and the DOH consider costs in determining
2		whether remediation is required?
3	Α.	No. Their determination is made solely based on whether
4		remediation is required to mitigate a current or
5		potential future significant threat of harm to public
6		health and/or the environment or to meet
7		statutory/regulatory goals and objectives. If they find
8		such threats to exist or remediation of the contamination
9		is necessary to achieve statutory and regulatory
10		goals/objectives, remediation must be performed.
11	Q.	Do costs play any role in the remedy selection process?
12	A.	Yes. While the DEC and the DOH do not consider economic
13		impacts as one of the two threshold criteria in
14		determining whether and to what extent remediation is
15		required, the DEC's regulations and guidance documents
16		permit consideration of costs in evaluating remedial
17		alternatives. Under those regulations and guidance
18		documents, "cost effectiveness" is a secondary
19		permissible criterion for such evaluations and can be
20		considered by the DEC when it evaluates and determines
21		whether to select one of two or more remedial
22		alternatives that are protective of human health and the
23		environment and that are consistent with applicable and

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1 relevant rules, regulations, policies and guidance. For 2 example, under the DEC's regulations and guidance 3 documents, the goal of remediation is to restore sites to 4 their pre-contamination condition to the extent that it 5 is technically feasible to do so. If this goal cannot be met, the remedy selected must, at a minimum, adequately б 7 protect human health and the environment, and include 8 technically feasible remediation measures for so-called 9 "source materials", such as free coal tar, coal tarcontaminated soil, and purifier waste. If two or more 10 11 competing remedial alternatives can meet all these goals and are essentially equivalent in addressing non-cost-12 related criteria, the DEC can select the least costly 13 14 alternative. The criteria used by the DEC in evaluating remedial alternatives are described in more detail in our 15 16 testimony below concerning the Remedial Planning Process. 17

Remedial Planning Process

Please describe the Remedial Planning Process that Con 18 Q. 19 Edison must follow for SIR Program Sites for which the 20 DEC and the DOH or EPA have determined that remediation 21 is required.

22 Under the MGP Agreements, ACOs or BCAs for New York Α. 23 Superfund Sites, Appendix B, and the hazardous waste

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1		management facility operating permit for the Astoria
2		Site), once the DEC and DOH determine that remediation is
3		required, Con Edison is required to identify and evaluate
4		potential applicable remedial alternatives for the DEC's
5		and DOH's review and approval. In the case of federal
6		Superfund Sites, Con Edison must identify and evaluate
7		potential applicable remedial alternatives for EPA's
8		review and approval.
9	Q.	For sites at which remediation is required, please
10		describe the process the Company follows in its
11		development of proposed remedial alternatives.
12	Α.	We will focus on the specific process for MGP Sites.
13		However, the process applicable to other types of SIR
14		Program sites is similar.
15		For MGP Sites, Con Edison must prepare an
16		Alternatives Analysis Report or Alternatives Analysis and
17		Proposed Remedial Action Work Plan (each an "AAR") for
18		the DEC's and DOH's consideration and approval. In that
19		AAR, Con Edison must identify potential remedial
20		alternatives, screen them to determine which alternatives
21		appear technically feasible to implement, and then assess
22		the feasible alternatives using the evaluation criteria

23 discussed below.

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1 The first step in the AAR process is to meet with the DEC and DOH to discuss their views on the general 2 3 parameters of what they believe would comprise an 4 approvable remediation program for a site, given the 5 site's use and the extent of the contamination present. For sites no longer owned by Con Edison, meetings are б 7 also scheduled with the site owners to identify any 8 changes in site use being considered by them. These 9 meetings are essential to understanding the perspective 10 of the regulatory agencies and property owners, so that 11 Con Edison does not expend time and resources pursuing 12 "dead ends."

Pursuant to the DEC's requirements, the AAR must 13 14 identify potential remedial alternatives and evaluate them against the following criteria in order to determine 15 16 which alternative is the most appropriate based on all the relevant factors. The first two factors listed below 17 are referred to as Threshold Criteria that must be 18 satisfied for an alternative to be considered for 19 20 possible selection. The next five are referred to as 21 Primary Balancing Criteria and the last two are referred 22 to as Modifying Criteria. The Primary Balancing and then

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1	Modifying Criteria are used to compare the remedial
2	alternatives that satisfy the Threshold Criteria.
3	Threshold Criteria:
4	• overall protectiveness of public health and the
5	environment; and
6	• compliance with standards, criteria, and guidance.
7	Primary Balancing Criteria:
8	<ul> <li>long-term effectiveness and permanence;</li> </ul>
9	• reduction in toxicity, mobility, or volume of
10	contamination through treatment;
11	<ul> <li>short-term impacts and effectiveness;</li> </ul>
12	• implementability; and
13	<ul> <li>cost-effectiveness, including capital costs and</li> </ul>
14	annual site maintenance plan costs. According to
15	DEC guidance, "this criterion is an evaluation of
16	the overall cost effectiveness of an alternative or
17	remedy" and "a remedy is cost effective if its
18	costs are proportional to its overall
19	effectiveness."
20	Modifying Criteria:
21	• community acceptance; and

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1	• State acceptance based on current, intended and
2	reasonably anticipated future land use (when a
3	complete remediation to unrestricted use levels
4	would not be achieved).
5	If the DEC and DOH do not find the Company's draft AAR to
6	be approvable, these agencies will inform the Company of
7	their reasons for disapproval and specify the revisions
8	that the Company must incorporate into the draft AAR.
9	For example, the DEC or DOH may prefer a different
10	alternative to the one recommended by the Company. Once
11	the DEC and DOH deem the AAR to be approvable, a notice
12	will be published in the State's Environmental Notice
13	Bulletin for a 30-day public comment period (45 days for
14	sites in the Brownfield Cleanup Program). A public
15	meeting is held at which the DEC, DOH, and Con Edison
16	present the recommended remedial alternative and receive
17	comments from the public. Con Edison will distribute a
18	Fact Sheet to stakeholders announcing the availability of
19	the AAR and the public meeting.

Q. Does Con Edison make the final decision on which remedial
alternative must be implemented for site being addressed
under government oversight?

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1 Α. No. While it may suggest remedial alternatives, Con 2 Edison does not make the final decision on which remedial 3 alternative must be implemented; that decision is made by 4 the DEC (or EPA for federal Superfund sites). After the 5 close of the public comment period, the DEC will formally approve the AAR. Depending on the comments received, the б 7 AAR may be revised to reflect public input. Community 8 acceptance is one of the criteria considered by the DEC 9 in the selection of an approved remedy. 10 How are remediation decisions made for sites with no or Q. 11 only partial government oversight, as is the case for 12 many sites included in the Other Sites category? For these sites, Con Edison complies with the inventory 13 Α. 14 of best practices for SIR programs, and pursues cost-15 effective remedies based on current use and contemplated 16 future use or re-use of sites and their zoning, 17 considering applicable regulations, guidance, and 18 potential health and environmental impacts, to prepare 19 these properties for sale and help minimize potential 20 long-term environmental liabilities for the Company. Remediation decisions are made by an internal team that 21 22 includes the Company's EH&S, Real Estate, and Law 23 Departments.

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1 Q. Is the selected remedial alternative sometimes

2 implemented by third-party property owners instead of the 3 Company?

4 Yes. For properties undergoing redevelopment, the Α. 5 Company and the property owner/developer may enter into a cooperation agreement to coordinate remediation and site б 7 redevelopment and share costs. By cooperating and 8 implementing required remediation work in conjunction 9 with a property owner's construction project, Con Edison 10 can achieve cost savings by sharing with or allocating to the property owner the cost of activities common to both 11 12 remediation and construction work. This includes such 13 high-cost items as, sheeting and shoring, soil 14 excavation, dewatering, soil transportation and disposal, 15 and back-filling. In such cases, Con Edison would have 16 an oversight role to see that the remedy is being 17 properly implemented in a cost-effective manner. In the case of federal Superfund sites in which the Company is a 18 member of a PRP Group, the PRP Group may implement the 19 20 selected remedy.

Q. Does agency approval of a remedial alternative mark theend of the remediation planning process?

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1 Α. No. The decision documents that the DEC or EPA issue 2 when they select and approve a remedial alternative for a 3 site generally contain only summary information about the 4 remedial alternative. Depending on the complexity of the remedy and the site, the DEC will require Con Edison to 5 prepare either a RAWP or detailed remedial design for the б 7 DEC's and DOH's approval. A detailed remedial design is 8 typically required for the more complex remedies/sites. 9 As part of these designs, the DEC generally requires the development of a remedial design package containing 10 detailed drawings, plans, and specifications to implement 11 12 the selected remedial alternative. In some cases, additional studies or investigations may be required. 13 14 For example, if the DEC requires groundwater treatment to 15 meet a specified cleanup level, Con Edison may conduct 16 bench-scale laboratory studies needed to design the 17 treatment system required to meet the remedial objectives. The detailed drawings, plans, and 18 19 specifications for construction of the selected remedial 20 alternative are subject to DEC/DOH review and approval. 21 Remedial Construction Process 22 Please describe Con Edison's remedial construction Q. 23 process.
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1 Α. The CM Department within Con Edison's Construction 2 organization is responsible for supporting the efforts of 3 Con Edison's EH&S Department to manage the remedial 4 construction phase of remediation projects. Remedial 5 design plans and specifications and engineer's cost estimates are prepared by the Company's environmental б 7 engineering consultants working jointly with the EH&S 8 project manager and CM. Depending on the estimated cost 9 of remediation, pre-qualified remediation contractors at 10 one of three cost categories will be used to solicit 11 technical proposals and bids for the performance of the remedial construction work. For relatively small and 12 13 straightforward projects, a technical proposal and 14 associated technical evaluation may not be required. 15 Additional information concerning review of technical 16 proposals is provided later in our testimony, in the Consultants/Contractors and Internal Staffing section. 17 18 After the award of a Purchase Order to the selected 19 remediation contractor, CM will manage the contractor's 20 performance of the work with the EH&S Remediation project 21 manager participating as a key member of the team. The 22 DEC generally has an inspector assigned to sites for 23 which significant remedial construction work is required

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1 so that the Company complies with the requirements of the approved remedy and design specifications and to 2 3 participate in project team meetings. For projects 4 entailing less significant remedial activities, the DEC 5 inspector will typically visit the sites periodically. 6 In addition, the Con Edison environmental engineering 7 consultant that prepared the approved design and bid 8 specifications will be present to see that the agency-9 approved remedy and design and bid specifications are 10 implemented properly, and to obtain information needed to 11 prepare the remediation report (sometimes referred to as the final engineering report) and, in some cases, to 12 13 perform air monitoring and/or post-excavation soil 14 sampling.

15 As discussed previously in our testimony, when 16 remediation is to be performed at third-party sites, the Company must enter into an access and cooperation 17 18 agreement with the property owner. In addition to 19 providing access, the agreements contain, as applicable, 20 commitments by the property owner not to violate post-21 remediation institutional controls required as part of 22 the DEC-approved remedy and not to interfere with the 23 operation of any DEC-required engineering controls.

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1	Q.	Does the completion of the remedial construction phase of
2		the DEC-approved remedies for Con Edison's MGP Sites or
3		other SIR Program sites mark the end of Con Edison's
4		obligations under its MGP Agreements or other agreements
5		with the DEC for those sites?

It does so only for sites that have been remediated to б Α. 7 the DEC's "unrestricted use" standards. However, because 8 many of the Company's MGP Sites and other SIR Program 9 sites are in highly developed areas occupied by existing 10 buildings or facilities, or present other logistical 11 challenges, it is frequently not feasible to remediate a 12 site to meet "unrestricted use" standards pursuant to the DEC's regulations and guidance. At other sites, it may 13 14 not be cost-effective to meet "unrestricted use" standards due to the background levels or depths of 15 16 contaminants present at the site. In such cases, Con 17 Edison may propose, and the DEC and DOH may allow, remediation to alternative standards that protect public 18 19 health and the environment for specified uses of the 20 site. If Con Edison does not remediate a site to 21 "unrestricted use" standards, Con Edison and the property 22 owner must comply with one or more DEC-required 23 institutional and/or engineering controls at the site to

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1 address the remaining contamination after completing remedial construction and to help minimize the potential 2 3 for exposure to such contamination. Examples of typical 4 institutional controls include restrictions on the use 5 and redevelopment of a remediated property that are made enforceable by the DEC through environmental easements or б 7 deed restrictions. Engineering controls include 8 subsurface containment or cutoff walls, sub-slab soil gas 9 ventilation systems, groundwater treatment, or product 10 (e.g., coal tar, gasoline, or fuel oil) recovery systems. 11 These controls are required in perpetuity or until the 12 DEC, with DOH concurrence, determines that they are no 13 longer necessary.

14 In order to comply with these various controls, the 15 Company is required to prepare an SMP for the DEC's 16 approval. A typical SMP includes procedures to:

operate and maintain engineering controls
and/or treatment systems;

maintain compliance with institutional controls,
where applicable;

inspect and evaluate site information periodically
 to determine whether the remedy continues to be
 effective; and

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1		<ul> <li>monitor and report the performance and the</li> </ul>
2		effectiveness of the remedy, including periodic
3		sampling.
4		Consultants/Contractors and Internal Staffing
5	Q.	Please describe the role of outside consultants and
6		subcontractors in the Company's SIR program.
7	Α.	The Company uses qualified and competitively priced
8		environmental consultants to perform
9		engineering/scientific work to prepare investigation work
10		plans, perform investigations and prepare reports of
11		investigation findings, evaluate remedial alternatives,
12		prepare remedial action plans and specifications, perform
13		treatability and pilot tests, as well as remediation
14		oversight, and prepare remediation reports under the
15		direct supervision of the project manager.
16	Q.	What primary types of subcontractors do environmental
17		consultants typically use during investigations?
18	A.	The Company's environmental consultants typically use
19		subcontractors to perform physical work such as drilling
20		subcontractors to perform test pits and to install soil
21		borings and groundwater monitoring wells, laboratory
22		subcontractors to perform sample analyses required by
23		agency-approved work plans, and land surveyor

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1		subcontractors to document the precise geographic
2		coordinates of test pit, boring, and well locations.
3	Q.	Why doesn't the Company contract directly with these
4		subcontractors?
5	Α.	The Company looks to the environmental consultants for
6		overall management of these subcontractors. It would be
7		counter-productive and would confuse the line of
8		responsibility between the environmental consultant and
9		subcontractors if the Company were to contract directly
10		with the subcontractors.
11	Q.	What about the option of buying the required drilling
12		equipment and using the Company's own laboratory for
13		analytical support?
14	A.	There is not sufficient regularly scheduled work to
15		justify the cost of purchasing drilling equipment,
16		including associated regular maintenance and repair
17		costs, and hiring of properly trained and experienced
18		full-time operators. With respect to using an in-house
19		laboratory, although the Company has a state-approved
20		environmental laboratory, Con Edison's ACOs and consent
21		decrees with the EPA explicitly require the use of
22		independent contractors acceptable to EPA for such work.

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1	Q.	What role do remediation contractors, who perform
2		physical work, play in the Company's SIR Program?
3	A.	The Company uses qualified and competitively priced
4		remediation contractors to implement the required
5		remedial construction elements of its agency approved
6		site remedies.
7	Q.	What types of subcontractors do remediation contractors
8		typically use during remediation projects?
9	A.	Remediation contractors typically use engineering
10		subcontractors to prepare detailed design documents
11		(e.g., sheeting and shoring plan) and obtain building
12		permits; environmental/safety consultants to prepare
13		environment, health and safety plans, perform air and

14 personnel monitoring, and obtain wastewater discharge 15 permits; waste transporters and waste management 16 facilities to dispose of wastes generated during the 17 remediation project; and laboratories to perform analyses 18 required by waste management facilities or for other 19 purposes. In addition, remediation contractors use various material and equipment suppliers and installers. 20 21 Why doesn't the Company contract directly with these Q. 22 subcontractors?

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1	Α.	The Company believes it is more appropriate to place
2		responsibility for these activities on the contractor.
3		This makes the contractor accountable for all aspects of
4		the work, including work performed by subcontractors.
5		For example, if there are any delays in obtaining
6		materials (e.g., steel for sheeting), delays in obtaining
7		permits (e.g., City sewer discharge permit for wastewater
8		or City Department of Buildings permits), delays in
9		obtaining approvals from waste management facilities, or
10		the presence of off-specification material for waste
11		disposal, the contractor would be responsible.
12	Q.	What about the option of buying the required construction
13		equipment or using Company employees to perform some of
14		the remediation activities?
15	A.	There is not sufficient regularly scheduled work to
16		justify the cost of purchasing specialized construction
17		equipment, including associated regular maintenance and
18		repair costs, and hiring of specially trained and
19		experienced operators. Examples of specialty equipment
20		include large diameter (e.g., 30 inches) drill rigs for
21		installing secant piles, equipment used to install slurry
22		walls, equipment for performing in-situ chemical

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- 1 treatment, and equipment for performing in-situ
  2 contaminant stabilization.
- 3 Q. Has the Company adopted any procedures for selecting and 4 retaining environmental consultants and remediation 5 contractors?
- As discussed below in our testimony, the Company has and б Α. implements comprehensive procedures and protocols for 7 8 selecting and retaining outside environmental consultants and remediation contractors. As part of this selection 9 10 process the following criteria are considered related to 11 MGP contracts: New York State MGP Experience; Urban 12 Experience; Sediment Experience; Utility Experience; 13 Historic Performance with the Company; Quality 14 Assurance/Quality Control ("QA/QC") Programs used by the 15 consultant; and consultant Health & Safety performance. 16 Q. How many Con Edison employees are directly involved in 17 the Company's SIR Program on a full-time or a regular 18 basis?

A. The Company currently has 25 employees directly involved
in its SIR Program on a full-time or a regular basis.
This includes 11 employees in the Company's EH&S
Department (described above), 10 employees in its CM
Department, and four employees in the Law Department.

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1		The number of CM Department employees involved in the SIR
2		Program may vary depending on SIR Program activity and
3		construction project activity.
4	Q.	Please describe the role of the EH&S employees in the
5		Company's SIR Program.
6	A.	The Remediation Department of EH&S has overall
7		responsibility within the Company for managing the
8		Company's SIR Program. This department consists of a
9		Director, two Managers and eight engineers and/or
10		scientists. Remediation staff persons serve as Project
11		Managers and Project Engineers for their assigned sites
12		under the SIR Program. Their responsibilities include:
13		• Directing the consultants on all phases of the
14		project including the development of investigation
15		work plans for the DEC's and DOH's approval;
16		• Coordinating with the Law Department, Corporate
17		Affairs, and property owners to complete access and
18		cooperation agreements;
19		• Coordinating with CM to implement the investigation
20		and remediation work plans;
21		<ul> <li>Reviewing and approving the consultants' budgets,</li> </ul>
22		and reviewing and recommending for approval
23		consultants' invoices;

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1		•	Coordinating with the DEC, DOH, EPA, consultants,
2			and property owners on the development of proposed
3			remedies;
4		•	Participating in the procurement process to select
5			a remediation contractor for each of their
6			remediation projects;
7		•	Participating in negotiations with property owners
8			and the Law Department on cooperation agreements
9			with respect to remediation responsibilities and
10			cost sharing;
11		•	Participating in public meetings and other meetings
12			with stakeholders in connection with investigation
13			findings, proposed remedies, and other project-
14			related issues;
15		•	Preparing and overseeing project schedules and
16			budgets;
17		•	Preparing quarterly projections of expenditures and
18			estimates of future liability; and
19		•	Providing periodic reports on the status of their
20			projects to Company management.
21	Q.	Please	e describe the role of the CM employees in the
22		Compan	y's SIR Program.

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1	Α.	CM employees support EH&S in the implementation of the
2		SIR Program investigation and remediation work. This
3		includes support of fieldwork, review of bid
4		specifications, and management of remediation contracts
5		and contractors.
6	Q.	Please describe the role of the Law Department employees
7		in the Company's SIR Program.
8	Α.	The Law Department provides environmental legal support,
9		including: (1) the negotiation and preparation of access,
10		cooperation, and other agreements with the present
11		owners, lessees, and/or developers of the Company's and
12		its corporate predecessors' former MGP and other sites;
13		(2) the negotiation and preparation of consent orders,
14		consent decrees, PRP group participation agreements, and
15		other agreements for Superfund sites owned by third
16		parties, (3) as applicable, participation in PRP groups
17		and allocation proceedings for third-party Superfund
18		sites, (4) when appropriate, litigation to protect the
19		Company's interests when negotiations are unsuccessful in
20		resolving important issues (e.g., claims against
21		insurance carriers and third parties), and (5) evaluation
22		of legal risks associated with environmental

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1		contamination before purchasing new sites or selling
2		existing ones.
3	Q.	Are there other Company employees who support the SIR
4		Program on an intermittent basis?
5	A.	Yes. These include, but are not limited to, employees in
6		Corporate Affairs, Wellness Center, Real Estate, other
7		groups within EH&S, and other organizations as necessary.
8		Internal Controls
9	Q.	Does the Company have internal controls for managing its
10		SIR Program?
11	A.	Con Edison has a comprehensive system of internal
12		controls in place to see that it performs its SIR
13		projects at the lowest reasonable cost. The Company
14		employs the following internal controls to achieve this
15		objective:
16		• standardized remediation contractor management
17		protocols;
18		• established procedures for selecting and retaining
19		environmental consultants and remediation
20		contractors;
21		• rigorous process for the review and approval of
22		consultant and contractor invoices;
23		• self-assessments; and

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1		• internal audit process.
2	Q.	Please identify the Company's remediation contractor
3		management protocols.
4	A.	These protocols include the Company's Contract
5		Administration Manual ("CAM"), Supplemental Construction
б		Contract Requirements ("Supplemental Requirements"), and
7		the Standard Terms and Conditions for Construction
8		Contracts ("Standard Terms"), which are provided as part
9		of the Company's workpapers in this proceeding.
10	Q.	Please summarize the purpose of the CAM.
11	Α.	The purpose of the CAM is to provide direction for
12		Company personnel in the administration of contracts to
13		promote the efficient use of Company and contractor
14		resources, as well as compliance with all applicable laws
15		and regulations. It provides detailed guidance for the
16		administration of construction contracts, including
17		remediation-related construction work. The CAM describes
18		the Company's procedures for requisitioning and
19		procurement of construction contracts, establishes
20		guidelines for executing changes to labor contracts after
21		the purchase order or contract has been issued, defines
22		the procedures utilized to process payments under
23		construction contracts, and establishes a system for

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1 monitoring progress of major projects against a planned 2 schedule. It also sets standards of performance for 3 field activities and provides procedures to be followed 4 in their execution and provides instructions to promote 5 compliance with the Company's requirement that contractors working for Con Edison have fully developed б 7 site/task specific Environmental, Health and Safety Plans 8 for their work.

9 Q. Please summarize the purpose of the Supplemental10 Construction Contract Requirements.

11 Α. The Supplemental Requirements contain requirements for 12 the contractor's management of construction work, including remediation-related construction work. 13 The 14 Supplemental Requirements establish requirements for 15 contractor performance regarding documentation, notice to 16 proceed, payment provisions and invoicing procedures, 17 approval of subcontractors, schedule monitoring, working hours, use of proper personal protective equipment 18 19 ("PPE"), adherence to safety regulations, contractor 20 performance evaluation and identification of hazards 21 encountered at the job site. The Supplemental 22 Requirements identify required submittals and a schedule 23 of submissions for items such as shop and work drawings,

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operating procedures, substitution of materials, and asconstructed drawings. They supplement Con Edison's Standard Terms and Conditions and govern the contractor's work regarding the use of qualified representatives; work permits; equipment and material delivery, handling, and storage; waste transportation and disposal; and site maintenance.

8 Please summarize the purpose of the Standard Terms. Q. 9 The Company's Standard Terms are incorporated into its Α. 10 contracts for construction services, including remediation-related construction work. The Standard 11 Terms define the contractual obligations of the 12 contractor and Con Edison. The obligations and 13 14 stipulations that are addressed include, but are not 15 limited to Contract Formation; Specifications, Plans, and 16 Drawings; Price and Payment; Time for Completion; 17 Excusable Delay; Safeguards in Work; Work Conditions; Contractor's Performance; Con Edison's Authority; 18 19 Estimated Quantities; Warranties; Changes; Claims; Codes, 20 Laws and Regulations, and Maintenance of Work. Are there similar terms and conditions for professional 21 Q. 22 services and service contracts?

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1	Α.	Yes. The Company has Standard Terms and Conditions for
2		Professional Services Contracts and Standard Terms and
3		Conditions for Service Contracts.
4	Q.	Please describe the process Con Edison uses to select and
5		retain its SIR Program environmental consultants.
б	Α.	The Company's internal procurement process to retain
7		environmental consultants for the SIR Program consists of
8		the following general steps:
9		• Identification of technically qualified and cost
10		competitive consultants - A technical evaluation is
11		performed as a pre-qualification phase before a
12		Purchase Requisition is issued or cost proposals
13		are solicited.
14		• Preparation of Purchase Requisition - This is the
15		formal request to the Company's Supply Chain
16		Department for procurement action. The Purchase
17		Requisition is issued by EH&S and includes the
18		services required, estimated budget, recommended
19		bidders, scope of work and any other related
20		documents.
21		• The Purchase Requisition must be approved by the
22		appropriate level within the Company before it is
23		sent to Supply Chain.

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1 •	Issuance of Request for Quotation - After it
2	receives a Purchase Requisition, Supply Chain
3	assigns a procurement specialist to the project.
4	The procurement specialist works with EH&S to
5	prepare a Request for Quotation ("RFQ") inviting
6	consultants to submit technical proposals and
7	commercial proposals. The RFQ may include a pre-
8	bid meeting and always includes a deadline for
9	submitting proposals. Alternatively, Supply Chain
10	may follow a two-step process by first issuing a
11	Request for Information ("RFI") and then issuing an
12	RFQ to solicit commercial proposals once the most
13	technically qualified firms are identified by EH&S,
14	or by issuing multiple rounds of RFQs where the
15	first round is to solicit vendor qualifications.
16 •	Pre-Bid Meeting - If necessary, a pre-bid meeting
17	is typically conducted at least one week after the
18	consultants receive the RFQ. This allows the
19	consultants to review the scope of work prior to
20	the meeting and to ask pertinent questions.
21 •	Review of Technical Proposals or Qualifications -
22	An RFQ may require the consultants to submit
23	separate technical and commercial proposals.

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1	Technical proposals and qualification packages are
2	forwarded by Supply Chain to EH&S for review.
3	Commercial proposals are retained by Supply Chain
4	for evaluation if the bidding consultants'
5	technical proposals are found to be acceptable.
б	Technical evaluation criteria are normally
7	established by EH&S prior to the issuance of the
8	RFQ or RFI, and the consultants are informed of
9	those criteria as discussed above. After
10	completion of its technical review, EH&S provides a
11	report with the review results to Supply Chain.
12 •	Review of Commercial Proposals - After receiving
13	the results of the technical or qualifications
14	evaluation from EH&S, Supply Chain evaluates the
15	commercial proposals submitted by those consultants
16	with acceptable technical scores or those deemed to
17	be technically qualified. For projects that do not
18	require a technical proposal, the commercial
19	evaluation begins upon the receipt of the
20	commercial proposals. Supply Chain identifies the
21	low bidder (or bidders if multiple contracts are to
22	be awarded) and negotiates pricing with the low
23	bidder(s), if appropriate. A meeting with the

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1		consultant(s) may be held to avoid possible
2		misunderstandings regarding the required work
3		scope.
4		• Contract Award - The consultants that have been
5		found to be technically acceptable or technically
6		qualified and that have submitted the lowest cost
7		proposal based on the commercial evaluation are
8		recommended by the Supply Chain procurement
9		specialist for award of a Purchase Order ("PO") or
10		a Purchase Agreement ("PA") to perform the
11		consulting services. The level of approval
12		required depends on the value of the PO or PA.
13	Q.	How does Con Edison select remediation contractors?
14	A.	The selection of contractors is a multi-step process.
15		The first step in Con Edison's remediation contractor
16		procurement process for its SIR Program was the
17		development of a pre-qualified bidders list. The purpose
18		of this list is to streamline the selection process by
19		establishing a short list of contractors pre-qualified to
20		bid on future MGP, as well as other, remediation
21		projects. The list obviates the need to evaluate which
22		firms should be invited to bid on each remediation
23		project.

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1	The procurement process to hire a remediation contractor
2	consists of the following general steps:
3	• Preparation of Purchase Requisition - This is the
4	formal request to Supply Chain for procurement
5	action. The Purchase Requisition is issued by CM,
б	and it includes the services requested, estimated
7	budget, recommended bidders, detailed
8	specifications and other related documents. The
9	Purchase Requisition must be approved by the
10	appropriate level within Construction before it is
11	sent to Supply Chain.
12	• Issuance of Request for Quotation - After Supply
13	Chain receives a Purchase Requisition, a
14	procurement specialist is assigned to the project.
15	The procurement specialist works with CM and EH&S
16	to prepare an RFQ inviting the contractors to
17	submit a technical proposal and a commercial
18	proposal. Depending on the scope of work and other
19	considerations, Supply Chain may request a
20	commercial proposal only, without a technical
21	proposal. The RFQ includes a scheduled field visit
22	to the site and a deadline to submit proposals.

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1 •	As indicated earlier in our testimony, technical
2	proposals may be required for large (based on cost
3	and scope of work), complex projects (based on
4	engineering considerations and property
5	constraints), to help bidders understand the scope
6	and complexities of the project. For relatively
7	small, straightforward projects, a technical
8	proposal and associated technical evaluation may
9	not be required. For these sites, Supply Chain
10	will issue an RFQ under which the contractors would
11	submit just a commercial proposal without a
12	technical proposal. A decision concerning whether
13	to perform a technical evaluation is made by the
14	EH&S Remediation Department in consultation with
15	Construction.

Field visit - The field visit is typically
 conducted at least one week after the contractors
 receive the RFQ. This allows the contractors to
 review the specifications prior to the field visit
 and ask pertinent questions.

Review of technical proposals (when a technical
 proposal is required) - The RFQ requires the
 contractors to submit separate technical and

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1	commercial proposals. Technical proposals are
2	forwarded by Supply Chain to CM and EH&S for their
3	review. The commercial proposals are retained by
4	Supply Chain for later evaluation if the bidding
5	contractors' technical proposals are found to be
6	acceptable. Technical evaluation criteria are
7	normally established by CM and EH&S prior to the
8	issuance of the RFQ, and the contractors are
9	informed of those criteria.
10 •	Review of commercial proposals - After receiving
11	the results of any technical evaluation from CM and
12	EH&S, Supply Chain evaluates the commercial
13	proposals submitted by those contractors with
14	acceptable technical scores. For small,
15	straightforward projects that do not require a
16	technical proposal, the commercial evaluation
17	begins upon the receipt of the commercial
18	proposals. Supply Chain works with the Company's
19	Bid-Check Estimating Section to evaluate the
20	pricing information submitted by the contractor
21	with the lowest cost proposal to determine if the
22	proposed labor rates, unit prices, lump sum prices,
23	and other cost items are reasonable and consistent

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1		with current market conditions. A meeting with the
2		contractor may be held to avoid misunderstandings
3		regarding the required work scope.
4		• Contract award - The contractor that submitted a
5		technically acceptable proposal (if a technical
6		evaluation was performed) and the lowest cost
7		proposal based on the commercial evaluation is
8		recommended by the Supply Chain procurement
9		specialist for award of a PO or PA to perform the
10		remediation. The level of approval required
11		depends on the value of the PO or PA.
12	Q.	Does Con Edison have policies and procedures associated
13		with the procurement process?
14	A.	Yes. Some of these policies and procedures are listed
15		below:
16		• Corporate Instruction 280-4: "Administration of
17		Construction, Service, and Public
18		Improvement/Interference Contracts". This
19		corporate instruction authorizes publication of the
20		CAM described above.
21		• Corporate Policy Statement 300-5: "Statement of
22		Procurement Policies and Procedures".

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1 •	Corporate Instruction 320-14: "Acquisition of
2	Materials, Supplies, or Services".
3•	Supply Chain Operating Procedure SCOP-301:
4	"Procurement Decisions".
5 •	Supply Chain Operating Procedure SCOP-302: "Bid
б	Evaluations".
7 •	Supply Chain Operating Procedure SCOP-303: "Request
8	for Quotations".
9 •	Supply Chain Operating Procedure SCOP-304: "Bid
10	Negotiations".
•	Supply Chain Operating Procedure SCOP-305:
12	"Authorizing Purchase Orders and Contracts".
13 •	Supply Chain Operating Procedure SCOP-306: "Terms
14	and Conditions for Procurements".
15 •	Supply Chain Operating Procedure SCOP-307:
16	"Contract Management and Renewal".
17 •	Supply Chain Operating Procedure SCOP-308:
18	"Contract and Standard Purchase Order
19	Modifications".
20 •	Supply Chain Operating Procedure SCOP-310:
21	"Procurement Files".

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1		• Supply Chain Operating Procedure SCOP-201:
2		"Supplier Qualification".
3		• Corporate Environmental, Health and Safety
4		Procedure CEHSP A12.03: "EH&S Qualifications for
5		Supplier Procurement and Oversight".
6	Q.	Please describe the Company's oversight process for the
7		services provided by its SIR Program remediation
8		contractors.
9	Α.	The Company utilizes CM personnel to administer and
10		oversee remediation contracts. Remediation projects are
11		procured primarily as fixed price contracts that may have
12		unit prices for certain types of work such as excavation
13		and disposal, backfill, and water treatment. As
14		described above, CM utilizes established procedures
15		contained in the Company's CAM to monitor work and to
16		execute changes to contracts.
17		The CAM prescribes the responsibilities of the field
18		personnel responsible for managing contract construction

work and provides detailed procedures for documenting the progress of work in the field. Field Inspectors are assigned to projects and, depending on the size and scope of the work, will generally oversee the work of the contractor daily. The duties of Field Inspectors

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1	include, but are not limited to, such items as job set-up
2	review; schedule review and compliance; review of work
3	completed by the contractor; inspection of work,
4	environmental and safety compliance; completion of the
5	Con Edison daily logbook; input into the Contractor
6	Oversight System ("COS"); and project closeout
7	procedures. The Field Inspector will set up and maintain
8	a central filing system to retain pertinent contract
9	correspondence and documents such as:
10	• Budget and Cost;
11	• Purchase Orders;
12	• Purchase Order Change Requests and/or
13	Authorizations (Change Orders);
14	• Specifications;
15	Correspondence;
16	• Schedules;
17	• Performance Logs;
18	• Payments;
19	• Permits;
20	<ul> <li>Submittals and Approvals;</li> </ul>
21	<ul> <li>Meetings;</li> </ul>
22	<ul> <li>Environmental and Safety Records;</li> </ul>

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1	• Project Close Out Documents;
2	• Materials and Equipment;
3	• Check Lists;
4	• Sampling Reports;
5	• Asbestos Notifications;
6	• Air Monitoring;
7	• Licenses and Training;
8	• Waste Storage;
9	• Disposal Sites; and
10	• Manifests.
11	The Company's Field Inspectors are responsible for the
12	implementation of changes to the base contract and are
13	thoroughly familiar with the reason for the change, its
14	scope and effect on the schedule. In the case of design
15	changes, sufficient liaison with the EH&S project manager
16	is required to make sure the change is implemented in a
17	timely fashion to help minimize its effect on the overall
18	job. For all changes, the Field Inspector (also known as
19	the Construction Inspector or "CI") prepares a Finding of
20	Fact that provides a description of the change, the
21	reason for the change, a range figure estimate of
22	material, equipment and labor costs, and details the

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change's effect on the project schedule. Findings of 1 Fact are reviewed and approved by the CI's supervisor and 2 3 at higher levels of management depending on the 4 individual and cumulative dollar value of the estimated 5 cost of the change. The EH&S project manager for the remediation project also must concur with the Findings of б 7 Fact before they are approved. After the Findings of 8 Fact are approved at the appropriate management level, a 9 change order request is issued to the contractor to 10 provide a price for the work. If the change order is 11 estimated to be more than \$25,000, Con Edison's Bid Check Estimating group will also provide an independent price 12 for the work scope change. Once a price agreement is 13 14 reached, a contract modification is processed based once 15 again on the designated management approval level, which 16 is dependent on the individual and cumulative dollar 17 value of the change. If agreement cannot be reached on a fixed price or unit price, then Con Edison may authorize 18 19 the contractor to proceed to implement the change on a 20 time and materials basis in accordance with the 21 aforementioned contract management documents until an 22 agreement is reached or in lieu of an agreement on a 23 fixed or unit price.

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Q. What is the Company's process for the review and payment
 of SIR Program environmental consultant invoices?
 A. EH&S manages contracts with environmental consultants.
 The following steps are generally followed by EH&S
 project managers in their review of invoices submitted by
 the consultants:

7 Utilize an online centralized accounting system that tracks all unit rates specified in the PO for 8 9 labor, material charges, and other line items. 10 This feature of the system eliminates the potential 11 for consultants to charge rates that are not 12 specified in the PO and eliminates potential 13 contractor calculation errors that could occur with 14 paper invoices.

15 • Reconcile the number of units for each line 16 item/work activity claimed to have been 17 used/performed with the number of units actually 18 used/performed. This is done through discussions and a review of field notes and other supporting 19 20 documentation. Under the accounting system, consultants submit electronic invoices on the 21 22 system in lieu of submitting paper invoices. 23 Before a consultant submits an invoice

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1	electronically, the consultant provides the EH&S
2	project manager with the quantity of each PO line
3	item that it plans to invoice and the information
4	that supports the planned invoice, such as time
5	sheets or subcontractor invoices. The project
6	manager then reviews the supporting information to
7	verify that it is consistent with the information
8	specified in the purchase requisition used by Con
9	Edison to request the consultant's services.
10	Purchase requisitions specify the requested
11	services by PO line item and identify the
12	appropriate project and task numbers (previously
13	known as account numbers or work order numbers)
14	that will be charged.

15 Once the project manager is satisfied that the • 16 charges proposed for invoicing by the consultant 17 are substantiated (for invoices up to \$3,000), the 18 project manager will enter the approved quantity 19 for each line item in the system as having been 20 received. For invoices exceeding \$3,000, the 21 project manager will submit proposed invoices and supporting information to the Section Manager for 22 approval before entering approved quantities for 23

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1		each line item in the system. The system will
2		automatically reject payment requests for line-item
3		amounts exceeding those authorized in a purchase
4		requisition.
5	Q.	What is the Company's process for the review and payment
6		of SIR Program contractor invoices?
7	A.	CM is responsible for the review and approval of SIR
8		Program remediation contractors' invoices. CM uses the
9		following Con Edison documents to format, reconcile and
10		process payment applications from such contractors: (1)
11		CAM; (2) Supplemental Requirements, and (3) Standard
12		Terms. The purposes of these documents are explained
13		earlier in our testimony.
14		Remediation contractors are required to submit
15		Performance Statements that correlate with their project

17 of the contractor's work and mirror the contractor's 18 price schedule. Lump sum, unit price and change order 19 items are listed on the Performance Statement and include 20 information on the description of work, the quantity of 21 work, the unit price of work if applicable, and the total 22 value of work. The Performance Statements indicate the 23 value of work completed to date, the value of work

schedule. Performance Statements are tabulated summaries

16

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1 requested for the current payment application and the total value of work remaining. CM receives performance 2 3 statements from the contractor that include back-up 4 information such as weight tickets, survey measurements 5 and as-built drawings that are used to substantiate the accuracy of the invoice. If the invoice is not б 7 approvable in its entirety, the contractor is required to 8 revise it as appropriate or approval of partial payment 9 is recommended. Once the CM section that manages the 10 remediation contractor determines that the performance 11 statement is acceptable, that section signs the 12 performance statement and sends it to the contractor and to CM's Administrative Services Group. The contractor 13 14 then submits the signed performance statement along with its invoice to CM's Administrative Services Group, which 15 16 compares the signed performance statement provided by the 17 CM section that manages the contractor and the invoice submitted by the contractor. CM's Administrative 18 Services Group reconciles the contractor's invoice with 19 20 the performance statement before processing the invoice 21 for payment.

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1		Once an invoice is approved, it is receipted on the
2		Company's centralized online accounting system for
3		subsequent payment.
4	Q.	Does Con Edison prepare and review financial reports for
5		SIR sites?
6	Α.	Yes. Con Edison's Accounting Department works with the
7		EH&S Remediation group and prepares and distributes
8		reports on a monthly basis indicating site-specific and
9		program-specific expenditures.
10	Q.	Are these monthly reports reviewed to identify any
11		expenditure that may have been erroneously charged to a
12		particular site?
13	A.	Yes. Accounting Department staff and EH&S Remediation
14		staff review listed expenditures. If any expenditures
15		are identified that appear to have been charged to a SIR
16		site account erroneously, Accounting and EH&S investigate
17		and, if appropriate, have the charge transferred to
18		appropriate project and task numbers.
19	Q.	Has Con Edison conducted internal audits of its SIR
20		Program projects?
21	A.	Audits of SIR projects have been conducted by Con
22		Edison's Auditing Department, Quality Assurance team, and

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1	an external consultant. The audit process reviews have
2	included, among other things, whether:
3	• The project was competitively bid and awarded to
4	the lowest bidder among the technically acceptable
5	contractors;
б	• The engineering package was accurate and complete;
7	• EH&S regulations and contractor health and safety
8	plans were complied with;
9	• CM properly managed, monitored, and documented the
10	project, and any changes in the project scope were
11	properly justified;
12	• Project payments were accurate and timely, and any
13	increases in pricing were properly justified and
14	reviewed for accuracy;
15	• CM effectively monitored contractor work and
16	completed the appropriate oversight inspections and
17	the required associated documentation.
18	During 2016, the Company conducted one internal Audit for
19	the SIR Program. This Audit assessed whether remediation
20	crews were working in accordance with Con Edison policies
21	and procedures, the contractor's Health and Safety Plan,
22	and applicable EH&S regulations. The most recent
23	internal Audit was conducted in 2020 and involved an

DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

1		assessment of the controls in the environmental
2		remediation program at Con Edison and its affiliate,
3		Orange and Rockland Utilities, Inc., related to
4		procurement, contractor oversight, employee safety, site
5		safety/work area protection, vehicle and equipment
6		safety, and regulatory compliance.
7		COMPLIANCE WITH RATE CASE FILING REQUIREMENTS
8	Q.	Are you familiar with the Commission's rate case filing
9		requirements with respect to SIR costs?
10	Α.	Yes, we are. In its Order of November 28, 2012, in Case
11		11-M-0034 ("Order"), the Commission adopted several rate
12		case filing requirements with respect to SIR costs in
13		order to enhance its oversight of these costs.
14	Q.	Please state what these filing requirements are.
15	Α.	The Commission's order states that in any future rate
16		filing in which a utility seeks to recover SIR expenses,
17		it must provide sworn testimony: (1) establishing that
18		the remediation process is in compliance with existing
19		timetables and DEC requirements, or providing
20		explanations for any divergence; (2) discussing the
21		utility's cost control efforts, including an attestation
22		to utility compliance with the best practices inventory;
23		and (3) indicating the results of any internal process
DIRECT TESTIMONY - ENVIRONMENT, HEALTH AND SAFETY PANEL

the utility may have conducted with respect to review of SIR procedures, and in particular explaining how internal controls are brought to bear on site investigation and remediation projects.

5 Q. Please discuss the Company's compliance with these6 requirements.

7 Α. For a discussion of the Company's compliance with 8 existing timetables and DEC requirements for remediation 9 programs, see the SIR Program section of our testimony. 10 Pursuant to the Commission's Order, the utilities have 11 established an inventory of best practices, which has 12 been accepted by the Department of Public Service Staff. 13 By this testimony, we are attesting that Con Edison 14 complies with the best practices inventory. We discuss 15 in detail above the Company's SIR cost control efforts 16 and practices in the section of our testimony entitled 17 "SIR Program Cost Saving Efforts and Practices." 18 Finally, we discuss above the Company's internal controls 19 and how those controls are brought to bear on site 20 investigation and remediation projects. Does this conclude your testimony? 21 Q.

22 A. Yes it does.

INFORMATION TECHNOLOGY PANEL

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## INFORMATION TECHNOLOGY PANEL

1		INTRODUCTION
2	Q.	Would the members of the Information Technology (IT) Panel
3		(Panel) please state your name and business address?
4	A.	Our names are Jeannine Haggerty, Manoj Chouthai, Allisyn
5		Glasser, James Prettitore, Mikhail Falkovich, Thomas Langlois,
6		Frank LaRocca, Aleksandra Pooley, and Denise Reid, and our
7		business address is 4 Irving Place, New York, NY 10003.
8	Q.	By whom are the panel members employed?
9	Α.	We are employed by Consolidated Edison Company of New York,
10		Inc. (Con Edison" or the Company) in the IT area.
11	Q.	Please explain your educational backgrounds, work experience,
12		and current general responsibilities.
13	A.	(Haggerty) I hold a master's degree in Energy Management from
14		New York Institute of Technology and a bachelor's degree in
15		Finance & International Business from Manhattan College. I
16		have been employed by Con Edison since 1991, holding various
17		positions of increasing responsibility in Utility Shared
18		Services, Corporate Shared Services, and Electric Operations.
19		In July 2019, I was promoted to Vice President of IT, Business
20		Systems Delivery (BSD), which is responsible for application
21		development and support for the Company's approximately 450
22		applications.

23

### INFORMATION TECHNOLOGY PANEL

1 (Chouthai) I hold a Master of Science from New York 2 University's Courant Institute of Mathematical Sciences and a 3 Master of Business Administration degree from New York 4 University's Stern School of Business. Prior to joining Con Edison in 2019, I was the Senior Vice President and Group CIO 5 6 of Reliance Industries Limited (RIL), India (2014-2018), responsible for all IT Platforms across central and line of 7 business IT organizations. Prior to that, I was the Vice 8 President and Chief Information Officer, Public Service 9 10 Enterprise Group (PSEG) (2003-2012), responsible for all IT. I joined Con Edison as the Vice President of IT Engineering 11 and Operations, responsible for cybersecurity, IT 12 13 infrastructure (network/data centers/servers), Enterprise Architecture and IT strategic planning. 14

15

(Glasser) I hold a Bachelor of Science degree in Management 16 Information Systems in 1998 from the University of Connecticut 17 and a Master of Business Administration degree in Project 18 Management from DeVry University in 2007. I have been 19 20 employed by Con Edison since 1998, holding positions of 21 increasing responsibility in Finance, Treasury, Shared Service Administration, Orange and Rockland Utilities, Inc. (O&R) 22 23 Operations, and IT. I am currently the Director of Enterprise 24 Architecture and Digital Platforms responsible for Enterprise

### INFORMATION TECHNOLOGY PANEL

1 Architecture, Cloud Services, Integration Services, Analytics 2 Center of Excellence and Digital Factory. 3 4 (Prettitore) I hold a Bachelor of Arts in Economics from the University of Rhode Island and a Master of Business 5 6 Administration in Strategy and Finance from New York University's Stern School of Business. I have been employed 7 by Con Edison since 1991, holding positions of increasing 8 responsibility in Finance, Supply Chain, System Operations, 9 10 and IT. I am currently the Director of IT Strategy

responsible for strategic planning. My responsibilities

include developing long-range strategic plans for IT
investment and overseeing our rate case filings.

14

11

(Falkovich) I hold a Bachelor of Science and Master of 15 Engineering from Cornell University. I have been employed in 16 17 the electric utility industry for the last 20 years, holding positions of increasing responsibility in IT, Engineering, 18 Legal, and Information Security. I was hired by Con Edison as 19 Director of Information Security in May 2016 and currently am 20 the Chief Information Security Officer. I am responsible for 21 the Company's cybersecurity initiatives, including threat and 22 23 risk management, Cybersecurity Engineering, and cybersecurity 24 compliance.

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2	(Langlois) I hold a Bachelor of Science and Master of
3	Science in Electrical Engineering from Manhattan College. I
4	have been employed by Con Edison since 2006 and have held
5	various positions in Distribution Engineering and
6	operations, and the Advanced Metering Infrastructure (AMI)
7	implementation team prior to assuming the Director role for
8	BSD. In my current role, which started in July 2021, I
9	focus on Outage Management Systems (OMS), Geographic
10	Information Systems (GIS), and Control Center systems.
11	
12	(LaRocca) I hold a Bachelor of Science in Computer Science
13	from St. John's University. I have been employed at Con
14	Edison since 2008 and held positions in Finance and IT. I
15	am currently a director in BSD responsible our managed
16	service provider relationship in supporting our outsourced
17	application portfolio. I also support our Shared Services
18	applications for Con Edison and O&R. Prior to joining Con
19	Edison in 2008, I spent 20 years in KeySpan Energy in the
20	Information Technology organization and, most recently, the

22

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## INFORMATION TECHNOLOGY PANEL

1		(Pooley) I hold a Bachelor of Science in Computer Science from
2		Oakland University and a Master of Science in Computer Science
3		from Oakland University. I have been employed by Con Edison
4		since 2014 holding positions of increasing responsibilities in
5		IT. I am currently the Director of Infrastructure and
6		Operations responsible for the operations of our IT Network,
7		Voice and Data Telecommunications, Servers, Storage, Data
8		Centers, End User Services, Network Operations Center, and
9		Service Desk.
10		
11		(Reid) I hold a Bachelor of Administration in Information
12		Systems and a Master of Business Administration in Accountancy
13		from Baruch College. I have been employed by Con Edison since
14		1990, holding positions of increasing responsibility in
15		various departments in IT (BSD, IT Planning, Quality
16		Assurance) and in Auditing. I am currently a Director in BSD
17		responsible for Work Management Solutions for Con Edison and
18		O&R.
19	Q.	Have any panel members previously submitted testimony or
20		testified in a proceeding before the New York State Public
21		Service Commission (PSC or the Commission)?
22	Α.	Ms. Glasser submitted testimony on behalf of the Company in
23		Cases 14-E-0493 and 14-G-0494 (2014 O&R Rate Case), Cases 19-
24		E-0065 and 19-G-0066 (2019 Con Edison Rate Cases), and for $O\&R$

## INFORMATION TECHNOLOGY PANEL

1		in Cases 21-E-0074 and 21-G-0073 (2021 O&R Rate Cases). Mr.
2		Falkovich and Mr. LaRocca submitted testimony in the 2019 Con
3		Edison Rate Cases and 2021 O&R Rate Cases.
4		The other Panel members have not previously submitted
5		testimony or testified before the Commission.
6		
7		PURPOSE OF TESTIMONY
8	Q.	Please explain the purpose of this testimony.
9	A.	This Panel's testimony presents an overview of Con Edison's IT
10		investments and initiatives over the next several years and,
11		in particular, over the proposed rate years. In working with
12		all corporate organizations, IT designs, develops, and
13		implements solutions to help the Company meet its key
14		corporate initiatives - operational excellence, safety, and an
15		enhanced customer experience. The proposed IT projects
16		position the Company to meet customer, stakeholder, regulator,
17		and employee expectations.
18	Q.	Please explain how the testimony is structured.
19	A.	This testimony is structured as follows:
20		• a discussion of the Company's overall IT organization,
21		its core function, IT strategy, IT investment tiers, IT
22		governance process, technology trends, and overall
23		capital and O&M request.

### INFORMATION TECHNOLOGY PANEL

an explanation of the requested projects, starting with
 enterprise-wide major technology projects, followed by IT
 projects in the tiers described in the IT overview
 section.

an overall discussion of IT projects in other areas
throughout the Company, supplemented by the business
justification in associated whitepapers and/or the
associated witness or panel testimony, explaining the
project.

Does this testimony include all Company IT-related projects? 10 Ο. Yes, except for the customer service-related projects included 11 Α. 12 in the Customer Operations Panel testimony. IT is a key partner in those projects, but they are discussed by the 13 14 Customer Operations Panel because they are so closely tied to other customer issues discussed by that panel. 15 For what period is the Company requesting funding? 16 Q. The Company seeks a one-year rate plan for the twelve-month 17 Α. period ending December 31, 2023 (Rate Year or RY1). As 18 discussed by the Accounting Panel, the Company is open to 19 discussing a longer rate plan in settlement negotiations. 20 Therefore, we present information for the twelve-month periods 21 22 ending December 31, 2024 (RY2) and December 31, 2025 (RY3). 23 What are the requested expenditures for IT projects that the Q. 24 Company is including in this filing?

### INFORMATION TECHNOLOGY PANEL

1	A.	The Company has included \$1.460 billion in requested capital
2		and $117.1$ million Operating and Maintenance (O&M)
3		expenditures for IT-related projects over the three-year
4		period. As noted earlier, this includes all IT projects,
5		except for the projects discussed by the Customer Operations
6		Panel.

7

		Capita	I & O&M	
	То	tal Annual	Request (\$	000)
	2023	2024	2025	Total
Capital	\$470.2	\$558.5	\$430.9	\$1,459.7
O&M (Incremental to test year)	\$75.0	\$24.5	\$17.6	\$117.1
Total	\$545.2	\$583.0	\$448.5	\$1,576.8

8

9

### IT OVERVIEW

10 Q. Please provide a summary of this section.

11 A. In this section, we explain the role and structure of the IT 12 organization, IT investment tiers, and IT governance process; 13 discuss technology trends; and explain the requested capital 14 and O&M costs. 15 16 IT Organization

17 Q. Please explain the role of the IT organization.

#### INFORMATION TECHNOLOGY PANEL

A. The IT organization provides the Company with the information
 technology products, services, and cybersecurity required to
 perform its business.

4 Q. How does IT meet this role?

5 A. IT invests in four technology tiers:

6 First, IT builds and operates the Company's foundational IT 7 infrastructure (e.g., data centers that host the servers, databases, routers, firewalls, etc.). This IT infrastructure 8 9 provides the basic computing, telecommunications, and 10 networking needs for the various applications that are used to provide critical Electric, Gas, and Steam to our customers as 11 well as our administrative and other back-office groups. 12 13 Second, IT implements software platforms, such as data and analytics, mobility, cloud, customer relationship management, 14 which are deployed on top of the foundational infrastructure. 15 These software platforms are the building blocks for 16 applications (see fourth item below) used throughout the 17 Company. 18

19 Third, IT provides cybersecurity protection for all technology
20 assets (Information Technology (IT) and Operational Technology
21 (OT)) across the enterprise.

Fourth, IT implements specialized applications to meet
business needs, enable value, and allow employees to perform
their jobs in a safe, secure, resilient, and efficient manner.

## INFORMATION TECHNOLOGY PANEL

1		These applications are required for all Company functions,
2		including electric, gas, and steam operations, customer
3		service, Finance, Supply Chain, Human Resources, Law,
4		Auditing, Facilities, and many others.
5	Q.	Please provide an example of a project using the above tiers.
6	A.	As explained later, we have a platform called C3.ai, which is
7		part of the larger Enterprise Data and Analytics platform
8		(EDAP). C3.ai is a cloud-based platform. We build various
9		analytics applications using the C3.ai platform.
10		Hot Sockets is an example of a specialized application on
11		EDAP. Hot Sockets leverages AMI meter data to identify meters
12		with potentially dangerous temperature conditions to improve
13		situational awareness and reduce safety risks, for both the
14		public and employees. We are looking to build additional
15		specialized applications on top of C3.ai.
16	Q.	What types of projects does IT work on?
17	A.	IT works on both Company-wide projects and on projects for
18		individual business and functional groups. Some of the
19		Company's largest capital investments in recent years have
20		been IT investments, including AMI, the outage management
21		system (OMS), the Gas Work & Asset Management system, mobile
22		apps along with the new customer service system (new CSS), and
23		the new Graphical Information System (GIS). In each case, IT

### INFORMATION TECHNOLOGY PANEL

worked closely with the relevant group to implement the
 system.

3 Q. Can you give some examples of Company-wide IT projects?

A. Yes. Past Company-wide IT projects include implementing SCADA
and OMS (IT/OT), Work and Asset Management Systems (WMS), Case
Management for new business, and Enterprise Resource Planning
systems (ERPs - i.e., Payroll Systems, Finance, Accounting,
Supply Chain systems) and Business Intelligence and Analytics
platforms (BI).

10 Q. Can you give some examples of business-group specific IT11 projects?

12 A. Business-group specific IT projects are wide ranging.

13 Examples of mobile applications include:

OMS Site Safety and Damage Assessment, Outage Dashboards,
 Feeder Status, Gas Plumber App, and Public Hazards

16 o Control Centers: Metropolitan Transportation Authority

17 (MTA) Dashboards

o Construction and Environmental Health and Safety
 Other projects address reporting needs using tools like
 Tableau and Power Business Intelligence.

Finally, IT provides support for incidents on an immediate
basis, such as pandemic related applications, including
dashboards, and mobile applications.

24 Q. How is the IT organization structured?

## INFORMATION TECHNOLOGY PANEL

1	A.	IT is divided into two groups, Business System Delivery (BSD)
2		and Engineering and Operations (E&O).
3	Q.	What areas fall under Business System Delivery?
4	Α.	BSD has four areas: Customer, IT/OT (Information
5		Technology/Operational Technology), Work & Asset Management,
6		and Shared Services.
7	Q.	Please describe each area.
8	Α.	The Customer area focuses on projects that improve the
9		customer experience, such as the Digital Customer Experience
10		(DCX), new Digital Assistance, new analytical tools, and our
11		new Customer Billing System (aka new CSS).
12		The IT/OT area supports Supervisory Control and Data
13		Acquisition (SCADA), Control Center applications that serve
14		Electric, Gas & Steam, our core and ancillary suite of Outage
15		Management Systems (OMS), Graphical Information Systems (GIS),
16		our AMI platform and Clean Energy initiatives.
17		Under the Work and Asset Management area, we are implementing
18		one Work and Asset Management platform for numerous
19		departments within Con Edison and O&R.
20		Finally, the Common area focuses on our back-office
21		departments such as Human Resources, Finance, Auditing, Supply
22		Chain, Training, Facilities, Law, and Project Management.
23		Several BSD projects, including Work and Asset Management,
24		Outage Management, and Oracle Human Resource and Finance

## INFORMATION TECHNOLOGY PANEL

1		systems, are discussed in the Major Enterprise System section
2		in this testimony.
3	Q.	What areas fall under Engineering and Operations?
4	A.	Engineering and Operations has four areas of work: Enterprise
5		Architecture and Digital Platforms, Cybersecurity,
6		Infrastructure and Operations, and IT Strategy.
7	Q.	Please describe each area.
8	A.	Enterprise Architecture is a standard IT methodology for
9		analyzing, planning, designing, and implementing IT solutions.
10		It is the equivalent of Distribution Engineering or Central
11		Engineering for IT. Key deliverables are architecture and
12		design documents across various IT domains, including
13		security, networks, applications, and infrastructure.
14		Digital Platforms enhances the Company's capabilities in areas
15		like mobile application development, data and analytics, and
16		the cloud.
17		Cybersecurity is responsible for cybersecurity operations and
18		policy.
19		Infrastructure and Operations maintains IT and communications
20		infrastructure, including data centers, networks, and end user
21		computing environments.
22		The IT Strategy group is responsible for IT strategic
23		planning.

## INFORMATION TECHNOLOGY PANEL

1	Q.	Before moving on, what are the benefits of Enterprise
2		Architecture?
3	A.	Some benefits of Enterprise Architecture are:
4		• Improved application portfolio management to reduce the number
5		of applications, costs, and risks.
6		• Improved technology and risk management to reduce complexity
7		and resolve security vulnerabilities, and compliance issues.
8		• Clearly documented architecture and standards to meet future
9		business goals.
10		• Reduced delivery times to keep up with a fast-changing
11		business environment.
12	Q.	How many applications does IT support?
13	Α.	IT supports approximately 450 applications.
14	Q.	Does IT maintain the approximately 450 applications IT
15		manages, by itself?
16	A.	No. In 2020, the Company contracted out much of its
17		maintenance and support work to a managed service provider,
18		Cognizant. Most corporations of our size use managed service
19		providers, including many utility companies.
20	Q.	Why did Con Edison decide to use a vendor?
21	A.	To allow IT to scale its operations to support the increased
22		demand for IT services. IT work is increasing with no decline
23		in sight. The demand for IT systems, data, and infrastructure
24		has grown tremendously. As a result, the Company has
25		recognized IT as our "4th Operation" alongside electric, gas,

## INFORMATION TECHNOLOGY PANEL

1		and steam. This is also evident with the doubling of our IT
2		Capital portfolio from 2019 to 2020. In 2020-2021, IT
3		executed our capital portfolio of \$350 million to improve
4		business processes and bring value to our customers.
5	Q.	What is the scope of services provided by Cognizant?
6	A	Cognizant performs support services for IT infrastructure,
7		including our network operations center and service desk.
8		Cognizant also provides maintenance and support for more than
9		300 applications. Part of the transition included
10		implementing ServiceNow as our new IT ticketing and work
11		management system. This allows us to track IT assets and
12		service tickets in one system and will allow us to perform
13		analysis on incident and service level trends.
14	Q.	Has IT implemented other general changes?
15	Α.	Yes. We have moved to cloud-based technology.
16	Q.	Why?
17	Α.	Many of our software vendors have either stopped or advised
18		they will stop offering their software for installation in our
19		"On-Premises" data centers. They will only offer their
20		products on the "cloud." We expect this trend to continue.
21		As explained later, moving to the cloud increases O&M
22		spending, as subscriptions are required. With subscriptions,
23		the Company receives regular upgrades and patches to systems

## INFORMATION TECHNOLOGY PANEL

1		directly from the vendor, instead of having to upgrade or
2		patch the product ourselves.
3		
4		IT Strategy
5	Q.	What is IT's strategy to address the myriad of projects along
6		with the changing IT environment?
7	A.	We have developed a three-pronged strategy, "Our Way of
8		Working," to guide our work. The three prongs are:
9		• Operational and project excellence
10		• Customer empowerment
11		• Unified enterprise architecture
12	Q.	Please discuss the first element of IT's strategy, Operational
13		and Project Excellence.
14	A.	IT focuses on operational excellence. IT is focused on
15		reaching zero safety and cyber incidents, zero operating
16		errors, and zero quality defects.
17	Q.	How does this enhance the service IT provides to internal
18		organizations?
19	A.	Because most Company operations rely on IT infrastructure, our
20		focus on operational excellence supports safe, reliable, and
21		resilient service to customers. For example, the operation
22		and control of our systems depend on secure networks and
23		telecommunications infrastructure provided by IT. Key IT
24		business applications are critical for core company functions,

## INFORMATION TECHNOLOGY PANEL

1		such as SCADA, outage restoration, gas leak response, and
2		customer care and billing.
3	Q.	Please discuss the second IT strategy element, customer
4		empowerment.
5	A.	The second element of the IT strategy is developing platforms
6		and technologies to help our customers connect with the
7		Company. Using technology to improve the customer experience
8		and enable personalization (including personalized
9		recommendations and views) is a priority.
10	Q.	Please discuss the third IT strategy element, unified
11		enterprise architecture.
12	A.	The third element creates standard enterprise architectures,
13		across all IT functions, that simplify the application and
14		infrastructure portfolio while taking a proactive role in
15		bringing new, innovative technology in a secure and reliable
16		manner.
17		
18		IT Investment Tiers
19	Q.	What are IT investment tiers?
20	Α.	Investment tiers are the different categories of IT work
21		required by a project. IT systems are built using four tiers:
22		Foundational IT Infrastructure, IT Platforms, Cybersecurity,

23 and Applications.

INFORMATION TECHNOLOGY PANEL



2 Q. Please explain.

1

The first investment tier is Foundational IT Infrastructure, 3 Α. 4 which is the equipment upon which applications are built. Foundational IT Infrastructure includes investments in 5 6 hardware and software, data centers, cloud, colocation 7 facilities, and networks. It also includes the assets needed 8 to run and house systems, such as: real estate/space for 9 equipment, routers, WiFi, cable, internet, LAN/WAN equipment, databases, firewalls, routers, and HVAC. 10

11 Q. Why is it necessary to make investments in Foundational IT12 Infrastructure?

A. These investments are necessary to allow basic computing,
networking, and telecommunications technology to be hosted,
deployed, and managed in a safe, secure, reliable, and
resilient manner. Investments are essentially deemed as a cost
of doing business and are focused on providing security,

### INFORMATION TECHNOLOGY PANEL

reliability, and resiliency for the overall infrastructure,
 systems and applications.

3 Q. What is the second category of investments?

4 A. IT Platform investments.

23

0.

5 Q. Please explain what this category includes.

A. IT Platform investments enable enterprise business functions
to effectively engage with customers, stakeholders, and
employees. Platforms enable large-scale deployment of
applications, which enable additional functions, such as
Analytics, Mobility, Customer Relationship Management, Work
and Asset Management.

12 Q. How does platform investment help our customers?

What is the third area for IT investment?

13 Α. Our customers benefit by leveraging the scale efficiencies the platform provides. For example, a Customer Relationship 14 15 Management (CRM) platform provides a single unified customer experience. If a customer is inquiring about their bill, 16 17 energy efficiency programs or a requesting an appointment, they will have the same look and feel. The goal of the tool is 18 to provide ease of use and a streamlined experience. The same 19 goes for internal applications. Despite the commonalities, 20 21 this platform still allows individual organizations to create unique applications to meet business needs. 22

#### INFORMATION TECHNOLOGY PANEL

1 Α. Cybersecurity investments to protect the Company's computing 2 assets, both IT and OT, from malicious and ransomware driven 3 cyber attacks. 4 Q. Please discuss the fourth investment category, IT 5 Applications. 6 Α. IT Applications are IT systems that are built or purchased to 7 assist the business group with an overall or specific need. They support key business processes across the Company, for 8 example, customer interaction, outage management and 9 10 restoration, energy system monitoring and control, finance, supply chain, and HR/Payroll. These investments are 11 prioritized based on expected value and managed via an IT 12 Technology Governance board (i.e., the IT Board or ITB). 13 Please provide some examples of IT Applications. 14 Ο. 15 Examples of IT include the outage management system (OMS) Α. which allows operators to monitor customer outages and 16 subsequent restorations; the Customer Service System used to 17 manage customer accounts and billing; and the Oracle E-18 Business Suite (EBS) system used for finance, accounting, and 19 budgeting. 20 21 22 IT Governance Process 23 Q. Please describe the governance process for IT investments. IT investments, including those proposed by this Panel, are 24 Α.

21

under the oversight of the IT Board (ITB), which consists of

## INFORMATION TECHNOLOGY PANEL

1		executives from across the Company. The ITB is responsible
2		for managing the IT portfolio, authorizing funding releases
3		and requests, and selecting a final portfolio of projects each
4		year. ITB meets at least quarterly. ITB also holds monthly
5		project meetings to review projects.
6	Q.	How are IT projects selected?
7	A.	Through an optimization process. The Company's goal is to
8		select a capital portfolio of projects that align with
9		Corporate and IT strategic goals and drive high-value
10		initiatives, which deliver safety, operational excellence, and
11		improved customer experience. Capital projects are rated for
12		the purposes of alignment with Company strategic goals.
13		Optimization scenarios are approved by the ITB. Once the ITB
14		approves a portfolio, it is included in the following year's
15		capital budget.
16		
17 18	Q.	<b>Technology Trends</b> Does IT consider technology trends?
19	A.	Yes. The Company, in general, and IT, specifically, looks to
20		transform and continually improve the way we do business. We
21		are constantly looking at new and evolving technology to
22		determine opportunities to improve IT's products and services.
23	Q.	Please explain.
24	A.	Technology is advancing at a rapid pace and changing the way
25		businesses operate. For example, Cloud technology was not

## INFORMATION TECHNOLOGY PANEL

1		available just a few years ago. Cloud fosters data analytics,
2		resiliency (data centers in different regions), and the
3		ability to more quickly deliver server environments needed for
4		IT projects. Other items like quantum computing, artificial
5		intelligence, virtual reality, and machine learning are
6		quickly evolving. We must stay abreast of new developments to
7		maximize efficiency and provide our customers the best service
8		possible.
9	Q.	What are the key trends shaping the IT organization's
10		strategy?
11	Α.	Cyber security, Cloud Computing, Artificial Intelligence (AI)
12		and Machine Learning (ML), Internet of Things (IoT), 5G
13		Communications and Connectivity, Digital Transformation, and
14		Technology Modernization. These IT trends inform business
15		strategy, as they may indicate new ways to unlock value across
16		the organization. The Company has considered these trends in
17		developing its budget and the components of this filing.
18		
19 20	Q.	Capital and O&M Investment Please describe the forecasted capital request for each rate
21		year and its main drivers.
22	A.	The 2023 capital request is \$401 million, a \$85 million
23		increase from 2022. The main drivers for the increase in 2023
24		are the Oracle EBS ERP Cloud Migration (\$51 million), the eGIS

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Implementation (\$35 million), and the Technology Modernization
 Program (\$32 million).

3 The 2024 capital request is \$476 million, a \$75 million
4 increase from 2023. The main drivers for the 2024 increase
5 are the Oracle EBS ERP Cloud Migration (\$66 million), the eGIS
6 Implementation (\$60 million), and the Technology Modernization
7 Program (\$29 million).

8 The 2025 capital request is \$386 million, a \$90 million
9 decrease from 2024. The main drivers are the Oracle EBS ERP
10 Cloud Migration (\$65 million) and the eGIS Implementation (\$15
11 million).

12 Q. Before explaining the Company's O&M request, please explain13 the categories of costs in the O&M category.

IT O&M requests fall into two main categories. First, most IT 14 Α. projects start out as capital projects in the development and 15 implementation stage. Once the system moves into production, 16 there are operating costs associated with running the system 17 or application, including subscription costs, support costs, 18 upgrade costs and the like. This is referred to as the O&M 19 tail or carrying cost for capital projects. For example, once 20 21 a large IT capital project, such as AMI, is implemented, O&M is required to cover recurring costs, including vendor 22 23 software maintenance, subscriptions for cloud services known

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Software as a Service (SaaS), and labor costs for employees or
 contractors to provide support.

3 Second, incremental O&M is required for the increasing 4 maintenance, and subscription contracts for overall IT infrastructure, including cloud, and communications. For 5 6 example, maintenance costs have increased for infrastructure 7 equipment, such as servers and network switches, consistent with our inventory growth. We have enhanced our remote 8 9 connectivity capability since our last rate filing, increasing 10 maintenance and support costs for the underlying hardware and software needed to support remote work. We continue to make 11 capital investments to modernize and improve the security for 12 13 our data centers, resulting in increased maintenance and support for data center infrastructure. Our mainframe 14 environment is necessary to support several important 15 applications, such as new CSS and billing interfaces for our 16 AMI systems. We are seeking incremental O&M to offset 17 software and hardware maintenance increases from mainframe 18 vendors, such as IBM. Another example is the growing 19 dependence on mobile devices for many key business functions, 20 21 resulting in increased telecommunications costs. Please describe the O&M request and the main drivers for the 22 Ο. 23 O&M request.

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1	Α.	For O&M, we are requesting \$75 million in incremental
2		expenditures in RY1, an additional \$24 million in RY2, and
3		another additional \$18 million in RY3. The main drivers for
4		the request are the increase in capital projects and the
5		associated O&M tail and the continued expansion of our
6		cybersecurity efforts and Oracle Software licensing. There
7		are additional O&M incremental costs related to various
8		Foundational IT Infrastructure services, such as hardware and
9		software maintenance, increasing maintenance costs for our
10		mainframe environment, and increasing telecommunications costs
11		due to device growth.
12	Q.	Has the Panel developed an exhibit, entitled IT O and M White
13		Papers, to explain the requested O&M funding?
14	Α.	Yes. An exhibit was prepared under the Panel's direction and
15		supervision.
16		MARK FOR IDENTIFICATION AS EXHIBIT (IT-8)
17	Q.	Has the Panel developed an exhibit to explain the requested
18		O&M for increased hardware and software maintenance?
19	A.	Yes. An exhibit was prepared under the Panel's direction and
20		supervision.
21		MARK FOR IDENTIFICATION AS EXHIBIT (IT-1)
22	Q.	Do both the capital and O&M requests include additional
23		personnel?

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A. Yes. Various projects require additional personnel. In
 total, our headcount will increase by 58 employees. They are
 broken down into the following Foundational IT Projects and
 are generally discussed in the exhibits accompanying each
 project.

6

		Staffing Lev	el Changes	
Foundational IT Projects	2023	2024	2025	Total
Cybersecurity	4	2	2	8
Foundational IT Infrastructure	15.5	2	1	18.5
IT Platforms	19	3	3	25
Applications	6.5	0	0	6.5
Total	45	7	6	58

7

8

### IT PROGRAMS AND PROJECTS BY CATEGORY

9 Q. Please identify the categories used for organizing IT

10 projects.

We have organized the projects using the following categories: 11 Α. 12 Major Enterprise Projects, Foundational IT, Common, Electric, 13 Customer Energy Services (CES), and Gas. Projects are discussed in testimony, exhibits, and/or the Business in the 14 15 exhibits. 16 MAJOR ENTERPRISE PROJECTS 17 What are the most significant Major Enterprise Projects the 18 Q.

19 Company is proposing?

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1	Α.	The most significant are Work and Asset Management, eGIS,
2		Distribution Control Center Resiliency, OMS, and Oracle
3		upgrades for Human Capital Management, and Enterprise Business
4		Systems. As mentioned earlier, the Customer Operations Panel
5		discusses other projects, including the New Customer Service
6		System and the Customer Relationship Management System.
7		
8		Work and Asset Management
9	Q.	Please explain the Work and Asset Management project.
10	A.	Different Company organizations currently use four work
11		management programs. The Company is requesting \$186 million
12		to develop a "One Enterprise" Work and Asset Management
13		solution for all groups with appropriate customizations.
14		Seven projects account for 89 percent of the requested \$186
15		million. The following explains the overall roadmap:

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- 1
- Please identify the seven major projects. 2 Q.
- The chart below sets forth the projects and their costs. 3 Α.
- 4

Work Management	2023	2024	2025	Sum - 3 years
Maximo Consolidation Program				
Phase 1	\$15,492,700	\$24,955,800	\$18,070,600	\$58,519,100
Electric - ARM Replacement	\$0	\$23,750,000	\$23,750,000	\$47,500,000
Construction Migration (Contractor Payment System				
Work Tracking)	\$10,377,000	\$10,094,000	\$0	\$20,471,000
WMS Sustainability Project	\$3,750,000	\$3,750,000	\$3,750,000	\$11,250,000
Gas Work & Asset Management New Functionality				
	\$3,375,000	\$3,375,000	\$3,375,000	\$10,125,000
Substation Technology Improvements Program	\$5,000,000	\$3,000,000	\$2,500,000	\$10,500,000
Protective Relay Settings				
Repository	\$5,000,000	\$3,000,000	\$0	\$8,000,000
Total	\$42,994,700	\$71,924,800	\$51,445,600	\$166,365,100

- Have the whitepapers associated with these projects been 6 Q.
- 7

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1 A. Yes, they have.

2 Ο. Have they been assembled into one exhibit, entitled Work 3 Management System? 4 Α. Yes. Please see the exhibit for additional detail. MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-1) 5 6 Ο. Please describe the benefits of one overall system. 7 Α. One overall system will transform the current Work and Asset Management application landscape into a consolidated, 8 streamlined, efficient, reliable, and robust solution. 9 The 10 program will address the functional limitations of the current legacy systems, technology obsolescence, and mitigate 11 cyber risks, enabling Con Edison to realize the full benefits 12 13 and synergies of a true enterprise solution across all business areas: common platform, streamlined workflows, single 14 consolidated data source, "center of excellence" support, best 15 of breed work and asset management functionalities, 16 17 scalability, performance, enhanced security, and the ability to meet current and growing business needs. For example, the 18 existing electric Work and Asset Management system runs on an 19 older platform (CGI ARM) and experiences limitations in 20 21 meeting the current and growing business needs. To gain these benefits, the Company will migrate disparate 22 23 legacy Work and Asset Management applications into the

### INFORMATION TECHNOLOGY PANEL

existing, highly configurable IBM Maximo Work and Asset
 management enterprise platform.

3 Q. Why undertake this project?

4 Α. This project standardizes the different applications into one 5 common software platforms and modernizes our work management 6 application portfolio. In addition, there are several disparate (20+) legacy work management systems running on 7 obsolete technologies. Some of these systems will soon 8 present a cyber risk unless addressed. Others lack 9 10 functionality and need to be migrated to an enterprise solution to leverage new and advanced capabilities, 11 consolidated application and platform support, and realize 12 13 efficiencies and accommodate growing business needs in the future. 14

15

16

eGIS

Q. Is the Company developing an enterprise-wide mapping system?
A. Yes. The current rate plan allows the Company \$90 million to
implement an enterprise-wide mapping system in three phases.
Phases 1 and 2 were included in the prior rate plan, phase 3
was not.

22 Q. Please explain Phases 1 and 2.

A. In 2019, the Company began its multi-phased effort to update
its outdated mapping systems by implementing the eGIS project
and establishing a single mapping platform for the Company.

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1		Phase 1 includes the distribution system and the mains and
2		services for electric and gas operations. Phase 2, started in
3		2020, includes establishing the primary (feeder) mapping
4		system and the Staten Island mapping system. Phases 1 and 2
5		are expected to be completed by the end of 2022.
6	Q.	Please discuss Phase 3.
7	Α.	Phase 3 consists of developing the conduit and composite
8		plates. The Company will complete the distribution class (120V
9		to 33kv) cables during Phase 1 and Phase 2. The Company plans
10		to complete the conduits that house the cables in Phase 3,
11		which is expected to begin in 2023 and be completed in 2025.
12		This includes the over 14,000 combined conduit plates and
13		composite feeder plates.
14	Q.	When do you plan to start Phase 3?
15	Α.	We cannot commence working on Phase 3 until Phases 1-2 are
16		complete. Phase 3 will take approximately three years because
17		the Company will manually re-draw most of our conduit and
18		composite plates onto the new platform.
19	Q.	What is the Company requesting in this filing for eGIS?
20	A.	Con Edison is requesting \$140 million to complete Phase 3 of
21		the project between 2023-2025. Without this funding and work,
22		our migration to the eGIS platform will not be fully complete
23		and we will still rely on legacy mapping systems for mapping
24		of certain assets.

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1	Q.	Is there a document that explains Phase 3 and ongoing eGIS
2		work?
3	A.	Yes. An exhibit was developed under our direction and
4		supervision.
5		MARK FOR IDENTIFICATION AS EXHIBIT (IT-1)
6	Q.	Is Con Edison on track to realize the benefits described in
7		the eGIS Business Case included in the Company's 2019 rate
8		filing?1
9	A.	Yes. Con Edison is on track to realize these benefits.
10		First, the eGIS project cost avoidance will be realized upon
11		elimination of legacy applications and the associated
12		maintenance and support. This will occur when the Company
13		achieves the go-live milestone in all boroughs and regions
14		associated with Phase 1 and Phase 2 and Phase 3. The
15		anticipated cost savings include custom support agreements for
16		obsolete software, non-IR supported eGIS related applications,
17		avoided system failure, and alleviating the need to develop
18		new eGIS like applications.
19	Q.	Please continue.
20	A.	Second, regarding the remainder of the benefits, the new

21

mapping system will improve efficiency by eliminating the need

<sup>&</sup>lt;sup>1</sup> See Case 19-E-0065, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, 2019 CECONY Electric Rate Case Exhibits Vol. 3, filed January 31, 2019.

### INFORMATION TECHNOLOGY PANEL

1		to map the same structure on multiple maps and reduce costs.
2		In addition, having all Company maps including all commodities
3		on a single platform will increase the efficiency of creating
4		work packages that require layouts. Once we integrate Phase
5		3, we will recognize all the benefits outlined in the business
6		case. The Business case filed in 2019 (named "eGIS Business
7		Case 2019.docx") is included in Exhibit (IT-1). An updated
8		BCA (named "eGIS BCA.xls") is included in our workpapers.
9	Q.	How will eGIS facilitate Distributed Energy Resource (DER)
10		integration and support operational resilience?
11	A.	Con Edison's eGIS will support the achievement of the State's
12		Climate Leadership and Community Protection Act (CLCPA) goals
13		in several ways. eGIS will facilitate the adoption of DER
14		through increased accuracy of hosting capacity maps, a
15		foundational component for the Company's Distributed Energy
16		Management System (DERMS), as explained by the CES Panel.
17		Moreover, the GIS mapping system is foundational for
18		developing a DERMS system.
19		Further, in the face of more frequent and severe storm events,
20		the eGIS will improve storm recovery efforts through improved
21		accuracy of outage counts in the Outage Management System.
22		eGIs will also facilitate damage assessment and restoration of
23		customer outages during normal blue-sky events as well as
24		major storms. In addition, the eGIS will integrate asset

### INFORMATION TECHNOLOGY PANEL

1 information and flood maps to facilitate evaluation and 2 planning for flood risks to Con Edison assets. Distribution Control Center Resiliency Project 3 Please describe the Control Center Resiliency project. 4 Q. The Distribution Control Center (DCC) data networks can 5 Α. 6 immediately sever the connection to the Corporate data 7 networks to operate independently, if needed, in an emergency. Severing the connection isolates and protects the critical 8 9 infrastructure and applications that the Distribution Control 10 Centers need to operate efficiently and safely. However, as designed, the current process makes operating in a 11 severed situation difficult in two areas. First, once 12 severed, the distribution control centers must resort to 13 14 manual processes to perform necessary work. Moreover, the 15 current configuration of the network has our Outage Management 16 System within the Distribution Control Center network, 17 thereby, limiting access to OMS for other key users. What will this project do? 18 Q. 19 Α. Initially, this project will establish a new separate 20 dedicated network for outage management systems, allowing work 21 functions to continue. 22 The Company will phase in applications in the OMS ecosystem during the rate period so that the functionality mirrors a 23 24 normal day in incremental steps. For example, the initial
# INFORMATION TECHNOLOGY PANEL

1		project focus is on customer calls and providing data to
2		outage maps and regulatory staff while islanded.
3	Q.	Please explain the benefits of this project.
4	Α.	This project will provide redundancy and resiliency to operate
5		in an ``islanded" state.
6		The project includes process improvements, improved incident
7		response, and streamlined IT environments (simplifying
8		existing environments and leveraging reusable centralized
9		services).
10	Q.	What funding is the Company seeking for this project?
11	Α.	The Company forecasts capital costs of \$8 million in each of
12		RY1 through RY3. We expect to complete the project in 2026.
13	Q.	Has the Panel developed an exhibit to more fully explain this
14		project?
15	A.	Yes. An exhibit was prepared under the Panel's direction and
16		supervision.
17		MARK FOR IDENTIFICATION AS EXHIBIT (IT-1)
18		
19	_	Outage Management System Projects
20	Q.	Does the Company have any projects related to outage
21		management?
22	Α.	Yes. We are proposing two projects: Outage Management System
23		- Phase Four (software) and OMS System Hardening Project
24		(hardware). The Company's capital forecast for OMS Phase 4 is
25		\$9.2 million in RY1, \$5.7 million in RY2 and \$5.2 million in

### INFORMATION TECHNOLOGY PANEL

1 RY3. The Company's capital forecast for OMS System Hardening 2 is \$3.9 million in RY1, \$4 million in RY2 and \$4.2 million in 3 RY3. 4 Q. Please describe the Company's current outage management 5 system. 6 Α. The Outage Management System (OMS) is the primary means of 7 reporting outage information for internal and external stakeholders during and after a storm event. Through the 8 9 hardware and software implementing the system, OMS manages, 10 tracks, and resolves customer outages on the electric distribution system. 11 The software supporting OMS is the Oracle Network Management 12 13 System (NMS), an industry leading outage management system. The system has multiple sources of input including, but not 14 limited to the following: customer outage reports, damage 15 assessment, SCADA, AMI, and manual user input. 16 Currently, the hardware driving OMS is older hardware, which 17 is approaching end of life. 18 Has the Panel developed an exhibit containing two whitepapers 19 Q. 20 associated with these two projects? 21 Α. They were prepared under our direction and supervision. Yes. MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-1) 22 Please describe the Outage Management System - Phase Four 23 0. 24 project.

# INFORMATION TECHNOLOGY PANEL

1	A.	This project will upgrade the Oracle Network Management System
2		(NMS) software to the latest version. The project promotes the
3		"One Enterprise" approach as both Con Edison and O&R will
4		simultaneously upgrade to the NMS 2.5 version.
5	Q.	Why perform this project?
6	Α.	The current version of the software has transitioned to
7		Extended Support. As a result, no new enhancements will be
8		made on the current version of the product line. Oracle's
9		Extended Support for this product ceases in November 2024.
10	Q.	Please explain the enhancements from this project.
11	A.	The enhancements include operator ease of use and additional
12		automation capabilities. This upgrade will also introduce a
13		new OMS mobile platform, with damage assessment, crew
14		management and Estimated Time of Restoration (ETR) field
15		update capabilities. The upgrade also improves availability
16		and reliability at local and remote sites, allows for faster
17		routine patching and improved disaster recovery, enables
18		Oracle's recent and upcoming enhancements offered, and
19		receives vendor support (e.g., service packs and patches).
20	Q.	Turning to the hardware component of upgrading OMS, please
21		describe the OMS IT System Hardening project.
22	A.	This project will improve the operational performance and
23		resiliency of our critical outage management systems and
24		supporting infrastructure, including underlying OMS

### INFORMATION TECHNOLOGY PANEL

technologies, OMS system architecture, data optimization, and end-to-end testing capability.

3 Storms of increasing severity and intensity require investment 4 in a robust, modernized, high availability architecture that 5 supports increased customer outage reporting and AMI outage 6 data integration to the OMS. Investments in end-to-end testing 7 will also focus on additional automation capabilities, testing 8 tool modernization, and expanding testing coverage.

9 Q. Why undertake this project?

10 A. This program addresses recent storm issues. The proposed
11 enhancements will both correct current technical gaps as well
12 as set the building blocks for future integrations,

13 enhancements, and testing.

14 Q. Please explain the project benefits.

15 The upgrade will replace end-of-life hardware and enable High Α. 16 Availability (HA) architecture mitigating the need for 17 prolonged maintenance outages for software patching. We 18 expect process improvements and reduced overhead through the 19 reduction of unplanned OMS outages through system stability improvements, improved incident response, and reduction in 20 future project cost by streamlining current IT environments 21 (simplifying existing environments and leveraging reusable 22 services), and implementing better testing strategies 23 (automating testing). Additionally, as noted below, we will 24

# INFORMATION TECHNOLOGY PANEL

1		develop a testing Center of Excellence, allowing the Company
2		to automate and standardize our testing practices.
3		
4		Oracle ERP Projects
5	Q.	Please describe the Oracle EBS Supply Chain and Finance (EBS)
6		and Human Capital Management (HCM) Cloud Migration projects.
7	Α.	These projects will move our existing on premises Oracle EBS
8		and HCM systems to Oracle's cloud platform.
9	Q.	Please explain the Oracle EBS project.
10	Α.	Oracle EBS provides the Company's finance and supply chain
11		functions. This project will migrate our existing EBS system
12		to the latest Oracle version, which is on Oracle's Cloud. The
13		Company is in the process of a Phase Zero study for this
14		migration. We plan to start the project in 2023 and would
15		complete it in 2025. The Company is seeking \$50.6 million in
16		RY1, \$66.5 million in RY2 and \$1.4 million in RY3.
17	Q.	Please describe the Oracle HCM Cloud Implementation project.
18	A.	This project replaces the legacy versions of our Oracle
19		Peoplesoft Human Capital Management (HCM) and Customer
20		Relationship Management (CRM) applications (the HR Payroll and
21		myHR Connection systems), consolidates disparate HR systems to
22		a single platform, develops advanced and predictive workforce
23		analytics, and stores payroll history for record retention
24		purposes. This project began in 2021 and is expected to be

# INFORMATION TECHNOLOGY PANEL

1		completed in 2024. The Company is seeking \$19.4 million
2		funding in RY1 and \$1.5 million RY2 to complete the project.
3	Q.	Why is the Company upgrading and moving both these projects to
4		the Cloud?
5	A.	Oracle intends to move all on-premises solutions to its cloud
6		platform and is devoting most of its development resources to
7		producing cloud versions of its software. Because of Oracle's
8		strategic direction, Con Edison is moving EBS and HCM
9		operations to the cloud to avoid the potential risk of facing
10		delays in enhancements, security fixes, and costly upgrades to
11		maintain the legacy on-premises software.
12		Additionally, moving HCM, Supply Chain, and Finance systems to
13		Oracle's cloud will modernize our portfolio.
14	Q.	Is there an exhibit that explains these projects in more
15		detail?
16	A.	Yes. The Panel had an exhibit prepared under its direction
17		and supervision.
18		MARK FOR IDENTIFICATION AS EXHIBIT (IT-1)
19		
20		FOUNDATIONAL IT PROJECTS
21	Q.	Please explain what is included in the Foundational IT
22		projects Section.
23	A.	The Foundational IT Projects section includes strategic IT
24		investments in four categories: Foundational IT

### INFORMATION TECHNOLOGY PANEL

- 1 Infrastructure, IT Platforms, Cybersecurity, and Applications.
- 2 These categories are discussed earlier.
- 3 Q. What is the total requested capital investment for
- 4 Foundational IT projects?

	Capital - Total Annual Request						
	(\$ millions)						
	2023	2024	2025	Sum - 3 years			
Foundational IT Infrastructure	\$74.3	\$115.3	\$96.2	\$285.9			
IT Platforms	\$24.5	\$22.3	\$21.1	\$67.9			
Cybersecurity	\$21.7	\$21.2	\$23.6	\$66.5			
Applications	\$53.7	\$49.3	\$43.8	\$147.0			
Total	\$174.2	\$208.3	\$184.7	\$567.2			

# 5

6

7

## Foundational IT Infrastructure

- 8 Q. What Foundational IT Infrastructure projects is the Company
- 9 proposing?
- 10 A. These nine projects modernize and upgrade our existing IT
- 11 infrastructure. The following shows the projects and
- 12 associated expenditures during RY1-RY3.

	Capital - Total Annual Request (\$ Millions)						
Foundational IT Infrastructure	2023	2024	2025	Sum - 3 years			
XM10 Computer Equipment	\$23.9	\$25.9	\$27.9	\$77.9			
CCTN Expansion and	\$20.0	\$20.0	\$20.0	\$60.0			

Modernization				
GridMod Communications	\$16.0	\$16.3	\$16.3	\$48.6
IT Hardware and		\$29.8		\$29.8
Software/M365		•		•
XM 8 Communications	\$3.9	\$9.0	\$9.0	\$21.9
Equipment	ŶŨĨŎ	ψοιο	ψοιο	+=•
End User Computing	\$3.4	\$4.7	\$6.2	\$14.2
Operational Technology	\$1.0	<b>\$1</b> 0	\$0.5	\$2.5
Network Phase II	Ŷ	<b></b>	<b>\$</b> 0.0	ΨΞΙΟ
Enterprise Architecture	\$0.6	\$0.6	\$0.3	\$1.5
Modernization	ψοιο	<b>\$</b> 0.0	<b>\$</b> 0.0	<i>Q</i> IIC
Total – Foundational IT	\$74.3	\$115.3	\$96.2	\$285.9
Infrastructure	<b>.</b> 10	÷		<i><b>4</b></i> <b>1010</b>

#### INFORMATION TECHNOLOGY PANEL

1

2 Q. Has the Panel prepared a document that explains the nine3 projects included in this category?

4 A. Yes. In the Exhibit entitled, Infrastructure, which was
5 prepared under our direction and supervision, there are nine
6 whitepapers.

7 MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-2) Are there any projects the Panel would like to discuss? 8 Q. 9 Α. Yes. While the foundational infrastructure category is a building block for IT, we explain Corporate Communication 10 Transmission Network (CCTN), Grid Modernization 11 12 Communications, Data Center Improvements, two general 13 equipment categories that IT owns, XM-8 and XM-10, and

### INFORMATION TECHNOLOGY PANEL

Hardware and Software Maintenance, which includes Cloud
 Computing, Azure and M365.

3 Q. Please discuss CCTN.

4 A. CCTN is Con Edison's fiber optic network communication system,
5 which securely carries the Company's corporate data, voice,
6 and Supervisory Control and Data Acquisition (SCADA) data.

7 CCTN provides a reliable, secure, and high-speed data network
8 that enables all critical operations locations to communicate
9 with each other. CCTN is comprised of Company-owned fiber
10 optical cables, optical equipment, and radio system backbone
11 network infrastructure components. The Company maintains over
12 locations hosting CCTN components.

13 Q. Before continuing, please explain the Company's SCADA system.

14 A. SCADA systems provide visibility and control of the Company's

15 transmission and distribution systems. These systems are

16 critical to the safe and reliable operation of the

17 distribution system.

18 Q. Please describe the CCTN project.

A. The CCTN project will continue replacing older fiber spans and
installing new technology and spans as needed to improve
reliability, resiliency, and security. Without this
foundational system, operational performance of critical
communications can be at risk.

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Q. Turning to the Rev-Grid Modernization project, please explain
 what is meant by Rev-Grid Modernization.

3 The Company continues to invest in the design and operation of Α. 4 the Distributed System Platform (DSP) that has enabled 5 functionality in key areas of Electric System (Grid). The DSP, 6 explained in the CES testimony, enables the foundation for the requisite people, process, technology, and infrastructure 7 evolution that is required to meet the goals set forth in the 8 New York State Climate Leadership and Consumer Protection Act 9 10 (CLCPA).

11 Q. What is the GridMod Communications Project?

A. As Con Edison deploys sensors and systems to support Rev-Grid
Modernization, IT deploys communication networks to enable
these Rev-Grid Modernization systems. Accordingly, this
project installs network communications solutions to manage
the transport of the data generated by these systems. This
infrastructure expansion will span a twenty-year horizon in
alignment with Con Edison's Grid Innovation plan.

19 Q. Turning to your next investment, please explain the Data20 Centers Improvement Project.

A. While we are reducing the size and number of our data centers
as our systems move to the cloud, we must maintain and upgrade
remaining centers so that they can host certain critical IT
assets and provide diversity and redundancy. The Data Centers

### INFORMATION TECHNOLOGY PANEL

1 Improvement Project enhances and upgrades end of life 2 equipment as it relates to power, cooling (HVAC), battery 3 (Uninterruptible Power Supply or UPS), cabling within the data 4 centers as well as other data center communications, and 5 network infrastructure that keep the data centers reliable and 6 redundant. The Company is also investing in appropriate data 7 center preventative maintenance and around the clock support for any emergencies. 8 Please explain the next investments, XM-8 and XM-10. Ο. 9

10 A. As described by the Shared Services Panel, the Company has
11 certain general equipment categories. IT is responsible for
12 managing and purchasing XM-8 and XM-10 equipment used
13 throughout the Company.

XM-8 provides communications equipment to support Company 14 telephone networks including voice over IP (VoIP), radio 15 systems, telecommunication equipment for voice circuits, and 16 conference room collaboration equipment. This allows employees 17 to communicate and access business systems, including the 18 Customer Service System, Outage Management systems, electric, 19 20 gas, steam monitoring and control systems, as well as other 21 financial, Human Resources, and legal systems. XM-10 provides critical computing components including the 22 23 mainframe, servers, PCs, tablets, laptops, storage, network

24 equipment for Local Area Networks (LANs), internet-facing

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1		technology improvements to allow remote access, and
2		infrastructure needed for the Wide Area Network (WAN) as well
3		as wireless networks. Technology upgrades are required to
4		provide a reliable and accessible environment for critical
5		resources located in data centers and support server growth
6		from new business system projects.
7	Q.	What benefits do XM-8 and XM-10 programs provide?
8	Α.	XM-8 and XM-10 equipment and associated upgrades promote
9		performance and security improvements. The programs under
10		these budgets support:
11		• Safety - private wired and wireless communications enable
12		Con Edison to respond rapidly to emergency situations and
13		critical incidents over secure and segmented channels.
14		• Operational Efficiency - the communication, data computing,
15		and networking infrastructure provides a stable and
16		efficient platform for the applications and processes used
17		by the various operating businesses to achieve and maintain
18		operational efficiency.
19		• Customer Enablement - the customer-centric applications and
20		voice communication systems used in the customer contact
21		centers.
22	Q.	What is the next project?
23	Α.	Hardware and Software Maintenance.

# INFORMATION TECHNOLOGY PANEL

1	Q.	Are there hardware and software maintenance contracts
2		associated with the investments discussed in this testimony?
3	A.	Yes. To use foundational infrastructure investments provided
4		by others, we must agree via contracts to obtain and pay for
5		the hardware and software maintenance services.
6		In addition, over the past few years, the Company is
7		increasingly relying on cloud services, which equates to a
8		subscription contract.
9		The Company protects these investments through maintenance or
10		subscription contracts for the hardware, software, or cloud
11		services. The existing infrastructure, including our
12		mainframe, also requires similar support.
13	Q.	Why do you need maintenance and/or subscription contracts?
14	A.	We must engage in contracts for services, especially with the
15		
		increasing volume of work. The volume of these contracts
16		increasing volume of work. The volume of these contracts increases commensurate with the investment.
16 17		<pre>increasing volume of work. The volume of these contracts increases commensurate with the investment. The services associated with these contracts keep the hardware</pre>
16 17 18		<pre>increasing volume of work. The volume of these contracts increases commensurate with the investment. The services associated with these contracts keep the hardware and software up to date, patch cybersecurity vulnerabilities,</pre>
16 17 18 19		<pre>increasing volume of work. The volume of these contracts increases commensurate with the investment. The services associated with these contracts keep the hardware and software up to date, patch cybersecurity vulnerabilities, replace hardware failures, maintain active cloud</pre>
16 17 18 19 20		<pre>increasing volume of work. The volume of these contracts increases commensurate with the investment. The services associated with these contracts keep the hardware and software up to date, patch cybersecurity vulnerabilities, replace hardware failures, maintain active cloud subscriptions, and implement new release features within the</pre>
16 17 18 19 20 21		<pre>increasing volume of work. The volume of these contracts increases commensurate with the investment. The services associated with these contracts keep the hardware and software up to date, patch cybersecurity vulnerabilities, replace hardware failures, maintain active cloud subscriptions, and implement new release features within the products. This allows sustainability and supportability of</pre>

#### INFORMATION TECHNOLOGY PANEL

availability of the network, business applications, and
 infrastructure.

Are there projects under IT Hardware and Software Maintenance 3 Q. 4 associated with cloud services subscription contracts? 5 Α. Yes, our Microsoft suite of services. The Microsoft suite of 6 services provides foundational and innovative tools to support 7 the Company. The Microsoft 365 (M365) program is the Company's major cloud services investment. M365's suite of 8 9 products includes Office, Azure, database and security tools.

10 Q. Please describe Cloud Computing in more detail.

A. Cloud computing is a network of remote servers hosted on the
Internet to store, manage, and process data in place of local
servers or personal computers. As Cloud technology matures,
companies extend, replace, or defer constructing their own
facilities, using this reliable option.

16 Q. Please describe Azure services.

Microsoft Azure is the Company's primary cloud provider, 17 Α. providing our data and analytics platform as well as cloud 18 services known as Infrastructure as a Service (IaaS). IaaS 19 provides server and storage capacity, extending our data 20 21 center footprint. These services provide scalable solutions which are designed to be provisioned quickly. 22 23 Please describe services received under M365. Ο.

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1	A.	M365 is the current corporate standard for desktop
2		productivity, collaboration, and security tools software. Its
3		business applications include Outlook, Teams, SharePoint,
4		OneDrive, and all other traditional Office products. It also
5		includes an advanced suite of security tools, such as Defender
6		and Active Directory. M365 helped us operate in a remote
7		environment, provides the ability to deploy applications
8		quickly and permits improved disaster recovery as applications
9		are accessible from anywhere.
10	Q.	Has the Panel prepared an exhibit that discusses the capital
11		and O&M projects associated with IT foundational
12		infrastructure?
13	A.	Yes. An exhibit was developed under our direction and
14		supervision.
15		MARK FOR IDENTIFICATION AS EXHIBIT (IT-2)
16		
17		TT Platforms
18	Q.	Please discuss the Foundational IT platform investments.
19	A.	The Company is investing in foundational technologies that
20		provide the ability to improve existing business processes and
21		technical enhancements that increase software and hardware
22		capabilities. These technologies include Data Analytics,
23		Cloud Computing, and Mobility. When we implement these
24		programs, we standardize these new technologies to avoid
25		technology redundancies, reduce costs, embed cybersecurity,

#### INFORMATION TECHNOLOGY PANEL

1	and	enable	quicker	delivery	of	the	technologies	mentioned
2	abov	ve.						

3 Q. Has the Panel prepared an exhibit describing the projects and4 programs associated with IT Platform Technologies?

5 A. Yes, the exhibit entitled, IT Platform Technologies, consists
6 of seven whitepapers and was prepared under our direction and
7 supervision.

MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-1) 8 Are there different categories of IT Platforms? 9 Q. 10 Α. As noted earlier, IT Platforms support projects for Data Analytics, Cloud Computing, Mobility, Customer Relationship 11 Management, Work & Asset Management, and ERP. We explained 12 13 Cloud Computing and our Work and Asset Management project earlier and the Customer Operations Panel discusses the 14 15 Customer Relationship Management projects.

- 16 Q. Is there a capital and O&M request associated with these 17 programs?
- 18 A. Yes.
- 19

	Capital - Total Annual Request (\$ Millions)						
IT Platforms	2023	2024	2025	Sum - 3 years			
Mobility-Digital Factory	\$13.8	\$13.8	\$13.8	\$41.3			
Data Governance Program	\$4.7	\$4.6	\$2.3	\$11.7			

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Data Integration	\$3.9	\$2.8	\$2.9	\$9.5
Modernization	ψοιο	φ2.0	φ2.0	çolo
Analytics Center of				
Excellence - EDAP	\$1.2	\$1.2	\$1.2	\$3.5
enhancements				
Business Enablement	\$1.0		\$1.0	\$2.0
(PACE – Digital Factory)	ψHσ		ψHσ	ΨΞIO
Total – IT Platforms	\$24.5	\$22.3	\$21.1	\$67.9

1

2

3

#### Data and Analytics

4 Q. Please describe Data and Analytics.

5 A. Analytics uses technology and mathematical techniques to
6 develop actionable insights from data to solve customer and
7 operational problems.

8 Q. Please provide an overview of the Company's proposed Data and9 Analytics program.

10 A. Through partnerships with the business groups, the Company's
11 Data and Analytics program focuses on leveraging technologies
12 to enable and execute data-driven insights across the Company.
13 IT provides technology investments, reusable frameworks, and
14 governance best practice information to support business15 driven analytics, while business groups sponsor projects that
16 target specific departmental needs.

17 Q. Please discuss recent data and analytics projects and the18 information produced.

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1	Α.	Since 2017, the Company has implemented analytics projects
2		across business groups that have improved public safety and
3		reliability. In the last rate case, the Company's analytics
4		efforts were focused largely on supporting its AMI rollout and
5		AMI network operations. The current projects expand the
6		existing analytics framework to provide Company-wide benefits.
7	Q.	What are the Data and Analytics projects included in this
8		filing?
9	A.	IT is sponsoring three Data and Analytics projects, as shown
10		in the table below:
11		• Analytics Center of Excellence - EDAP Enhancements
12		• Data Governance
13		• Data Integration Modernization
14		We note that, in addition to these Data and Analytics
15		projects, other Panels sponsor projects, including Customer
16		Operations Data Analytics, Distribution Engineering Grid Mod
17		Data Analytics Use Cases, and the Customer Operations Privacy
18		Readiness Program.
19	Q.	Is there another data and analytics initiative that the
20		Company is working on?
21	A.	Yes. The Commission requires the development of an Integrated
22		Energy Data Resource (IEDR). IT and other Company
23		organizations support this effort. We are working with Staff,
24		NYSERDA, and other utilities on developing the IEDR.

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1	Q.	Has the Company developed exhibits that further explain the
2		three Data and Analytics projects sponsored by this Panel?
3	Α.	Yes. Under our direction and supervision, we have three
4		whitepapers explaining the projects.
5		MARK FOR IDENTIFICATION AS EXHIBIT (IT-2)
6	Q.	Please describe the project identified as Analytics Center of
7		Excellence - EDAP Enhancements.
8	A.	The Company's Enterprise Data Analytics Platform (EDAP) is our
9		central data repository and analytics platform. EDAP delivers
10		advanced analytics to the enterprise. The platform is
11		comprised of a suite of technologies, including C3.ai and
12		Azure technologies, to deliver enterprise analytics
13		capabilities, such as data processing, centralizing raw data,
14		building and sharing datasets, modeling and forecasting, and
15		self-service analysis and reporting.
16		This project will enhance EDAP's existing technical
17		capabilities including expanding functionality, providing
18		easier access to analytics tools and increasing data and
19		analytics accuracy. As the program grows and demand for near-
20		real-time operational analytics increases, the platform
21		requires expanded infrastructure to improve resiliency and
22		reliability, lower recovery time during an outage, accommodate
23		more ad hoc analytics, and enable self-service capabilities.
24	Q.	Please describe the Data Governance Program.

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1	Α.	The Data Governance Program will develop and deploy a data
2		management framework to include an out-of-the-box technology
3		platform equipped with industry-standard data management
4		capabilities. The program will classify, control, secure, and
5		govern data assets as they are produced, processed, and
6		integrated with other assets and made available for
7		consumption across the enterprise. Data governance works in
8		conjunction with data integration processes that provide clean
9		data to downstream applications, business processes, and
10		analytic use cases.
11	Q.	Are there other projects that will help to govern and
12		standardize data and data integrations?
13	A.	Yes. Data Integration Modernization is also key in creating
14		standard and consistent data across various systems.
15	Q.	Please describe the Data Integration Modernization project.
16	A.	Data integrations allows multiple systems to share data
17		through standard processes and tools. It involves
18		combining data residing in different systems and providing it
19		to other business systems. Data integrations are implemented
20		using standard practices, architectural techniques, and tools
21		to produce consistent access to data in a secured, timely
22		fashion.
23		This project will implement tools that can scale, process

24 large data volumes, and transform and enhance the data where

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1		needed. Business use cases, such as asset maintenance,
2		electric/gas system monitoring, smart sensor programs, EDAP
3		and privacy, will rely on integration capabilities delivered
4		by the integration modernization project.
5	Q.	Are these foundational platforms used to support business
6		projects?
7	A.	Yes. As noted earlier, business groups request funding for
8		several projects. These projects include the Customer Data and
9		Analytics, Privacy Readiness, Central Operations Condition
10		Monitoring and Asset Health, and Grid Mod Data Analytics.
11		They target departmental outcomes that can be addressed by
12		analytics or the treatment of data. These projects seek to
13		unlock new insights and affect process change to enhance data-
14		driven decision-making that supports the Company imperatives
15		of safety, operational excellence, and customer experience.
16		
17		Mobility
18	Q.	What is Mobility?
19	Α.	Mobility is the adoption of digital technology through mobile
20		platforms. This technology allows employees and customers to
21		perform work tasks or customer-related tasks from anywhere, an
22		expectation from users in today's mobile world. Common goals
23		for Mobility implementations include improving efficiency,
24		value, and/or innovation.
25	Q.	How is the Company implementing Mobility?

# INFORMATION TECHNOLOGY PANEL

Α.	The Company is currently planning two projects to enhance
	digital capabilities. They are:
	• Digital Factory - Mobility
	• Digital Factory - Process Automation Center of
	Excellence.
	IT has two working groups, the mobile application development
	group, and the Process Automation Center of Excellence (PACE)
	to support Mobility.
Q.	Has the Panel prepared an exhibit that explains these
	projects?
A.	Yes. An exhibit was developed under our direction and
	supervision.
	MARK FOR IDENTIFICATION AS EXHIBIT (IT-2)
Q.	What is Digital Factory - Mobility?
	Digital Factory is an IT mobile application development and
	support group. By working collaboratively with business
	areas, Digital Factory's development focuses on high impact
	business processes and agile delivery of technologies that
	promote operational and project excellence.
Q.	Please provide examples of Mobility projects that have been
	completed.
Α.	Some examples of Mobility Projects that have been completed
	are the First Responder Tool (FRT), Environmental Resource
	А. Q. Q. Q. А.

### INFORMATION TECHNOLOGY PANEL

Component Library (CCL), Site Safety, and Public Hazards. Some
 of these projects have planned enhancements based on business
 requests and additional learnings.

4 Q. In addition to providing technology for Digital Factory, is 5 the Company requesting personnel to assist with this work? 6 Α. Yes. We are requesting an increased headcount of two resources for the Digital Factory - Mobility team, and six 7 resources for the Digital Factory - PACE team. Both teams will 8 leverage contractors as required for the scope of the project. 9 10 The increased headcount and contract resources will include application developers, UI/UX designers, scrum masters, and 11 product analysts. 12

Q. What does Digital Factory's mobile application development
group plan to do in the future to enable the Company's
objectives?

Digital Factory plans on expanding its mobile applications 16 Α. portfolio to different workstreams. We will promote 17 operational and project excellence by creating mobile products 18 that enhance data collection, provide better data availability 19 and analysis, and digitize processes. By promoting innovation 20 21 and implementing new technologies, Digital Factory aims to provide a better customer and employee experience. 22 23 Please provide some examples of expected work during the 0.

24 upcoming three years.

#### INFORMATION TECHNOLOGY PANEL

1	Α.	The Digital Factory will continue to enhance the existing
2		products mentioned above and deploy new mobile applications
3		for overhead line and underground electric crews, and
4		emergency response organizations.

5 Q. Please describe the Digital Factory PACE team.

6 Α. The Digital Factory PACE Team is a development, support, and 7 governance team that manages SharePoint, PowerApps, and Blue Prism Robotic Process Automation (RPA). This project looks to 8 expand the governance and support for these technologies by 9 10 creating a center of excellence to enable the business to also develop its own applications. These technologies enable an 11 end user to develop with little to no programming knowledge. 12 13 This type of programming, known as citizen development, requires a governance and training group to confirm standards 14

15 are met.

16 Q. What solutions has PACE implemented?

17 A. The PACE Team has built over 30 applications. As an example,
18 the team was able to quickly develop a Pandemic Case Tracking
19 system via SharePoint and RPA, while also deploying a Covid

application for field employees to report daily symptoms.

21

22

20

Cybersecurity

Q. Does the Company have an incremental request for itscybersecurity program?

25 A. Yes. See the chart below.

INFORMATION TECHNOLOGY PANEL

Capital - Total Annual Reque				equest
	2023	2024	2025	Sum - 3 years
Cybersecurity	\$21.7	\$21.2	\$23.6	\$66.5

1

2 Q. Please explain IT's Cybersecurity strategy.

3 Over the past few years, the risk of cybersecurity incidents Α. has increased dramatically, as can be seen by multiple 4 5 organizations experiencing impacts to their operations and 6 losing confidential customer information. The Company works to mitigate the growing cybersecurity threat and maintain the 7 8 confidentiality, integrity, and availability of our systems and data through implementation of a robust set of processes 9 10 and internal controls. To accomplish this, we continue to focus on deploying new technology to mitigate new and evolving 11 12 threats, expanding the capabilities and functions of the cybersecurity team, and implementing new procedures and 13 policies to embed security throughout Company processes and 14 systems. 15

16 Q. Does the Company have a cybersecurity program?

17 A. Yes. The Company has implemented a strategy that combines
18 defense-in-depth (multiple security layers) with defense-in19 breadth (multiple tools at these layers) concepts. As new
20 risks are identified, and the capabilities of adversaries
21 increase, the Company reassesses current security controls,

# INFORMATION TECHNOLOGY PANEL

1		implements new processes, and invests in new technologies to
2		maintain a secure posture and stay ahead of malicious actors.
3		Cyber-attack risks include operating failures of control
4		systems, damage to transmission and distribution (T&D) assets,
5		the loss of sensitive data, and employee and public safety.
6	Q.	Does the Company work with others regarding cybersecurity?
7	A.	The Company engages in collaborative defense efforts with
8		industry, federal, state, and local partners. We also work on
9		and participate in local, regional, and national level
10		cybersecurity drills. We benchmark with and share best
11		practices with peers within and outside the industry. Our
12		cybersecurity protection program relies on a strong framework
13		of Collective Defense and Collective Response.
14	Q.	Are there other initiatives that affect the nature of the
15		Company's actions to address cybersecurity?
16	A.	There are several initiatives/rules that affect our actions.
17		They include:
18		o Revisions, and additions to NERC's Critical
19		Infrastructure Protection (CIP) standards, which contain
20		cybersecurity rules for the bulk electric system
21		o Federal government security directives, including, for
22		example, Transportation Security Administration (TSA)
23		requirements, and

INFORMATION TECHNOLOGY PANEL

1		o Other potential legislation and/or regulation at both the
2		federal and state level regarding cybersecurity and
3		privacy, including data breaches.
4	Q.	How has the Company been addressing the cybersecurity
5		challenge?
6	Α.	The Company continues to address cybersecurity from three main
7		vantage points: (1) preventing and educating, (2) monitoring,
8		detecting, and alerting, and (3) responding to incidents,
9		including recovery/mitigation.
10	Q.	What does the Company mean by prevention and education?
11	A.	Prevention is aimed at avoiding any attacks on our system and
12		is achieved through risk management processes, appropriate
13		architecture and security reviews, and implementation of
14		multiple technologies at multiple security zones. Education
15		provides employees and partners with information on their role
16		in preventing cyber intrusions, awareness of cybersecurity
17		threats, and proper cyber hygiene protocols.
18	Q.	Turning to the second step, detection, what does the Company
19		do?
20	Α.	The Company operates a 24x7 Cybersecurity Operations Center
21		(CSOC), which monitors our computing network to detect
22		threats, anomalies, and vulnerabilities. We partner with
23		external entities that provide the Company with intelligence
24		to help mitigate potential threats.

### INFORMATION TECHNOLOGY PANEL

Q. Please explain your third cybersecurity area: Incident
 Response and Recovery/Mitigation.

A. The Company has segmented its network to minimize the impact
of a cyber attack. The Company has also developed plans and
procedures to respond to cyber-attacks and data breaches. This
includes the availability of cyber forensic experts, who
provide forensic analysis.

8 Q. Is there more work to do in the cybersecurity area?

9 A. Yes. Given the significant rise in the sophistication,

10 volume, and impact of cybersecurity threats, we must continue 11 to further grow and develop our capabilities, implement 12 technology, and enhance processes to further protect our 13 systems and data and improve detection, resiliency, and 14 recoverability.

15 Q. How are you addressing the continued work?

To stay ahead of the current and evolving threats, we must 16 Α. 17 have technology in place to prevent and detect threats and upgrade these technologies as new or upgraded versions become 18 available. Staying ahead of the threats means continuing many 19 of the items discussed above. The Company will also continue 20 21 to work with others, partnering with law enforcement across federal, state, and local agencies and benchmarking best 22 23 practices with our industry peers.

### INFORMATION TECHNOLOGY PANEL

Q. Please describe the forecasted capital request for each rate
 year under the cybersecurity program.

3 To continue enhancing the Company's security posture, the Α. 4 Company will invest in multiple cybersecurity efforts to secure both the IT and OT (i.e., segments of our network that 5 6 support operational equipment, such as substations and electrical switches). The total RY1 capital request is \$21.7 7 million, RY2 capital request is \$21.6 million, and RY3 capital 8 request is \$23.6 million. (*i.e.*, \$66.9 million in total over 9 10 the period 2023-2025).

Please summarize the Company's cybersecurity O&M request. 11 Q. With the investments in cybersecurity technologies and 12 Α. 13 capabilities, the Company projects the associated incremental maintenance cost to be \$11.5 million in incremental 14 expenditures in RY1, \$7 million in incremental expenditures in 15 RY2, and \$1.8 million in incremental expenditures RY3 16 (i.e., \$20.3 million in total over the period 2023-2025). 17 A large portion of the O&M budget increase would be the 18 inclusion of advanced cybersecurity technologies, such as an 19 Identity and Access Management solution, a Virtual Private 20 21 Network (VPN) replacement solution, and a segmentation solution. 22

The O&M request also includes maintaining contracts from past
 capital implementations, such as Privileged Access Management

# INFORMATION TECHNOLOGY PANEL

1		and Microsoft security technologies. In addition, contractor
2		services are required to perform automation of cybersecurity
3		operations and increase the level of threat hunting,
4		penetration testing, and security assessments.
5	Q.	Is there a document that further explains the Company's
6		cybersecurity program?
7	A.	Yes. There is a confidential exhibit entitled Cybersecurity
8		and Cybersecurity Infrastructure, that was prepared at the
9		Panel's direction and supervision
10		MARK FOR IDENTIFICATION AS CONFIDENTIAL EXHIBIT (IT-7)
11	Q.	Please describe this document.
12	A.	This confidential document explains the Company's proposed
13		cybersecurity investments for the next five years. Note that
14		all IT related confidential exhibits are included in
15		CONFIDENTIAL Exhibit (IT-7).
16		
17		Applications
18	Q.	What is covered under the Applications category of projects
19		and programs?
20	A.	As discussed earlier, the Company is continuously looking to
21		modernize, standardize our application portfolio so that the
22		applications are supported (avoid technology obsolesce/end of
23		life) as well as rationalize the portfolio which is
24		demonstrated by our One Work & Asset management System
25		initiative.

# INFORMATION TECHNOLOGY PANEL

1	Q.	Will you discuss projects for each category?
2	A.	Yes. We explain about modernizing our portfolio and discuss
3		the Technology Modernization project. Then, we turn to other
4		projects and discuss the Enterprise Unifier Software Project -
5		Phase 2, and IT System Testing Center of Excellence (COE).
6	Q.	Has the Panel prepared a document that explains the projects
7		included in this category?
8	A.	Yes. We have whitepapers describing the Application related
9		projects that were prepared under our direction and
10		supervision.
11		MARK FOR IDENTIFICATION AS EXHIBIT (IT-2)
12	Q.	Regarding the first topic, how will the Company modernize the
13		portfolio?
14	A.	The Company will continue to:
15		o consolidate and modernize business systems (as noted
16		above, we expect to retire over 100 applications after
17		GIS and new CSS is fully implemented)
18		o Continue to outsource certain maintenance and support
19		functions and leverage our providers automation tools to
20		reduce costs of support.
21	Q.	Please discuss the Technology Modernization project.
22	A.	IT manages a portfolio of approximately 450 applications in
23		support of our Electric, Gas, Steam, Customer Operations, and
24		Shared Services organizations. Over the next three years, IT

# INFORMATION TECHNOLOGY PANEL

1		plans to modernize, upgrade, replace, consolidate, and retire					
2		applications within this portfolio. This project has two main					
3		initiatives:					
4		1. Retiring or replacing approximately 150 of the 450					
5		applications over the next 3 years.					
6		2. Consolidating applications to a single standardized					
7		enterprise technology as discussed earlier and					
8		demonstrated by our GIS project which will retire 30+					
9		systems built over the past 25 years.					
10	Q.	What will this project achieve?					
11	Α.	We will modernize and reduce our portfolio of systems. That					
12		is, systems will be consolidated or retired as appropriate,					
13		and upgrades will be performed to maintain current standards.					
14		Our goal will be to upgrade/modernize approximately 50 apps					
15		per year over the next 3 years (both insourced and					
16		outsourced).					
17	Q.	What are the main drivers for this initiative?					
18	Α.	The main drivers are increasing organizational efficiencies by					
19		keeping applications functionally current, the reduction of					
20		technology obsolescence to mitigate risks, and maintaining					
21		vendor software support.					
22	Q.	Turning to the second category of application projects, what					
23		is the Enterprise Unifier Software Project - Phase 2?					

### INFORMATION TECHNOLOGY PANEL

A. The project improves the Company's project management
 capabilities for capital construction projects by expanding
 and implementing our project management software platform,
 Primavera.

5 Q. Please explain the reason for this project.

6 Α. Primavera supports improved schedule management, cost 7 management, contract management, project lifecycle governance, and document management. The project supports enterprise 8 9 standard processes and procedures, which will foster improved 10 project management overall and lead to greater consistency and efficiency in the Company's execution of capital projects. 11 This project is also consistent with our strategy of 12 13 standardizing on enterprise IT platforms for common business processes. 14

15 Q. What is the IT System Testing COE project?

The Testing COE is a consolidated and centralized governance 16 Α. model for application testing practices, which will be 17 implemented across IT. It is critical to test applications to 18 confirm they work as designed. There are difficult testing 19 cycles undertaken before an application moves into Production. 20 21 For example, there is functional testing (does application meeting design) and performance testing (is application 22 23 working as designed under forecasted load). Our IT systems are 24 constantly receiving patching - whether it's for cyber

### INFORMATION TECHNOLOGY PANEL

security or enhancements - which requires testing for each
 change.

3 Applications like our Outage Management Systems must scale 4 exponentially from the daily non-storm load within minutes to handle a large storm event. Our public web site and external 5 6 outage Map (fed by our OMS) may have no one viewing the site one minute and then thousands of views and creating outage 7 tickets within minutes. We must confirm the system's ability 8 to scale up so that that our customers are not negatively 9 10 impacted by processing delays. In addition, our upcoming or in-flight major application initiatives require a centralized 11 governance model for a common sustained/repeatable process for 12 functional and performance testing, defect management, and 13 knowledge management. 14

15 Q. Why is the IT System Testing COE Project needed?

16 A. In short, to invest in both technology, processes and people
17 so that we have a robust and structured method for performing
18 all the various types of testing. Most notably, this will
19 improve our capability for outage management simulation
20 testing.

21

#### PROJECTS IN OTHER AREAS

Q. The Panel mentioned earlier that it included exhibits,
 generally whitepapers, for IT projects for most other Company
 organizations. How will these projects be addressed?

# INFORMATION TECHNOLOGY PANEL

1	A.	This testimony and accompanying exhibits discuss the remaining
2		IT projects requested by other organizations, except for
3		Customer Operations. Some of these projects are enterprise
4		wide, some are specific to the organization, and they vary in
5		size and scope.
6		We have divided the projects into business organizations and
7		each business organization has an exhibit with their IT
8		related white papers. Some of the larger projects are
9		explained either in this testimony or in the organization's
10		testimony.
11		
12	0	COMMON IT PROJECTS
12	Q.	Prease exprain what if projects are included in this section.
14	Α.	IT projects that support various Company organizations, such
15		as Human Resources, Supply Chain, Learning & Inclusion, Law,
16		Corporate Security, Environmental Health and Safety, Rate
17		Engineering, Accounting, and Auditing are included in this
18		section.
19	Q.	What is the total requested capital investment for Common
20		projects?
21	A.	Common total capital request for 2023-2025 is \$47.6 million:
22		\$14.9 million in RY1, \$17.9 million in RY2 and \$14.7 million
23		in RY3.
24	Q.	Are there several large projects which represent most of the
25		requested capital investment?

## INFORMATION TECHNOLOGY PANEL

1 A. Yes. Two projects, the Oracle HCM and EBS projects, described

2 in the enterprise-wide section earlier.

- 3 Q. Please list the remaining Common IT projects.
- 4 A. The table below lists all Common IT projects with the
- 5 requested capital funding.
- 6

	Capital - Total Annual Request				
	(\$ Millions)				
Common IT	2023	2024	2025	Sum - 3	
Projects			2025	years	
Learning and	\$5.0	\$4.3	\$3.1		
Inclusion Digital				\$12.4	
Learning				ψ12. <del>4</del>	
Transformation					
Budget System	\$0.8	\$3.5	\$3.5	\$7.8	
Enhancements				ψ1.0	
Phased Replacement	\$1.4	\$3.0	\$2.7	\$7.1	
of Legal Technology				φ7.1	
Corporate Security	\$1.5	\$1.5	\$1.5		
NVR and DVR				\$4.5	
replacements					
Rate Case	\$1.3	\$1.3	\$1.3	¢3.8	
Enhancements				φ3.0	
Corporate Security -					
Company Wide	\$1.2	\$1.2	\$1.2	¢2.6	
Camera Rollout				<b>φ</b> 3.0	
Program					
Mobile EHS SME	\$1.0	\$1.0	\$0.2	\$2.2	
INFORMATION TECHNOLOGY PANEL

ERM - Archer Software	\$1.8	\$0.2		\$2.0
Third Party Risk Management		\$0.3	\$1.0	\$1.3
Sales and Use Tax integration Sabrix Vertex	\$0.5	\$0.7		\$1.2
Corporate Security - Cyber forensic equipment	\$0.3	\$0.3	\$0.3	\$0.8
Soft Tissue Injury Prevention Project	\$0.3	\$0.3		\$0.6
Obsolete Oracle GRC Software Replacement	\$0.1	\$0.4		\$0.4
Total – Common IT Projects	\$14.9	\$17.9	\$14.7	\$47.6

1

2	Q.	Has the Panel prepared whitepapers describing the programs
3		noted above?
4	A.	Yes. The Panel has had an exhibit prepared under its

- 5 direction and supervision.
- 6 MARK FOR IDENTIFICATION AS EXHIBIT (IT-3)
- 7 Q. Will the Panel explain any of these projects?
- 8 A. The Panel will three projects discuss:
- 9 Phased Replacement of Legal Technology
- 10
- Budget System Enhancement

INFORMATION TECHNOLOGY PANEL

1		• Sales & Use Tax Oracle Add On
2	Q.	Please describe the Phased Replacement of Legal Technology
3		project.
4	Α.	This project is a phased approach to replace obsolete legal
5		technology that is critical to the running of the Law
6		Department. Specifically, there are two phases, Phase 1
7		starts with the implementation of cloud-based matter
8		management and e-billing systems. Phase 2 is the
9		implementation of a cloud-based document management system and
10		will include the conversion of data from the existing out of
11		date document management system to the new system.
12	Q.	Please describe the Budget System Enhancements project.
13	Α.	This project represents an ongoing investment in the
14		continuation of the Company's move from the legacy Hyperion
15		Planning (HP) suite of planning and budgeting applications to
16		the newer Enterprise Planning and Budgeting Cloud Service
17		(ePBCS) technology platform. The system will provide more
18		accurate planning forecasts for internal budget reviews and
19		approvals and facilitates information for regulatory
20		proceedings, such as rate cases.
21	Q.	Please describe the Sales and Use Tax Oracle Add On.
22	Α.	This project is to add a Sales and Use Tax software program
23		to the Oracle system, which will improve the process of

## INFORMATION TECHNOLOGY PANEL

1		calculating, collecting, and reporting of Sales and Use
2		Tax.
3	Q.	Are there other descriptions of these projects?
4	A.	Shared Services discusses Learning and Inclusion Digital
5		Transformation. Other projects are discussed in the exhibit.
6		
7		ELECTRIC IT PROJECTS
8	Q.	Please explain what Electric IT projects are included in this
9		section.
10	A.	IT projects that support Electric Operations and Substations
11		are included in this section.
12	Q.	What is the total requested capital investment for Electric
13		projects?
14	A.	The total capital request for 2023-2025 is \$47.8 million:
15		\$20.8 million in RY1, \$15.2 million in RY2 and \$11.8 million
16		in RY3.
17	Q.	What Electric projects will you describe?
18	A.	We explain Grid Modernization Data Use Cases and the Customer
19		Business Intelligence and Decisioning project.
20	Q.	Please describe the Grid Modernization Data Analytics Use
21		Cases project.
22	A.	Using one of our Foundational IT platforms, Enterprise Data
23		Analytics Platform (EDAP), IT and Distribution Engineering
24		have partnered to series of modules on C3.ai. This project
25		enables Grid Innovation data analytics use cases to understand

## INFORMATION TECHNOLOGY PANEL

1		asset health, and improve safety and operations. For example,
2		one module developed, using AMI voltage data and Machine
3		Learning, identifies locations with high probability of an
4		open and defective neutral and ground conditions on customer
5		services. If a neutral is loose, corroded, or open, it has the
6		potential to cause, among others, dim or flickering lights or
7		electric shock. Another module leverages plant data to
8		automate identification of unit substation transformer
9		overloads to reduce the risk of equipment failure.
10	Q.	Is this project evolving?
11	A.	With each successful new module, Distribution Engineering and
12		IT prioritize new use cases. We already have a backlog of
13		several use case under review as well as potential projects
14		for 2023-2025.
15	Q.	What are some of the use cases on the table?
16	A.	During 2022, we are working on approximately five use cases,
17		including a transformer health risk score. During 2023-2025,
18		some potential use cases involve cable failure analytics, and
19		substation and feeder health risk scores. These modules will
20		help us better understand operating conditions and potentially
21		prevent failures.
22	Q.	Please discuss the Customer Business Intelligence and

23 Decisioning project.

## INFORMATION TECHNOLOGY PANEL

1	Α.	This project has developed our Virtual Assistant application,
2		which enables a customer to cancel an appointment with our
3		Energy Services groups through an automated process. Once the
4		cancellation is made, the process we have developed
5		automatically updates any affected systems to cancel and
6		reschedule an appointment.
7		During 2023-2025, this project will look to make additional
8		enhancements and automations, allowing employees to focus on
9		more complex issues.
10		We already have several potential use cases, including
11		understanding failed inspections through data analysis and
12		developing training to assist contractors for better
13		inspection results.
11	0	Diseas list the memoining Electric III presidents

14 Q. Please list the remaining Electric IT projects.

15 A. The table below lists all Electric IT projects with the16 requested capital funding.

	Сар	ital - Total	Annual Ree	quest	
		(\$ Millions)			
Electric IT Projects	2023	2024	2025	Sum - 3 years	
Grid Mod Data Analytics Use Cases	\$4.5	\$4.5	\$4.5	\$13.5	
Customer Business Intelligence and Decisioning	\$4.0	\$4.0	\$4.0	\$12.0	
DEMS Replacement Project	\$2.8	\$1.5		\$4.3	
AutoCAD (Engineering	\$0.8	\$0.8	\$0.8	\$2.4	

## INFORMATION TECHNOLOGY PANEL

Equipment Upgrade					
Program)					
Electric - ARM Replacement	\$2.2			\$2.2	
(Phase 0)	φ2.2			ΨΖ.Ζ	
Central Operations Tableau	\$0.6	\$0.6	\$0.6	\$1 <b>7</b>	
to Power Bi Migration	ψ0.0	ψ0.0	ψ0.0	ψ1.7	
Operation Management	\$0.8	\$0.4	\$0.4	\$1.5	
System at ECC	ψ0.0	ψ0.4	ψ0.4	ψ1.5	
TNVS WEB	\$0.5	\$0.5	\$0.5	\$1.5	
Operations Network for	\$0.4	<u></u>	<u></u> ፍባ 5	¢1 3	
EMS	φ0.4	φ0.5	φ0.5	φ1.5	
District Operator Task	¢ ∩ 9	¢0.4		¢1 0	
Managing System	φ0.0	<b>Φ</b> 0.4		<b>Φ1.</b> Ζ	
Central Operations Battery	\$0.6	\$0.6		¢1 0	
Monitoring Systems	φ0.0	Φ0.0		Ψ1.2	
Integration of virtual reality					
into Substation Operating	\$0.8	\$0.3		\$1.1	
Orders					
Central Operations					
Condition Monitoring and	\$0.5	\$0.5		\$1.0	
Asset Health					
2021 Electronic Feeder Sign	¢0.2	¢0.2	¢0.2	¢1.0	
On	φ0.5	φ0.5	φ0.5	φ1.0	
nMarket upgrade to	¢1.0			¢1 0	
accommodate REV	φ1.0			<b>ΦΙ.</b> Ο	
Contingency Analysis	\$0.2	\$0.2	<u></u> ቁስ  ን	\$0.7	
Program (CAP)	Ψ0.2	Ψ0.2	Ψ0.2	ψ0.7	
Distribution Ops Training	\$0.1			\$0.1	
Simulator	<i>\$</i> 0.1			Ţ	
Total – Electric IT Projects	\$20.8	\$15.2	\$11.8	\$47.8	

#### INFORMATION TECHNOLOGY PANEL

#### 1 2 Ο. Has the Panel prepared any documents that explain these 3 projects? 4 Α. Yes. Whitepapers have been prepared under our direction and 5 supervision. 6 MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-4) 7 8 CUSTOMER ENERGY SERVICES (CES) IT PROJECTS 9 Please explain what IT projects are included in this section. Q. IT projects that support Customer Energy Services (CES) are 10 Α. 11 included in this section. 12 Q. What is the total requested capital investment for CES 13 projects? The total capital request for 2023-2025 is \$294.8 million: 14 Α. \$90.6 million in RY1, \$99.6 million in RY2 and \$104.6 million 15 in RY3. 16 Where are the details about the CES IT requests? 17 Q. The table below lists all CES IT projects with the requested 18 Α. 19 capital funding.

Capital - Total Annual Request (\$ Millions) Sum - 3 2023 2024 2025 **CES IT Projects** years DSP \$62.2 \$62.6 \$63.1 \$187.9 DERMS ADMS \$16.5 \$15.3 \$15.3 \$47.0 Customer Recommendation \$12.0 \$12.0 \$11.0 \$35.0

## INFORMATION TECHNOLOGY PANEL

& Analysis Tools				
AMI Enhancements		\$7.0	\$15.2	\$22.2
Program		Ψ7.0	ψ10.2	ΨΖΖ.Ζ
REV DER Forecasting		¢o z		¢0.7
Application		φ2. <i>1</i>		<b>ΦΖ.</b> Ι
Total – CES IT Projects	\$90.6	\$99.6	\$104.6	\$294.8

1

2	Q.	Are there any documents that explain these projects?
3	A.	Yes. The CES testimony explains these projects.
4		Additionally, we have prepared whitepapers, under our
5		direction and supervision, that provide additional detail.
6		MARK FOR IDENTIFICATION AS EXHIBIT (IT-5)
7 8		
9		GAS IT PROJECTS
10	Q.	Please explain what IT projects are included in this section
11	A.	IT projects that support Gas are included in this section.
12	Q.	Is there one large project which represents the majority of
13		the requested capital investment?
14	A.	Yes. The Work & Asset Management New Functionality project,
15		described earlier, (\$10.1 million for RY1-RY3), which is
16		discussed in the Major Enterprise portion of this testimony.
17	Q.	Are there any additional Gas IT projects?
18	A.	Yes. There is one project with a total capital request for
19		2023-2025 is \$0.6 million, all in RY3.
20	A.	The table below lists the Gas IT project with the requested
21		capital funding.

### INFORMATION TECHNOLOGY PANEL

	Capital - Total Annual Request (\$ Millions)			
Gas IT Projects	2023	2024	2025	Sum - 3 years
SmartApp Replacement - Gas	\$0.6			\$0.6
Total – Gas IT Projects	\$0.6			\$0.6

1

Q. Has an exhibit been prepared to discuss this project?
A. Yes. A white paper entitled SmartApp Replacement - Gas has
been prepared under our direction and supervision.
MARK FOR IDENTIFICATION AS EXHIBIT \_\_ (IT-6)

6 Q. Does this complete the Panel's initial testimony?

- 7 A. Yes, it does.
- 8

MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		INTRODUCTION		
2	Q.	Would the members of the Municipal Infrastructure Support		
3		Panel ("Panel") please state your names and business		
4		addresses?		
5	A.	( <b>Sanoulis</b> ) Constantine Sanoulis and my address is 1610		
6		Matthews Avenue, Bronx, NY 10462.		
7		( <b>Brady</b> ) Dennis Brady and my address is 4 Irving Place, New		
8		York, NY 10003.		
9	Q.	What are your current positions at Consolidated Edison		
10		Company of New York, Inc. ("Con Edison" or the "Company")?		
11	A.	A. ( <b>Sanoulis</b> ) I am employed by Con Edison as the Vice		
12		President of Construction.		
13		( <b>Brady</b> ) I am employed by Con Edison as a Department Manager		
14		in Construction's Public Improvement Department.		
15	Q.	Please describe your educational backgrounds.		
16	A.	( <b>Sanoulis</b> ) I graduated from the City College of New York in		
17		1982 with a Bachelor of Engineering degree in Mechanical		
18		Engineering.		
19		( <b>Brady</b> ) I graduated from State University of New York at		
20		Buffalo with a Bachelor of Science degree in Mechanical		
21		Engineering and a Bachelor of Arts in Economics. I		
22		graduated from Pace University with a Master of Business		
23		Administration.		

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1 Q. Please describe your work experiences.

2 (Sanoulis) I joined Con Edison as an Assistant Engineer in Α. 3 1982. Since then, I have held various management positions 4 of increasing responsibility in the Company, including Plant Manager of the Waterside and Hudson Avenue Stations, 5 б Chief Mechanical Engineer, General Manager of Facilities 7 and General Manager of Construction Services, General Manager of Public Improvement & Engineering, and Vice 8 9 President of Steam Operations. In 2021, I assumed my 10 present position as the Vice President of Construction. 11 (Brady) I joined Con Edison in 2002 as a management intern 12 in the Company's GOLD program. Since then, I have held 13 positions of increasing responsibility in the Company, 14 including Operating Supervisor in Bronx/Westchester 15 Electric Construction, Senior Analyst for Manhattan 16 Electric, Project Manager in Energy Management, Section 17 Manager for Bronx/Westchester Electric Work and Resource 18 Management, Section Manager for the Brooklyn/Queens 19 Equipment Group, and Construction Manager for Public 20 Improvement. In 2021, I assumed my present position as 21 Department Manager in Public Improvement.

22 Q. Please generally describe your current responsibilities.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

(Sanoulis) My current responsibilities as Vice President of 1 Α. 2 Construction are to oversee both the contractor and inhouse work forces that perform the installation of electric 3 4 and gas facilities in the Con Edison service territory. 5 Additionally, I oversee all major capital improvement б projects in our generating, substation and other 7 facilities, along with maintaining the integrity of our electric, gas and steam systems during municipal 8 9 construction projects.

(Brady) My current responsibilities as Department Manager
of Public Improvement are to oversee the operational
support and engineering coordination for all municipal
projects that impact Con Edison in the service territory.
This requires planning, coordinating, analysis, operational
support and negotiating with contractors to facilitate the
administration of projects.

Q. Have you previously testified before the New York StatePublic Service Commission ("Commission")?

A. (Sanoulis) Yes, I testified in Case Nos. 99-F-1314, 99-S1621, 05-S-1376, 09-S-0794, 09-G-0795, and with regards to
Municipal Infrastructure programs, 13-E-0030, 13-G-0031,
and 13-S-0032 for electric, gas and steam filings.

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# MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		(Brady) Yes, I testified in Case Nos. 13-E-0030, 13-G-0031,
2		13-S-0032 with regards to the Management Audit Panel.
3	Q.	What is the purpose of your testimony?
4	A.	Our testimony provides the Company's forecast for
5		interference cost during the rate year, and we also provide
6		forecasts for two subsequent rate years to provide a basis
7		for settlement negotiations if the parties decide to seek a
8		three-year rate plan settlement. In providing this
9		forecast, we demonstrate the material costs the Company
10		incurs to comply with its obligations to perform
11		interference work. We will describe the nature of
12		interference and the challenges faced in forecasting costs
13		because this work is largely driven by factors outside of
14		the Company's control. Accordingly, the Company proposes a
15		full, bi-lateral reconciliation for these costs. Finally,
16		we will describe how the Company, within the limited
17		ability it has to control interference work, has
18		implemented an array of cost-mitigation measures.
19	Q.	Please summarize the areas your testimony addresses.
20	Α.	Our testimony addresses:

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	(1)	The definition and significance of "interference" as it
2		relates to Con Edison's system, including changes since
3		the Company's last filing and risks currently foreseen;
4	(2)	Interference Forecasting Methodologies;
5	(3)	Projected Operation and Maintenance ("O&M")
6		interference costs associated with the Company's
7		electric and gas facilities for the 12 months ending
8		December 31, 2023 ("Rate Year" or "RY1"), and for two
9		additional 12-month periods ending December 31, 2024 and
10		December 31, 2025 (which we will refer to as "RY2" and
11		"RY3," respectively, for ease of reference);
12	(4)	Projected Capital interference costs associated with
13		the Company's electric and gas facilities for calendar
14		years 2023 to 2025 ( <i>i.e.</i> , RY1 through RY3);
15	(5)	Mitigation measures the Company undertakes to reduce
16		its interference costs; and
17	(6)	A proposal for reconciliation of interference capital
18		and O&M expenses.
19		
20		
21		

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

DEFINITION AND SIGNIFICANCE OF INTERFERENCE 1 2 Please explain the term "interference" as it pertains to Ο. the Company. 3 4 Con Edison has an extensive system of gas and electric Α. facilities under and above the streets, including gas 5 б mains, gas services, electric services, electric cables, 7 conduits, poles, and appurtenances of various sizes and operating voltages. Under the streets, Con Edison 8 9 facilities share space with privately-owned facilities such 10 as telephone and cable TV, and with municipally-owned facilities such as water, sewer, transit, and traffic 11 12 facilities. Above ground, Con Edison electric overhead 13 facilities share space with private and municipal 14 facilities such as telephone, cable TV, fire alarm, street 15 lighting and traffic signals. The term "interference" 16 describes work Con Edison must do whenever its facilities 17 are "in the way" of an overhead or underground municipal 18 project and must be located, identified, relocated, 19 replaced, protected, or otherwise supported to accommodate 20 the project.

Q. Why is the Company required to perform interference workassociated with municipal projects and some state projects?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

As per the advice of counsel, the courts have held that Con 1 Α. 2 Edison's right to lay and maintain its facilities pursuant to a franchise granted by a municipality is subject to the 3 4 municipality's right to require Con Edison to remove or 5 relocate its facilities at the Company's expense whenever б public health, safety, or convenience requires. If the 7 Company fails to comply with such a request by the municipality, the Company may be liable for damages caused 8 9 by its failure. The City of New York has enhanced its 10 right to require utilities to perform interference work by 11 enacting New York City Administrative Code sections 19-143 12 (Excavations for Public Works), 24-521 (Excavations for 13 Public Works), and 19-150 (Civil Penalties) that, along 14 with court decisions interpreting these franchise 15 provisions, impose financial penalties up to \$5,000 on the 16 Company on a per day, per location basis, if the Company 17 does not timely relocate or protect its facilities located 18 at the site of public works projects undertaken for the 19 benefit, health or safety of the residents of the City. 20 New York State also has provisions for public utilities in 21 New York Highway Law Article 52, and Part 131 of NYSDOT 22 Rules and Regulations - NYCRR Title 17 (Accommodation of

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Utilities within State Highway Right-Of-Way) that specify 1 2 the facility owners are required to maintain their facilities. 3 Please explain the difference between "direct" interference 4 Q. 5 and "indirect" interference. 6 Direct interference occurs when an existing Con Edison Α. 7 facility must be located, identified, and relocated to 8 accommodate a new municipal facility. Indirect 9 interference occurs when Con Edison must locate its 10 facilities and monitor municipal construction or take steps to protect its facilities, but not move its facilities. 11 12 Indirect interference includes, for example, compensating 13 the municipal contactor for performing utility work or for 14 making incremental changes to its work plan to accommodate 15 Con Edison facilities, such as a change to the proposed 16 trench sheeting and shoring system to accommodate Company 17 facilities.

18 Q. What is the difference between municipal interference and19 private interference?

20 A. Municipal interference is work done by or on behalf of Con21 Edison to accommodate a municipal project. Private

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- 1 interference is work done by or on behalf of Con Edison to 2 accommodate a non-governmental project.
- 3 Q. Please describe the cost responsibility for municipal4 interference and private interference.
- 5 As a general matter, municipal interference costs are Α. б assigned to Con Edison for recovery through rates. For 7 example, if the City of New York ("City") installs or repairs a sewer or water main in the vicinity of the 8 9 Company's facilities, then all costs to locate, move, 10 support, protect and/or relocate the affected Con Edison 11 facilities are assigned to Con Edison for recovery from 12 customers.

13 There are some exceptions to this general rule. For 14 example, certain governmental authorities, such as the New 15 York City Transit Authority and Port Authority of New York 16 & New Jersey, may reimburse the Company for interference 17 costs.

18 In contrast to the general rule for municipal interference, 19 all private interference costs are borne by the private 20 entity.

Q. What types of municipal construction activities typicallyresult in interference with Company facilities?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	Α.	The typical municipal projects that affect Company
2		facilities are the installation of water mains, sewer
3		drainage facilities, reconstruction of roads, highway
4		bridges, curbs, sidewalks, and the repaving of roadways.
5	Q.	What types of interference costs are attributable to paving
6		roadways?
7	A.	When a municipality repaves a street or modifies the
8		pavement around a Con Edison facility, Con Edison may need
9		to raise, lower, or otherwise modify one of its structures
10		(e.g., raising or lowering the castings of manholes). The
11		resulting costs are interference expenses.
12	Q.	Are there other types of governmental activities that
13		affect the Company's interference expenses?
14	Α.	Yes. Any governmental project that requires Con Edison to
15		locate, identify, alter, monitor, protect, replace, or
16		otherwise support a Company facility results in a municipal
17		infrastructure expense. For example, when a New York State
18		bridge is repaired, replaced, or modified, Con Edison may
19		incur interference expenses if existing Company
20		infrastructure is required to be supported, relocated, or
21		replaced.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

How often does the Company have to support, protect and/or 1 Ο. 2 relocate its facilities due to interferences? On any given day, there are hundreds of municipal projects 3 Α. 4 being planned, engineered, or constructed within the 5 Company's service area. These projects are initiated by б various New York City organizations such as the Department 7 of Design and Construction ("DDC"), Department of Transportation ("DOT"), Department of Environmental 8 9 Protection ("DEP"), Department of Parks, Bureau of Bridges, 10 and the Economic Development Corporation ("EDC"), in 11 addition to various Westchester County municipalities. The 12 projects may be planned or they may be the result of an 13 emergency, such as responding to a water main break. In 14 either case, any resulting municipal activities will 15 typically impact Con Edison facilities located in that area 16 and, therefore, may present interference issues. 17 Ο. Does the Company coordinate with municipalities in order to 18 mitigate interference costs? 19 Α. Yes. The Company coordinates with municipalities to 20 mitigate interference costs both during the design and the 21 construction phases of municipal projects.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

During the design phase, the Company works with a 1 2 municipality to identify project alternatives that eliminate or mitigate any interference. For example, if a 3 4 municipality proposed a new water main that either directly 5 or indirectly interfered with an electric facility, the б Company would work with the municipality to identify an 7 alternative location for the water main or an alternative project design to the extent feasible. The Company would 8 9 then pay the municipality the incremental cost of 10 implementing the changes with the goal of achieving an 11 overall project synergy among all stakeholders and reducing 12 the project's duration and/or cost to the Company. 13 During the construction phase, the Company would continue 14 to work with the municipality to reduce any impact on 15 Company facilities. For example, if during construction a 16 gas facility not previously identified is found to be in 17 direct or indirect interference with the proposed municipal 18 plan, the Company would work with the municipality to 19 develop and implement an alternative plan or field 20 modification to eliminate or mitigate the interference.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Is it possible to avoid or mitigate all interference 1 Q. 2 conditions through City and municipal design changes and 3 construction-phase accommodations? 4 No, it is not. Despite best coordinated efforts, due to Α. 5 the heavy congestion of various underground facilities 6 within the streets, relocating or supporting Company 7 facilities is generally unavoidable. Is the City the primary municipality that drives the level 8 Q. 9 of the Company's interference expenditures? 10 Yes. The City's Capital Infrastructure Improvement Program Α. 11 is the primary driver of the Company's interference 12 expenditures, both for capital and O&M. Other 13 municipalities in Westchester County and certain New York 14 State projects also result in interference costs, but 15 generally on a smaller scale. 16 Q. Please summarize any significant changes in interference as 17 it pertains to Con Edison since the Company's last rate 18 filings. Interference has experienced no significant changes since 19 Α. the last rate filings. Con Edison continued to perform 20 21 municipal interference work during the height of the COVID-

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

19 Pandemic and continues design coordination with the 1 2 various municipal agencies described above. As further explained below, the Company's proposed 3 4 reconciliation mechanism would address the risk of the 5 Company's interference costs increasing significantly as a 6 result of the federal legislation. If feasible, the 7 Company will provide additional information concerning the federal legislation on update. 8 9 MUNICIPAL INFRASTRUCTURE EXPENDITURES - RESOURCE DATA 10 Does the City develop a forecast for its infrastructure Ο. 11 expenditures? 12 Yes. The City of New York Office of Management and Budget Α. 13 ("OMB") publishes its four-year Capital Commitment Plan 14 ("Commitment Plan") three times a year, usually in 15 February, May, and September. This plan describes 16 anticipated infrastructure projects to which the City 17 expects to commit funding in the current fiscal year and each of the three upcoming fiscal years for the different 18 19 categories of reconstruction work. The City's fiscal year 20 runs from July  $1^{st}$  to June  $30^{th}$ .

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Is the Commitment Plan the primary resource document used 1 Ο. 2 by the Company to identify City projects for the purpose of forecasting interference expenditures? 3 4 Yes, the Capital Commitment Plan is the primary resource Α. 5 document because it includes the most current and the best б available information relating to the forecasted City 7 expenditures that impact the Company's interference costs. Where is the Capital Commitment Plan published? 8 Q. 9 The OMB publishes the report on the official website of the Α. 10 City of New York. The OMB's web address is: 11 https://wwwl.nyc.gov/site/omb/publications/publications.pag 12 е 13 Are there any particular categories of City infrastructure Ο. 14 work listed in the Commitment Plan that typically involve 15 interference work? 16 Α. Yes. The categories of City infrastructure work that 17 typically result in interference work are Highways, Highway 18 Bridges, Water Main 1, Water Main 6 and Sewers. 19 Q. Explain the funding sources for the projects comprising the 20 Commitment Plan. 21 Projects under the Commitment Plan may be funded by the Α. 22 City ("City Cost") or by other sources ("Non-City Cost" or

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

"NC Cost"). The Commitment Plan identifies both City Cost
 and Non-City Cost funding sources and the Company is
 responsible for interference costs related to projects in
 both categories.

5 Q. Why is this the case for Non-City Cost Projects?

A. The Company is responsible for interference costs for NonCity funded projects because even though they are not
funded by the City, they are municipal projects done for
the public interest and with the City's approval. The
aggregate of the two sources (City Cost and Non-City Cost)
is the driver of the Company's expenditures.

12 Q. What is the forecasted City OMB Budget for City fiscal 13 years 2023, 2024 and 2025 as it relates to the categories 14 of City infrastructure work described above (*i.e.*,

15 Highways, Highway Bridges, Water Main 1, Water Main 6 and 16 Sewers)?

A. The OMB Capital Commitment Plan published in October 2021
forecasts \$2.3 billion for 2023, \$2.8 billion for 2024 and
\$4.0 billion for 2025 for these categories of City
infrastructure work.

21 Q. Does the Company also review the City's actual spending on 22 infrastructure?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	Α.	Yes, the Company reviews the OMB's "Monthly Transaction		
2		Analysis" reporting for the infrastructure categories,		
3		Highways, Highway Bridges, Sewers & Water Mains, to review		
4		and track actual City and Non-City expenditures.		
5	Q.	Was Exhibit (MISP-1), entitled "NYC OMB EXPENDITURES		
6		2017-2021" prepared under your supervision or direction?		
7	A.	Yes, it was.		
8	Q.	What does this exhibit show?		
9	Α.	Exhibit (MISP-1) shows actual OMB expenditures for City		
10		fiscal years 2017 to 2021 for these interference-type		
11		categories, as well as the City's current commitment		
12		forecast for 2022 to 2025.		
13	Q.	Why does the Company review the City's actual expenditures?		
14	A.	The Company compares its actual O&M expenditures to the		
15		City's infrastructure expenditures in order to validate the		
16		historical correlation between these expenditures. This		
17		correlation is discussed in more detail later in our		
18		testimony.		
19	Q.	Does the Company use resources other than the City's		
20		Commitment Plan to identify planned and ongoing projects		

21 that impact interference costs?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Yes, while the Commitment Plan is the Company's primary 1 Α. 2 resource, it actively communicates with relevant City and State agencies and with municipalities in Westchester to 3 4 obtain additional project information and other details 5 that impact the Company's interference expenditures. For 6 example, the Company communicates with NYSDOT, NYCDOT, EDC, 7 NYC Parks Department, DEP and DDC. In addition, there are over forty independent municipalities in Westchester that 8 9 provide information the Company uses to develop its 10 interference forecast.

Q. Are there particular categories of infrastructure work in
Westchester or done by the State that typically involve
interference work?

14 A. Yes. Similar to New York City, the categories of
15 infrastructure work that typically involve interference
16 work are highways, highway bridges, parks, water mains, and
17 sewers.

18

### FORECASTING METHODOLOGY

19 Q. Did the Company modify the methodology used in its last 20 rate filings (Cases 19-E-0065 & 19-G-0066) to forecast 21 interference costs for the Rate Year in this filing?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	Α.	No, the Company used the same methodology to forecast
2		interference costs as outlined in the 19-E-0065 & 19-G-0066
3		cases.
4	Q.	Does the Company's forecasting methodology account for the
5		recent federal infrastructure act?
6	A.	No. Neither the Company's forecasting methodology nor its
7		requested interference budget reflect the Infrastructure
8		Investment and Jobs act signed into law on November 15,
9		2021.
10	Q.	Why not?
11	A.	The federal legislation authorizes \$1.2 trillion in
12		spending, which includes \$550 billion in new federal
13		investments in transportation, bridges, public transit,
14		roadways, water, and energy systems. While these are the
15		core areas for interference work in the Company's service
16		territory, the Company does not yet know when or how the
17		municipalities in its service territory will use any
18		available funds they receive.
19	Q.	Is there a risk that the federal legislation will cause the
20		Company's interference costs to significantly increase?
21	A.	Yes. Given the amount of money available to municipalities
22		in the Company's service territory, there is a substantial

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		risk that municipal interference spending may significantly		
2		increase. To mitigate against this risk, the Company		
3		proposes a reconciliation mechanism, discussed later in		
4		this testimony. In addition, the Company will update its		
5		interference request during the update phase of this		
6		proceeding if it receives additional information.		
7		O&M Forecasting Methodology		
8	Q.	How did the Company develop its O&M forecast for municipal		
9		interference?		
10	Α.	The Company's developed its municipal interference O&M		
11		forecast using the following four methods:		
12		1. Project-By-Project Analysis,		
13		2. NYC Budget Calculation,		
14		3. Exponential Growth Analysis, and		
15		4. Regression Analysis.		
16	Q.	Please explain the Project-by-Project Analysis.		
17	Α.	The Project-by-Project Analysis reflects: (1) recurring		
18		annual programs ("Annuals"); (2) municipal projects with		
19		defined scopes ("Defined Scope Projects"); and (3) design		
20		phase municipal projects with undefined locations or scopes		
21		("Design Phase Projects").		

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Q. Please explain each category in the Project-by Project
 Analysis and the methods each uses to forecast
 expenditures.

4 Annuals consists of recurring work, such as the test pit Α. 5 excavation program (to locate facilities) and the program б for adjusting or replacing manhole castings. The total 7 Annuals forecast draws inferences from each annual program's prior year's (i.e., single year) annual cost. 8 9 This method of forecasting is used for this type of work 10 because these items are fairly predictable and repeat 11 annually.

Defined Scope Projects include projects in construction, out for bid, or awarded by the municipality. The Company evaluates each project's design and develops a project specific scope of work and cost estimate using established unit work items.

Design Phase Projects are at an early stage of development. The Company develops cost estimates according to one of two methods. The first is for projects that have a defined location but an undefined scope. For these projects, the Company evaluates the potential impact to its facilities by considering different factors, including: the nature of the

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

municipal project (e.g., water mains, sewers, drainage, 1 2 curbs, sidewalk, roadway), the project's cost estimate, the project's location (*i.e.*, borough and specific geographic 3 4 work area), the Company facilities in the project area, and the type of interference work that can be anticipated 5 (*i.e.*, support, protect, alter). The Company then б 7 evaluates the factors based on its historical experience to develop "impact cost estimates." 8 9 The second method is for projects that have undefined 10 locations but defined scopes, (e.g., pedestrian ramp 11 installations, catch basin replacements). For these 12 projects, the Company extrapolates expenditure trends from 13 available completed projects of a similar type. 14 Ο. Please explain the NYC Budget Calculation analysis. 15 Α. Using NYC OMB publications, the Company analyzes the 16 Monthly Transaction Analysis for prior expenditures and the 17 Capital Commitment Plan to identify future forecasts. In short, the Company extracts the categories of Highway, 18 19 Highway Bridge, Sewers, and Water Mains to identify the 20 correlation between City forecasts and actual City 21 expenditures.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- Q. Please explain the Exponential Growth analysis for
   forecasting.
- A. The Exponential Growth analysis forecasts both City
  liquidations (*i.e.*, actual City expenditures) and Company
  expenditures. Using NYC OMB Monthly Transaction Analysis
  reports from prior fiscal years, the Company calculated the
  ten, seven and five-year growth rates of actual City
  liquidations. The Company used these growth rates to
  forecast future City liquidations.
- 10 Q. What were the growth rates for the ten, seven and five-year 11 calculations?
- 12 A. As shown in the table below, the Company calculated the13 growth rates as follows:

Year Range	Span of City FY	Growth Rate
10 Year	2012-2021	8.19%
7 Year	2014-2021	9.48%
5 Year	2016-2021	6.72%

- 14 Q. What growth rate did the Company use in this current case 15 to forecast City expenditures and why?
- 16 A. The Company used a seven-year growth rate to forecast City
  17 liquidations. The seven-year growth rate was selected
  18 because it accounts for both short and long term economic

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

variables. Additionally, the seven-year growth rate is the
 same rate used in the Company's last rate filing.

3 Q. Has anything changed since the Company's last rate filing 4 which would cause the Company to change its proposed growth 5 rate?

A. No, the Company has not experienced any significant changes
since the last filing that would suggest a different rate.
Q. How did the Company apply the forecasted City expenditures
as it relates to Company expenditures?

10 A. To forecast City expenditures using a seven-year growth 11 rate, the Company took the average of Company expenditures 12 divided by City liquidations over the same seven-year 13 period and applied that factor to the forecasted City 14 liquidations from years 2022 to 2026.

15 Q. Please explain the Regression Analysis used for

16 forecasting.

17 A. The Regression Analysis assumes that Company expenditures 18 are dependent on City liquidations. The model runs a 19 regression from forecasted City liquidations which in turn 20 is used to forecast Company expenditures.

21 Q. How does the Company forecast future City liquidations?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- A. The City liquidation forecast for years 2022 to 2026 is
   based on the analysis as explained in the Exponential
   Growth Rate method.
- Please explain the results of the Regression Analysis. 4 Q. 5 Assuming a perfect correlation between the City and the Α. б Company there would be a 1.0 correlation coefficient. A 7 perfect one-to-one relationship would mean that the two variables move in the same direction. In fact, the Company 8 9 derived a correlation between Company expenditures and City 10 liquidations to be .89.
- 11 Q. Did the Company rely on one single analysis to develop its12 O&M forecast?
- A. No. The Company used all four methods described above to
  develop its forecast, which also reflects aspirational cost
  mitigating efforts and initiatives, discussed later, that
  are within the range of the models.
- 17 Q. Please show how the results of the various analyses are18 used to calculate your Rate Year forecast.
- A. Exhibit MISP-2 shows the four O&M methodologies and the
  total O&M forecast for fiscal years 2022 to 2026.
- 21 Q. Was Exhibit \_\_\_\_ (MISP-2), entitled "O&M Methodologies"
- 22 prepared under your supervision?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- 1 A. Yes, it was.
- 2 Q. What does this exhibit show?

A. Exhibit \_\_\_\_ (MISP-2) shows the four O&M methods and the O&M
forecast on a line chart to demonstrate the conclusions.
Q. How does your prior rate case "O&M METHODOLOGIES" exhibit
compare to actuals performance incurred in FY'19, FY'20 and
FY'21?

The Company's actual O&M performance is close to the budget 8 Α. 9 submitted in the last rate filing. This performance 10 further demonstrates the effectiveness of the Company's 11 multiple forecasting models and cost mitigating measures, 12 as well as the Company's active efforts to refine the forecasting process. By using the models together as a 13 14 portfolio of potential outcomes, the Company has been able 15 to develop forecasts that are consistent with our actual 16 costs. The Company is not proposing any major changes to 17 its forecasting methodology.

Q. Was Exhibit \_\_\_\_ (MISP-3), entitled "2019 O&M METHODOLOGIES
 AND RESULTS" prepared under your supervision?

20 A. Yes, it was.

21 Q. What does this exhibit show?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

A. Exhibit (MISP-3) shows the Company's prior rate case
 exhibit with the additional data points for the Company's
 actual O&M performance in FY'19, FY'20 and FY'21.

#### 4 Capital Forecast Methodology

5 Q. How did you develop the Company's capital forecast?

6 A. The Company's capital forecast is derived from three of the

7 four methods used in the O&M forecast: Project-By-Project,

8 Exponential Growth Analysis and Regression Analysis.

9 The Company developed the cost estimates for the capital

10 projects using the same methodologies as described earlier 11 in the document.

12 Q. Why is the NYC Budget Calculation method that is used in13 the O&M forecast not used for the capital forecast?

14 A. Historically, the Company has applied this methodology to

15 O&M forecasting only. There is insufficient internal

16 history to validate using this method for capital

17 forecasting.

## 18 Additional Challenges

19 Q. What influence, if any, does the Company exercise over the 20 scope and/or timing of the work performed by the City and 21 other municipalities?

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### MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

While the Company employs measures to mitigate the costs 1 Α. 2 related to municipal interference work (as discussed in detail in the Mitigation section below), the Company has no 3 4 control over project and contractor selection, bidding 5 methodologies, availability of municipal contractor 6 resources, start dates or the duration of City/municipal 7 projects. Moreover, the Company cannot dictate a municipal contractor's construction means and methods and is 8 9 therefore unable to forecast the resulting incremental cost 10 impact.

11 Q. Are the projects identified by the City, State and other 12 municipalities in their plans the only projects they 13 execute in the target year?

14 A. No, projects are regularly added or delayed by the City and
15 other municipalities as compared to their proposed
16 municipal plans.

Q. Why is it reasonable to assume that the City and other
municipalities will generally execute the projects
reflected in the Company's forecast for the Rate Year?
A. The majority of the Company's forecast for RY1 is based on
projects already in construction/design and recurring work.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	Q.	What do the City's actual expenditures, as set forth in
2		Exhibit (MISP-1), demonstrate with regard to the City's
3		spending trends?
4	Α.	Exhibit (MISP-1) shows that the City's actual
5		expenditures have remained steady in City FY'17 to FY'21.
6		In FY'21, the City spent \$1.68 billion.
7	Q.	Has the Company identified any trends in tracking the
8		City's Capital Commitment plan forecasts that further
9		supports anticipated increased spending?
10	Α.	Yes, regardless of its forecasts, the City has typically
11		spent in the range of \$1.8 billion per fiscal year in the
12		City FY 2019 and FY 2020 fiscal periods. Moreover, the
13		Company has noted two significant observations regarding
14		prior vs. more recent NYC forecasts.
15		Prior fiscal year forecasts had progressively increasing
16		targets that were in line with agency level communications
17		reinforcing the community goals to provide additional
18		infrastructure.
19		For example, in City FY-2017 and 2018, the City
20		progressively increased its forecasts as it approached the
21		actual City fiscal year. The City's October 2014
22		projection for fiscal year 2018 was \$884 million. In

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

September 2015, the target for fiscal year 2018 was \$1.6
 billion. In May 2017, two months before the 2018 City
 fiscal start, the projection had nearly tripled to \$2.8
 billion.

5 More recent fiscal year forecasts are more consistent with 6 and in the range of actual costs incurred than prior fiscal 7 forecasts. For example, for FY'20 at \$2.1 billion, FY'21 at \$1.8 billion and FY'22 at \$1.8 billion. In these three 8 9 examples the City started higher and reduced forecasts, 10 which are in line with actual expenditures seen in FY'20 at \$1.8 billion and FY'19 \$1.9 billion. This illustrates the 11 12 difficulty in basing our forecast solely on the City's 13 forecast(which is still the only legitimate method we can 14 use) and why a reconciliation benefits both the Company and 15 its customers.

16 Q. Was Exhibit \_\_\_ (MISP-4), entitled "NYC-Historical Review 17 of Capital Commitment Plan" prepared under your

18 supervision?

19 A. Yes, it was.

20 Q. What does this exhibit show?

A. Exhibit (MISP-4) shows the OMB's commitment plans for
FYs 2014 through 2022 extracted from prior Capital

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		Commitment Plans starting in September 2010 through October
2		2021.
3	Q.	Let's turn our attention to commitments versus actual
4		municipal expenditures. Was Exhibit (MISP-5), entitled
5		"NYC Initial Commitment versus NYC Actual Expenditures"
6		prepared under your supervision or direction?
7	A.	Yes, it was.
8	Q.	What does this exhibit compare?
9	Α.	Exhibit (MISP-5) compares the initial municipal
10		commitment to actual municipal expenditures.
11	Q.	What does this exhibit show?
12	Α.	This exhibit compares the City's initial commitments for
13		fiscal years 2013 to 2021 (published in the Commitment
14		Plans) to actual City expenditures over the same period and
15		shows that, over the period, average actual City
16		expenditures are approximately 13.3% above initial
17		forecasts.
18	Q.	Does the Company assume that the City's actual expenditures
19		will continue to be above the City's projections in the
20		coming years?
21	A.	Yes, based on some of the major initiatives currently
22		planned by the City and described later in our testimony,

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

the Company expects actual expenditures to continue to be 1 2 above current levels for the foreseeable future, although the Company cannot predict by how much. 3 4 In past proceedings, Staff has proposed basing the forecast Q. 5 for O&M and capital interference expenditures on a fiveб year average of recent actual Company costs. Is a forecast 7 based upon a five-year average of recent actual costs a reasonable basis for setting rates? 8 No, it is not. 9 Α. 10 Why not? Ο. 11 As an initial matter, using an average approach would Α. 12 require the Company and the Commission to ignore municipal 13 cost estimates and mandatory timing when forecasting future 14 expenditures. While the Company is involved in mitigating 15 interferences early in the design phase on some projects, 16 the Company has limited control of the final design and 17 must perform interference work on the relevant municipality's timetable or face penalties. It would be 18 19 unreasonable and arbitrary for the Company and the 20 Commission to ignore such objective data when setting 21 rates.

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#### MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Second, using an average approach would not reflect current 1 2 municipal infrastructure spending and would result in interference being significantly underfunded. From 2017 to 3 4 2021, Company costs have been increasing materially because 5 municipal spending has been increasing materially. The 6 five-year (2017-2021) average is \$122.6 million for 7 electric O&M and \$133.2 million for electric capital. In contrast, the forecasts for the Rate Year are \$138.9 8 9 million in electric O&M and \$222.4 million in electric 10 capital, with no reasonable expectation that actual 11 spending would, under any circumstance, be anywhere near 12 the five-year average. Thus, there is no support for an 13 average-based approach. 14 Q. What is the percentage of actual City expenditures compared 15 to actual Company O&M expenditures? 16 Α. From 2013 to 2021, the Company's actual expenditures have

17 ranged between 8.9% and 13.7% of the City's actual 18 expenditures. Exhibit \_\_\_\_ (MISP-6) illustrates the 19 correlation between escalating City expenditures and 20 similarly increasing Company O&M expenditures.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- Q. Was Exhibit \_\_\_\_ (MISP-6), entitled "NYC EXPENDITURES VERSUS
   CON EDISON EXPENDITURES" prepared under your supervision or
   direction?
- 4 A. Yes, it was.
- 5 Q. What has the correlation been in recent years?
- 6 A. In recent years, the Company has demonstrated a
- 7 progressively declining relationship in the ratio of City

8 expenditures to Company O&M. For example, 2017 to 2021 the
9 average was 10.0%.

10 Q. What decrease has the Company seen?

11 A. The ratio of City expenditure to Company O&M expenditure

12

has decreased progressively in recent years:

2015	2016	2017	2018	2019	2020	2021
12.3%	11.8%	11.3%	10.6%	8.9%	9.2%	10.1%

Does the Company expect to continue this downward trend? 13 Q. 14 This will depend on several different factors. As Α. 15 mentioned elsewhere in this testimony, costs associated 16 with interference work are directly impacted by the type of 17 projects selected by the municipality, the location of the projects and the Company facilities identified to be in 18 19 interference. For example, in Staten Island, the Company 20 only has an electric system that is comprised of an

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### MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

overhead system and an underground system that shares the 1 2 street with other subsurface facilities with limited congestion. By contrast, in Manhattan, the Company has an 3 4 extensive electric and gas underground system that shares heavily congested streets with other subsurface facilities. 5 б Therefore, there is a direct relationship between the 7 location and types of projects selected by the municipality and the resulting facility impact to interference costs. 8 9 In addition to heavily congested subsurface infrastructure 10 in Manhattan, there are other work conditions such as: restrictive work-hours, extensive maintenance and 11 12 protection of traffic requirements, and high volume of 13 vehicular and pedestrian traffic that are also factors 14 impacting interference costs that are not conditions 15 indicative to Staten Island.

16 Q. Upon what basis is the Company forecasting that the City's 17 capital expenditures will continue at the current high 18 levels?

19 A. Based on current City project plans and publications and 20 confirmations by municipal agencies, the Company expects 21 that the City's capital expenditures will be consistent 22 with current levels over the next several years.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

Q. Are there other emerging programs that could affect
 interference costs during the rate years, which cannot be
 fully evaluated at this time?

4 Yes. The most significant example is that the City Α. 5 continues to be in active design on a coastal resiliency б program to reinforce the southern perimeter coast line of 7 Manhattan from East 23rd Street to the Battery to West 23rd 8 Street. The City is in active construction on the first 9 phase of the coastal resiliency program, which started in 10 2021 in the area along the East River from East 23rd Street to Montgomery Street to the south. The program goal is to 11 12 provide flood protection by installing a coastal barrier to 13 protect the surrounding neighborhood from future storm 14 surges, while simultaneously providing new community space 15 and recreational and economic opportunities.

16 Q. Are there published resources from the City regarding this 17 project?

18 A. Yes, please see the NYC.gov web site for The East Side19 Coastal Resiliency Project at:

20 https://wwwl.nyc.gov/site/escr/index.page

Q. Has the Company been communicating with the City regardingthis project?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1	Α.	Yes. The Company has been in discussions with City and its
2		design consultant to complete the design plans. The
3		Company has provided information as to the location of its
4		existing transmission and distribution facilities
5		incorporating Company infrastructure support and protection
6		requirements into the City project.
7	Q.	What is the current status of this project?
8	Α.	The City has begun construction activities on the first
9		phase from East $23^{rd}$ Street heading south to Montgomery
10		Street.
11	Q.	Has the Company included this in its five-year forecast?
12	Α.	Yes, the Company has included this project in its five-year
13		forecast with a forecast totaling approximately \$252
14		million in electric transmission and distribution capital.
15	Q.	What is the Company's current cost estimate for this
16		project?
17	Α.	The Company is in the construction phase with the City with
18		a current cost estimate of \$252 million for this project.
19	Q.	Are the other interference costs that are currently
20		included in the Company's financial projections also
21		subject to material changes?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

A. Yes. The Company's forecasts are based on the best
 information available at the time the forecasts are
 developed. However, there are many variables that may
 affect the Company's expenditures that cannot be reasonably
 forecasted, including:

- Unanticipated large-scale emergency sewer or water
  main breaks beyond what is already included in the
  current financial projections.
- 9 Task Order contracts with no pre-engineering.
- Critical infrastructure projects, such as Borough
   Based Jails or post Hurricane drainage improvements,
   pose a scope risk to the Company.
- Additional State or City design-build projects that
   emerge during the rate period and therefore will not
   be reflected in current forecasts.

• Fast-track projects by City agencies

Additional cost burdens on the Company due to cost
 sharing shifts (in the Company's direction) between
 the Company and the City (e.g., City Engineering
 costs, Traffic Enforcement Agents, Pedestrian
 Managers)

22

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1				INTE	RFERENCE	I – O&M			
2	Q.	Please	describe	e O&M in	terferen	ce costs	•		
3	Α.	The Con	mpany's (	D&M inte	rference	costs a	re the n	naintena	nce
4		expendi	itures in	ncurred	when the	Company	is requ	ired to	
5		support	t, protec	ct or ma	intain f	acilitie	s due to	o interfe	erence
6		with pr	coposed (	City or	other mu	nicipal	faciliti	les. 0&1	Ā
7		interfe	erence co	osts are	most of	ten asso	ciated w	with ind	irect
8		interfe	erence, b	out can	also be	associat	ed with	direct	
9		interfe	erences.						
10	Q.	Please	provide	the Com	pany's r	ecent ac	tual O&M	1 interf	erence
11		costs f	for elect	cric and	gas (ex	cluding	Company	labor) ]	су
12		calenda	ar year a	and for	the 12 m	onths en	ded Sept	cember 3	Э,
13		2020 (`	`Historio	c Year")					
14	Α.	The tot	al O&M d	cost in	2017 to	2021 and	the His	storic Ye	ear
15		("H.Y."	') were a	as follo	ws:				
	i				-				-
		M&O	2017	2018	2019	2020	H.Y.	2021	
		Electric							1

 Electric
 \$126.4
 \$122.8
 \$111.5
 \$119.3
 \$119.2
 \$133.0

 Gas
 \$28.5
 \$28.7
 \$34.6
 \$32.3
 \$21.8
 \$22.4

 16
 Notes:
 Excludes
 Company
 Labor,
 Dollars
 in Millions
 and

 17
 rounded.

18 Q. Why has interference O&M spending fluctuated between 201719 and 2020?

### MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

As noted above, the City's actual infrastructure 1 Α. 2 expenditures in the project categories that typically generate interference work for the Company have a material 3 4 impact during the period 2017 to 2020. As demonstrated by 5 the historic data set forth in Company Exhibit \_\_\_\_ (MISPб 6), the level of Company O&M costs are directly related to 7 the level of City capital infrastructure costs, but the City's forecast and the relationship of the City's actual 8 9 costs to its forecasts can change significantly. 10 What are the Company's O&M cost projections for Q. interference in the Rate Year (excluding Company labor)? 11 12 The Company is forecasting \$138.9 million in electric O&M Α. 13 and \$38.0 million in gas O&M expenditures in the Rate Year. 14 Q. Has the Company forecasted O&M interference expenses for 15 periods beyond the Rate Year? 16 Α. Yes. The Company has forecasted O&M interference expenses 17 for two annual periods beyond the Rate Year. The Company 18 is forecasting O&M expenditures (excluding Company labor) 19 of \$141.6 million in electric O&M and \$38.7 million in gas O&M expenditures for RY2. For RY3, the Company has 20 21 forecasted O&M expenditures (excluding Company labor) of

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- \$144.4 million in electric O&M and \$39.4 million in gas O&M
   expenditures.
- Q. Was Exhibit \_\_\_\_ (MISP-7), entitled "ACTUAL AND FORECASTED
   Q&M EXPENDITURES" prepared under your supervision or
- 5 direction?
- 6 A. Yes, it was.
- 7 Q. What does this exhibit show?
- 8 A. Exhibit \_\_\_\_ (MISP-7) shows actual electric and gas O&M
- 9 expenditures for 2017 to 2021, as well as the historical
- 10 year O&M expenditures. This exhibit also shows forecasted 11 O&M expenditures for 2022 to 2026.
- 12

## INTERFERENCE - CAPITAL

- 13 Q. Please describe the capital costs associated with
- 14 interference.
- 15 A. The Company's capital interference costs are expenditures 16 incurred when the Company is required to relocate its 17 facilities to a new location due to interference with 18 proposed municipal facilities. Capital interference costs 19 are most often associated with direct interference.
- 20 Q. What were the total capital interference costs incurred
- 21 between calendar years 2017 and 2021?

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- 1 A. The total capital costs incurred from 2017 and 2021 were as
- 2 follows:

Capital	2017	2018	2019	2020	2021
Electric	\$128.0	\$102.0	\$139.7	\$159.3	\$136.9
Gas	\$123.1	\$120.9	\$128.2	\$120.0	\$79.4

3 Note: Dollars in Millions rounded

- 4 Q. What is the forecast for capital expenditures related to5 interference going forward?
- 6 A. The Company is forecasting from 2022 to 2026 the following
- 7 expenditures:

Capital	2022	2023	2024	2025	2026
Electric	\$168.0	\$222.4	\$234.0	\$240.1	\$249.3
Gas	\$116.8	\$127.0	\$133.3	\$139.0	\$143.2

8 Note: Dollars in Millions and rounded

9 Q. Was Exhibit \_\_\_\_ (MISP-8), entitled "ACTUAL AND FORECASTED

10 CAPITAL EXPENDITURES" prepared under your supervision or

- 11 direction?
- 12 A. Yes, it was.
- 13 Q. What does this exhibit show?
- 14 A. Exhibit (MISP-8) shows actual capital expenditures for
  15 2017 to 2021 for Electric and Gas. This exhibit also shows

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		forecasted capital expenditures for 2022 to 2026 for
2		Electric and Gas.
3		MITIGATION
4	Q.	What measures has the Company undertaken to mitigate
5		interference costs?
6	A.	In addressing interference costs, the Company is required
7		to adhere to state and municipal statutes, codes,
8		regulations and other established protocols. Given the
9		nature of interference work and that this work (and related
10		expenditures) is driven by factors outside of the Company's
11		control, our opportunities for mitigation measures are
12		limited. Notwithstanding these limitations, the Company
13		has implemented the following initiatives to mitigate
14		interference costs:
15		Strengthening our engineering practices:
16		Con Edison's first opportunity for cost mitigation is
17		during a project's initial design and planning phases. Con
18		Edison takes the opportunity to study the agencies' scopes
19		of work and perform an in-depth analysis to determine the
20		type, nature, and extent of the interferences. During the
21		planning phase of agency projects, the Company may suggest,
22		request and/or discuss with the municipal agency possible

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

scope changes to minimize interferences and request design 1 2 accommodations, as discussed earlier in our testimony. The Company also provides consulting support to the field that 3 4 assists to mitigate the impact of unanticipated, as-found subsurface field conditions during construction. 5 б Additionally, when the municipality determines the street 7 will be excavated, Con Edison uses this opportunity to consolidate existing infrastructure and reduce maintenance 8 9 costs while still providing the same level of service 10 capacity. For example, when multiple service boxes or manholes exist on a block, the Company redesign, 11 12 consolidate and reduce the number of structures, thereby 13 lessening future maintenance costs. Moreover, 14 consolidating structures provides for additional space in 15 the streets for future use by the Company, the City and 16 other utilities. 17 Coordinate interference work with other Company capital 18 projects for synergies and cost savings:

19 To the extent practicable, including considering municipal 20 schedules, the Company bundles interference work with other 21 Company capital projects to mitigate redundancy by looking 22 for synergies during both the municipal engineering design

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

and construction phases, (such as new business, system
upgrades, gas main replacement program, and/or other system
reliability work) with the proposed municipal project work.
This effort results in minimizing adverse impacts to the
community by reducing street opening redundancies and
minimize delays to municipal projects.

#### 7 Maximize Number of Section U Projects:

Section U projects are done according to a protocol that 8 9 provides the Company with certain limited leverage to 10 negotiate a fair market price with City agency contractors for the Company's portion of interference work. Under the 11 12 Section U protocol, the contractor of record for the 13 Section U project negotiates in an attempt to reach an 14 agreement with the utilities prior to the start of the 15 project. If an agreement cannot be reached, the matter is submitted for arbitration to the American Arbitration 16 17 Association and the result is final and binding. 18 Projects are not automatically classified as Section U 19 until approved by the DDC. The Company actively tries to 20 show that projects are eligible for the Section U protocol 21 and has been able to increase the number of Section U 22 interference projects in recent years.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

### 1 Joint Bid Protocol:

2 For work performed under the Joint Bid protocol, the Company's interference work is included in the City bid 3 4 documents and is bid along with the City work. The City and the various utilities jointly coordinate their work 5 б from the outset of the project and both City and utility 7 work is managed under singular project oversight, which generally results in improved project scheduling and more 8 9 efficient construction management providing for an overall 10 enhanced customer experience. The program has evolved from 11 Lower Manhattan in 2004 to Citywide in 2017, and currently 12 is now in its fourth iteration in coordination with utility 13 partners. The City has led this effort from the beginning.

## 14 <u>Negotiating Team</u>:

15 The Company uses a negotiating team concept when entering 16 into agreements. The team consists of the estimator, the 17 project engineer, the borough manager and the borough project specialist. The negotiating team has been 18 19 extremely successful since its inception by facilitating 20 pricing uniformity for work items throughout the boroughs 21 thereby reducing prices for commonly used items that 22 resulted from estimating time studies. Additionally, time

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

studies support challenges from contractors in arbitration if the pricing offered by the Company is perceived to be inconsistent with fair market value.

#### 4 Unit Price Agreements:

5 The Company has also used multi-year and multi-borough 6 contractor agreements for macro work units to establish 7 consistent pricing across its service area. This effort 8 may also reduce Company administrative costs that would 9 normally be associated with multiple negotiations for 10 different projects with the same vendor.

11 Evaluate field conditions to create new macro work units: Since the mid-1990s, Con Edison has been working with the 12 13 communication utilities Time Warner (Time Warner is 14 currently doing business as, Spectrum, a brand of Charter 15 Communications Inc.) and Empire City Subway ("ECS"), which 16 owns and maintains underground facilities for Verizon. The 17 Company has worked with Time Warner and Empire City Subway to develop a list of common work units as a means of 18 19 standardizing municipal field work. These standardized units are referred to as Con Edison, ECS and Time Warner 20 21 ("C.E.T.") specification items. The list has expanded over

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

- 1 time and presently includes more than 250 items that cover
  2 common utility work tasks.
- 3 Maximize Lump Sum Agreements:

4 The Company promotes lump sum agreements, which are single 5 price agreements that encompass all labor, material and б equipment to complete the defined work. This creates 7 financial incentive for efficient construction management by the contractor instead of negotiating for extra work on 8 9 a piecemeal basis. The agreements also reduce the 10 Company's risk by minimizing adverse impact on Company 11 facilities and potential costs associated with project 12 schedule delays. These project agreements also aid the 13 Company in forecasting future budget years, but cannot 14 remove the overall uncertainty.

15 Opportunities to reduce project costs by performing

16 advanced relocation:

When feasible, the Company uses advanced relocation of Company facilities to avoid interferences with City facilities. The Company uses this method predominantly in the outer boroughs where it is more feasible than in Manhattan's congested streets. Recently and where operational flexibility has been afforded, the Company has

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		been more aggressive in attempting to perform advance work
2		in Manhattan to minimize the impact on the City schedule,
3		the community, and reduce the financial exposure from
4		having to negotiate pricing with the City's contractor.
5		The Company uses the Company's existing contractors to
6		perform the work in advance at a lower overall cost when
7		compared to the costs of using the municipal City
8		contractors to perform interference work. The advance work
9		will result in less interferences, which in turn will
10		minimize overall interference costs and potential delays.
11		RECONCILIATION
12	Q.	Does the Company's current electric and gas plans provide
13		for reconciliation of capital and $O\&M$ expenditures related
14		to interference?
15	Α.	For O&M expenses, the plans provide for full downward
16		reconciliation of actual expenses below the targeted level
17		of expenses and reconciliation of amounts (other than
18		Company labor) for up to 15 percent above the target level
19		of expenses, shared on an $80/20$ basis between customers and
20		the Company, respectively, with three exceptions as set
21		forth in the rate plan.

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

For electric capital expenditures, Municipal Infrastructure
 Support costs are part of electric net plant, with a
 limited upward reconciliation for certain interference
 capital costs.

For gas capital expenditures, Municipal Infrastructure Support costs are subject to full downward reconciliation as part of gas operations net plant with a limited upward reconciliation for certain interference capital costs.
Q. Is the Company proposing any modifications to these mechanisms as they apply to either capital or O&M

12 A. Yes. The Company is proposing a full reconciliation of
13 Municipal Infrastructure Support capital expenditures and
14 O&M expenses, in the manner proposed by the Company's
15 Accounting Panel.

11

expenditures?

16 Q. Why should the Commission adopt full reconciliation of 17 Municipal Infrastructure Support capital expenditures and 18 O&M expenses?

19 A. As we have explained in this testimony, interference costs 20 are beyond the Company's direct control, are not subject to 21 reasonable estimation, are driven by the infrastructure 22 work performed by the City, State and other municipalities,

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### MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

and constitutes work the Company is required to perform 1 2 pursuant to a schedule established by the municipality that often requires a significant diversion of Company resources 3 4 and significant incremental costs. Moreover, there are a 5 number of major City infrastructure initiatives under 6 consideration that are not yet included in the Company's 7 forecast, but which could potentially have significant cost impacts. 8 9 Accordingly, the Company believes that rates should reflect 10 a reasonable estimate of these expenses and then be subject 11 to full reconciliation, as further explained by the 12 Company's Accounting Panel and Electric and Gas Rate

13 Panels.

14 Q. Should there be a concern that the Company will not seek to 15 minimize its interference costs if there is full

16 reconciliation of these expenses?

17 A. No. The Company has demonstrated a long-standing and 18 consistent approach to mitigating these costs, to the 19 extent practicable, and continued coordination between the 20 City and the Company during the design phase, which is a 21 critical component of the continued success in controlling 22 rising costs. The Company has consistently followed this

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## MUNICIPAL INFRASTRUCTURE SUPPORT PANEL ELECTRIC & GAS

1		approach, including during periods when a bilateral
2		reconciliation mechanism for interference expenses was in
3		place (e.g., as adopted in the Commission's April 2009 rate
4		order in Case 08-E-0539). Moreover, these cost mitigation
5		efforts are ingrained in the Company's efforts to implement
6		cost management improvements and are reviewable at any time
7		by the Department of Public Service and the Commission.
8	Q.	Does this conclude your direct testimony?
9	A.	Yes, it does.

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1		I. INTRODUCTION
2	Q.	Please state your name and business address.
3	Α.	Stephanie J. Merritt. My business address is 4 Irving
4		Place, New York, New York.
5	Q.	By whom are you employed and in what capacity?
6	Α.	I am employed by Consolidated Edison Company of New
7		York, Inc. ("Con Edison" or the "Company") and my
8		responsibilities include the property tax functions
9		for the Company and its affiliate, Orange and Rockland
10		Utilities, Inc. ("O&R").
11	Q.	Please explain your educational background, work
12		experience and current general responsibilities.
13	Α.	I graduated from Le Moyne College in 2004 with the
14		degree of Bachelor of Science in Accounting, as well
15		as a Bachelor of Arts in Economics. Currently, I am
16		pursuing a Master of Business Administration Degree in
17		Accounting and Finance from Syracuse University. I
18		have been employed by Con Edison since 2005 and have
19		held various positions of increasing responsibility
20		within the Finance area. After approximately two

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1 years in Corporate Accounting, I transferred to the 2 Tax Department where I was promoted to Staff 3 Accountant in the Financial Accounting and Regulatory 4 Depreciation Group. In that position, my major 5 responsibilities included the preparation and 6 interpretation of the Company's depreciation studies in connection with rate proceedings. I have assisted 7 in over ten rate proceedings for Con Edison; O&R; 8 9 Rockland Electric Company (O&R's New Jersey utility subsidiary); and Pike County Light & Power Company 10 11 (O&R's former Pennsylvania utility subsidiary). In 12 2010, I began working in the Property Tax Group. Ι 13 started as the Accounting Supervisor and rose to the 14 position of Senior Tax Accountant in 2014. In 15 September 2015, I was promoted to Section Manger -16 Local Taxes, and in June 2017 I was promoted to 17 Department Manager - General Taxes. I have held my current position of Director - General Tax since July 18 2020. My responsibilities include oversight of the 19 sections and personnel responsible for taxes other 20

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1		than income taxes, including all local and state,			
2		excise, sales and use taxes.			
3	Q.	Have you previously testified before any regulatory			
4		commission regarding property taxes?			
5	Α.	I have testified before the Commission regarding			
б		property taxes in the following Con Edison base rate			
7		cases: Cases 13-E-0030, 13-G-0031, 13-S-0032, 16-E-			
8		0060 16-G-0061, 19-E-0065 and 19-G-0066. I have also			
9		testified before the Commission regarding property			
10		taxes in the following O&R base rate cases: Cases 18-			
11		E-0067, 18-G-0068, 21-G-0073 and 21-E-0074.			
12		II. PURPOSE OF TESTIMONY			
13	Q.	What is the purpose of your direct testimony in these			
14		proceedings?			
15	Α.	My direct testimony:			
16		• Presents general background information on			
17		property taxes;			
18		• Describes the level of electric and gas property			
19		taxes recently paid by the Company;			

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1	•	Presents the Company's electric and gas property
2		tax forecast and the methodology and certain
3		assumptions used in that forecast;
4	•	Explains the limitations on the Company's ability
5		to control, and consequently, the difficulty in
6		estimating, the level of its property tax
7		obligations and describes the corresponding need
8		for a full and symmetrical property tax
9		reconciliation, which is also discussed in the
10		direct testimony of the Company's Accounting
11		Panel;
12	•	Discusses the Company's efforts to limit its
13		property tax obligation to its fair share; and
14	•	Discusses the Company's proposal to recover its
15		costs to achieve property tax savings, which can
16		come in the form of a refund, credit or future
17		property tax reduction.
18	Q. Plea	se explain the general basis upon which property

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taxes levied upon the Company have historically been

19

1 determined.

2 Historically, Con Edison has paid two types of Α. 3 property taxes: real estate taxes and special 4 franchise taxes. Real estate taxes are based on the 5 "value" of taxable property and include taxes on land 6 and structures or equipment erected or affixed to Special franchise taxes are property taxes on 7 land. utility equipment located on or under public streets 8 9 and highways. In New York State, public utility property is valued using the "cost approach." The New 10 11 York State Office of Real Property Tax Services ("ORPTS") and many local assessors in the Company's 12 13 service territory determine value by using a 14 Reproduction Cost New Less Depreciation ("RCNLD") methodology for utility structures and/or equipment. 15 RCNLD calculates what it would cost to reproduce the 16 17 utility structures and/or equipment at current construction costs based on a trending index, 18 subtracts an allowance for depreciation and 19 obsolescence, if any, and adds the value of land to 20

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arrive at a "value" for the entire property. The
RCNLD methodology applies to all Company equipment and
certain Company structures. The value of real
property and commercial buildings, such as the
Company's 4 Irving Place Headquarters or the Learning
Center, are determined by comparable sales or rental
data rather than the RCNLD methodology.

#### 8 III. SUMMARY OF RECENT AND PROJECTED PROPERTY TAXES

9 Q. To whom does the Company pay property taxes?

10 A. The Company pays a majority of its property taxes to New
11 York City. There are four classes of property in New
12 York City and, therefore, four different tax rates.

Classes 1 and 2 pertain to various forms of
residential property.

Class 3 contains most utility property. Special
 franchise property is included within this class.
 Con Edison makes up 85% of Class 3 property.

Class 4 contains all commercial and industrial
 properties, such as office, retail, factory

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1 buildings and all other properties not included in Classes 1, 2 or 3. 2 3 With minor exceptions covering certain vacant land that 4 is classified within Classes 1 and 2, the vast majority 5 of the Company's property is included in Class 3. The remainder is included in Class 4. 6 The Company also pays property taxes to municipalities 7 in Westchester County. In addition, the Company pays 8 9 property taxes to municipalities in Orange, Rockland, Dutchess and Putnam Counties, where it owns 10 11 transmission facilities. The Company also pays property taxes on gas storage facilities (pursuant to 12 13 a service agreement) located in West Virginia and 14 Mississippi. I will refer to non-New York City municipalities as "Westchester & Other." 15 16 Ο. Please provide some background on the amount of 17 property taxes paid by the Company. For the historic test year (*i.e.*, October 1, 2020 18 Α. through September 30, 2021), property taxes for 19 electric expense were \$1,701.8 million, and for gas 20

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1		expense were \$375.3 million. Of those amounts,		
2		\$1,879.7 million was applicable to New York City and		
3		\$197.4 million to Westchester & Other.		
4	Q.	Have you forecasted property taxes for calendar year		
5		2023 for this proceeding?		
6	Α.	Yes. For calendar year 2023 ("Rate Year"), we have		
7		forecasted property taxes for electric expense to be		
8		\$2,001.2 million and for gas expense to be \$509.9		
9		million. Of those amounts, \$2,305.6 million is		
10		applicable to New York City (\$1,855.5 million for		
11		electric and \$450.0 million for gas) and \$205.5		
12		million is applicable to Westchester & Other (\$145.6		
13		million for electric and \$59.9 million for gas).		
14	Q.	Have you forecasted property taxes for calendar years		
15		2024 and 2025?		
16	A.	Yes. I forecasted property taxes for the two annual		
17		periods beyond the Rate Year to provide a basis for		
18		settlement discussions regarding a multi-year rate		
19		plan.		
20	Q.	Please continue.		

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1 A. The table below summarizes those forecasted amounts.

_	(\$000ສ)			
	<u>Rate Year 1</u> _(2023)	Rate Year 2 (2024)	Rate Year 3 (2025)	
New York City				
Electric	1,855,539	2,062,921	2,299,039	
Gas	450,033	<u>523,568</u>	604,613	
Total New York City	2,305,572	2,586,489	2,903,652	
Westchester & Other				
Electric	145,617	148,144	150,728	
Gas Total Westchester &	<u>59,881</u>	60,929	61,995	
Other	205,498	209,073	212,723	
Total Electric	2,001,156	2,211,065	2,449,767	
Total Gas	509,914	584,497	666,608	
Total Consolidated Edison Company of New York, Inc.	<u>2,511,070</u>	<u>2,795,562</u>	<u>3,116,375</u>	

Consolidated Edison Company of New York, Inc. Forecasted Property Taxes by Rate Year

2 Q. What are the main drivers of the Company's property

3 tax increases during the 2023 through 2025 period?

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1 Property taxes increase for three reasons: the tax Α. 2 rate increases, the assessed value of the taxable 3 property increases, or both the tax rate and assessed 4 value increase. Each possibility is dependent on many 5 factors, all of which are outside the Company's 6 control, making it difficult to estimate future property taxes. For example, it is impossible for the 7 Company to determine the financial needs of New York 8 9 City and each Westchester & Other municipality (and school district) each year. In every case, the 10 11 property taxes assessed to the Company are the result of the decisions, economic circumstances, and 12 13 political considerations of the jurisdiction levying 14 The Company has no control over tax rates. the tax. Assessment challenges, when warranted, are the 15 16 Company's only recourse to mitigate its property tax liability. Regarding assessments, the growth of the 17 value of the Company's property and equipment, either 18 through new infrastructure investment, application of 19 the Handy-Whitman construction index, or 20

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discontinuation of depreciation, is the primary driver
 of assessment increases.

- 3 Q. Will the Company provide updates related to property4 taxes during these proceedings?
- 5 Α. The Company intends to update property taxes at Yes. 6 the update stage of these proceedings and will also provide updated property tax information throughout 7 these proceedings if new information becomes available 8 9 that is, in the Company's judgment, significant. Ιt is the Company's recommendation to base the revenue 10 11 requirements in these proceedings on the latest available information on property taxes, subject to 12 13 full reconciliation as discussed later in my testimony 14 and in the direct testimony of the Company's 15 Accounting Panel.

16 IV. NEW YORK CITY TAX FORECST

17 Q. Please explain how you forecasted New York City18 property taxes.

19 A. I used the Company's 2021/2022 real estate and special

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1 franchise assessed values as a starting point and 2 applied current tax rates to those values to compute 3 taxes for fiscal year 2021/2022. I then computed 4 estimated changes to assessed values for subsequent 5 periods based on net plant changes forecasted by the 6 Company's Accounting Panel.

Q. For the purpose of estimating property tax rates in
New York City, did you compute a five-year average
percentage change in the tax rates?

10 A. Yes, I did, and it indicates that the tax rates
11 relevant to the Company has increased for Classes 3
12 and 4.

13 Q. What was the five-year average percentage change in14 the tax rates resulting from your calculations?

A. The five-year average change in the tax rates was an
increase of 3.473% and 0.071% for Classes 3 and 4,
respectively. I note that this shows that the City is
increasing property taxes at a much higher rate for
utility property then it is for other commercial

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- 1 property. As noted above, Con Edison makes up 85% of 2 Class 3 property. 3 Did you use the five-year average for the escalation Ο. 4 rate? 5 Yes. My forecast reflects a five-year average to Α. forecast the Class 3 and 4 property tax rates. As б 7 discussed below, I have concluded that it is best to use this escalation percentage for all years being 8 9 forecasted. Are the property tax escalations used to forecast 10 Q. 11 property taxes based on the five-year average of the 12 most recent property tax rates changes beginning with fiscal year 2016/2017 and ending with fiscal year 13 14 2021/2022? 15 Α. No. My five-year average percent change calculations begin with fiscal year 2015/2016 and end with fiscal 16 17 year 2020/2021. 18 Why does your five-year average percent change 0.
- 19 calculations exclude the most recent property tax 20 rates for fiscal year 2021/2022?

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1 My five-year average percent change calculations Α. 2 excludes the most recent fiscal year's tax rates to 3 normalize the five-year average for the effects of the 4 overall lower property tax rates for fiscal year 5 2021/2022 due to the COVID-19 pandemic. For fiscal year 2021/22, the property tax rates for 6 Classes 1 through 3 decreased and the Class 4 property 7 tax rate increased by 0.9040%. These rate decreases 8 9 were driven by lower market values that resulted in lower taxable assessed values for Classes 2 and 4 due 10 11 to the COVID-19 pandemic (because valuations are based 12 on income).<sup>1</sup> 13 Because the lower property tax rates for fiscal year 14 2021/2022 were driven by unique COVID-19 impacts, it 15 is appropriate to treat the tax rates for fiscal year

<sup>&</sup>lt;sup>1</sup> These decreases were offset by the federal Covid-19 stimulus funding and higher personal income tax and corporate tax revenues overall that reduced the property tax levy (or the amount of revenue raised through property taxes) to fund the New York City fiscal year 2021/2022 budget).

1 2021/2022 as an outlier and exclude this year from my 2 five-year average percent change calculations. 3 4 V. WESTCHESTER & OTHER TAX FORECAST 5 Please describe how you arrived at the forecasted 6 0. property tax amounts for Westchester & Other. 7 For Westchester & Other, I used the Company's most 8 Α. 9 recent property taxes paid as a starting point. Then, 10 because it is not practicable to specifically forecast 11 property taxes for each of the many different municipalities, school districts and other special 12 13 districts to which the Company pays property taxes because each has different factors affecting its need 14 15 to raise revenue. 16 0. Why is it impracticable to specifically forecast 17 property taxes for each taxing authority for Westchester and Other counties? 18 In Westchester and Other counties, the Company pays 19 Α. 20 property taxes to 66 municipalities, each with their

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1 own budgets, tax levy, tax rates, and equalization 2 rates, although the equalization rates may be shared 3 by certain assessing units. In addition, school 4 districts within each jurisdiction, which often 5 overlap jurisdictions, each have their own levy and 6 tax rate. Although the property tax process is 7 complicated by the many different places the Company pays property taxes, the overall process is similar in 8 9 each area. Therefore, as long as every property in a locality is assessed at the same percentage of value, 10 11 all taxpayers pay their fair share of tax assuming 12 their market value has been properly determined.

13 Q. Why is this the case?

14 A. Except in areas where tax classification exists, such 15 as New York City, the Real Property Tax Law requires 16 all properties in each municipality to be assessed at 17 a uniform percentage of market value each year. This 18 means that all taxable properties in each city, town, 19 and village must be assessed at market value or at the 20 same uniform percentage of market value each year.

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1		Therefore, I calculated an overall escalation
2		percentage, which is appropriate to develop the
3		forecasted property tax amounts. I developed the
4		escalation percentage based on recent historical tax
5		payment information from calendar years 2016 through
6		2021.
7	Q.	What escalation percentage did you use?
8	A.	I used a five-year average escalation percentage of
9		1.75%.
10	Q.	Are you sponsoring an exhibit containing the
11		computation of the five-year average escalation rate?
12	A.	Yes, I am sponsoring Exhibit (PTP-1) entitled
13		"Consolidated Edison Company of New York, Inc. Five-
14		Year Average of Property Taxes Paid, Westchester &
15		Other" for that purpose. This exhibit summarizes the
16		tax payments made for the last six calendar years and
17		computes the five-year average for Westchester $\&$
18		Other.
10	0	

19 Q. Was Exhibit \_\_ (PTP-1) prepared by you or under your20 direction and supervision?

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1 A. Yes.

2	Q.	Is that because you expect taxes in each of the next
3		several years to increase by 1.75%?
4	A.	Yes, I believe it is a reasonable basis for estimate.
5		The five-year average in Westchester & Other has been
6		fairly stable and at this time I believe that a 1.75%
7		escalation rate will be representative of the
8		escalation rate applicable during the Rate Year.
9	Q.	Is there a difference in methodology between the
10		escalation rate you used for Westchester & Other and
11		the escalation rate you used for New York City?
12	A.	Yes. Except in areas where tax classification exists,
13		such as New York City, the Real Property Tax Law
14		requires all properties in each municipality to be
15		assessed at a uniform percentage of market value each
16		year. This means that all taxable properties in each
17		city, town, and village must be assessed at market
18		value or at the same uniform percentage of market
19		value each year.

20 Q. Please continue.

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1		The five-year average for Westchester & Other is an
2		average based on actual taxes paid by the Company that
3		I believe should be relied upon to set the level of
4		property taxes in this proceeding. In contrast, as
5		noted above, for New York City I used the current
6		fiscal period tax rates.
7	Q.	How did you reflect the 2% cap law under the New York
8		State real property tax law ( <i>i.e.</i> , N. Y. General
9		Municipal Law Section 3-C) with respect to property
10		taxes in your analyses?
11	A.	I made no effort to specifically reflect the 2% cap
12		law in my analyses.
13	Q.	Why not?
14	A.	The impact of the 2% cap on the Company's property
15		taxes is necessarily limited by the fact that it does
16		not apply to New York City. As to areas outside New
17		York City ( <i>e.g.</i> , Westchester & Upstate New York
18		Counties), the legislation limits are not dispositive
19		as they may be overridden by a 60% vote of the
20		governing body of the local government or a 60% vote

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1 of school district voters. In addition, there are 2 exclusions that limit the reach of the cap. For 3 instance, there are exclusions for court orders or judgments against the governing body or school 4 5 district. There are also exclusions for contributions 6 to employee retirement funds beyond specified limits. Other exclusions require computations to determine 7 what the legislation refers to as a "quantity change 8 9 factor," which may allow the tax levy to increase above the cap due to development. There are also 10 11 exclusions that will allow school districts to increase the tax levy for certain expenditures 12 13 associated with facilities, capital equipment, debt 14 service, lease expenditures, and transportation debt service, subject to the approval of the qualified 15 voters where required. 16

17 Q. Please continue.

18 A. On September 8, 2020, the New York State Department of
19 Taxation and Finance issued an emergency re-adoption
20 of amendments of the Educational Law to permit New

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1 York school districts to increase their property tax 2 levy above the levy limit for certain costs associated 3 with their share of additional budgeted capital 4 expenditures made by a board of cooperative 5 educational services. This change was made permanent 6 in December 2020. However, the Company's fiscal year 2020-2021 school property taxes, which were paid 7 beginning in September 2020 increased by 1% when 8 9 compared to the last fiscal year. This amended 10 regulation did not have a material impact on the 11 Company and the increase in school property taxes 12 would fall within my overall escalation factor of 13 1.75% used to forecast future year property taxes 14 based on the 5-year average of property taxes paid.

#### 15 VI. UNCERTAINTY ASSOCIATED WITH FORECASTING PROPERTY TAXES

Q. Why do you believe that a reasonable forecast of theCompany's property taxes is not practicable?

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1 Α. In New York State, the main revenue source to balance 2 local municipal budgets is property taxes. Local 3 budgets are strongly influenced by the state of the 4 economy, e.g., whether the City is experiencing budget 5 shortfalls due to an economic downturn. Moreover, as 6 discussed above, the majority of the Company's property taxes are New York City property taxes. 7 In New York City, the classification system adds 8 9 complexity and uncertainty.

# Q. Please provide an overview of the tax rate process in New York City.

12 A. Each year, the Mayor submits to the City Council the 13 executive budget for the upcoming fiscal year (*i.e.*, 14 July 1 to June 30). After the City Council adopts a 15 budget, it must fix the annual real property tax rates 16 and authorize the levy of real property taxes for the 17 fiscal year.

18 Q. What mechanism does New York City use to fix property19 tax rates?

20 A. The City Council must pass a resolution, known as the

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Tax Fixing Resolution, which authorizes the tax rates
to be used for each class and authorizes the levy of
real property taxes for the fiscal year. The City
Council adopted the most recent Tax Fixing Resolution
in June 2021, which authorized the use of the tax
rates that became effective for fiscal year 2021/2022.
Q. Please continue.

The City Council determines the amount of the real 8 Α. 9 property tax levy in the following manner. First, the City Council acknowledges the amount of the fiscal 10 11 year budget and the estimate of the probable amount of 12 all non-property tax revenues. Both amounts are set 13 forth in a communication from the Mayor. The City 14 Council then determines the net amount to be raised by taxes on real property by subtracting the amount of 15 the fiscal revenue amount from the fiscal budget 16 17 amount. The property tax is unique in that it is the only tax over which New York City has the discretion 18 to determine the rate without new legislation from the 19 State and, therefore, property taxes may be used to 20

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balance the budget. New York City also makes
allowances for such items as uncollectible property
taxes, refunds and collections of levies from prior
years, collectively known as the "property tax
reserve." The tax levy is equal to the property tax
revenue plus the property tax reserve.

7 Q. What happens next?

8 After determining the amount of the real property tax Α. 9 levy, the Council authorizes and fixes the real Three factors determine the 10 property tax rates. 11 amount of tax imposed on a property in New York City: the market valuation for the property itself; the 12 13 fraction of the market value on which taxes are to be 14 paid; and the tax rate for the property class. As noted above, there are four classes of property in New 15 York City and, therefore, four different tax rates. 16 17 Each class is responsible for a specific share of the property tax levy, known as the "class share." 18 How are the class shares determined? 19 Ο.

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1 Α. The class shares are determined each year according to 2 a complex statutory formula that takes into account 3 changes in the market value of taxable real property, physical changes resulting from new construction or 4 5 demolitions, changes in taxable status, and transfers of real property among the four classes. The "base 6 percentage" is the percentage of total market value 7 that each class constituted on the 1989 base tax roll. 8 9 This is the roll that was used in setting the tax levy for fiscal year 1990. The "local base proportions" 10 11 are the class tax shares that were used to fix the tax 12 rates for fiscal year 1991 and comprise the thresholds 13 currently used. Each year the City Council certifies 14 "current percentages" and "current base proportions" to the State Board of Real Property Services 15 16 ("SBRPS"). The current percentage is similar to the 17 base percentage but applies to the most recent year for which the SBRPS has established class equalization 18 rates (typically the preceding fiscal year). 19 The current base proportions are the local base 20

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1 proportions modified to take into account the market 2 value changes indicated by the latest class 3 equalization rates. The Council next certifies the 4 "adjusted base proportions" to SBRPS. The adjusted 5 base proportions are the current base proportions adjusted to reflect physical and quantity changes 6 indicated on the current assessment roll. 7 These adjusted base proportions constitute the class shares 8 9 applicable to the tax levy on the current tax roll. Fundamentally, the process was designed so that each 10 11 of the four classes would bear roughly the same class 12 share of the overall tax levy as it did in 1990, 13 subject to physical and market value changes. 14 Is there a limitation on the levy and/or the class Q. 15 shares? 16 Α. There are two limitations. One is a State 17 constitutional operating limit provision and the second is a five percent cap. 18 Please describe the operating limit provision. 19 Ο. 20 Α. The operating limit provision generally provides that

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1 New York City is not allowed to levy taxes on real 2 property in any fiscal year in excess of an amount 3 equal to a combined total of 2.5 percent of the 4 average full valuation of taxable real property for 5 the current year and the prior four years. Please describe the second limitation. 6 0. The second limitation is a five percent cap. The 7 Α. statute provides that the current base proportion 8 9 (*i.e.*, the current year's class share) of any class cannot exceed the adjusted base proportion or adjusted 10 11 proportion of the prior year by more than 5%. Where a 12 class's share change exceeds the 5% limit, the excess 13 is spread among the other classes. In most years, the 14 New York State Legislature has passed annual laws lowering the 5% overall cap for Class 1. The effect 15 of these laws has been to cause the other classes to 16 17 bear more of the overall tax burden than would have been the case under the 5% limit. 18

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- Q. Did the New York State Legislature pass an annual law
   lowering the 5% cap for Class 1 for fiscal year
   2021/2022?
- 4 A. Yes. Although the Class Shares for Classes 1 and 2
  5 increased based on the fiscal year 2021/2022 market
  6 values, only Class 1's share exceeded the 5% cap and
  7 was shifted to another Class.
- What Class(es) bore the burden for Class 1's class 8 Ο. 9 share in excess of 5% for fiscal year 2021/2022? The excess above the 5% from Class 1 was shifted to 10 Α. 11 Class 3. As shown in the table below, shifting Class 1's share in excess of 5% to Class 3 increases Class 12 13 3's class share of the property tax levy from a 14 negative 18.8% change to a positive 3.1% change in fiscal year 2021/2022 when compared to fiscal year 15 2020/2021. 16

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	Percent Change	Percent Change
	Before Shifting	After Shifting
		Excess to Class
Class	Excess to Class 3	3
1	+15.1	+5.0
2	+4.3	+4.3
3	-18.8	+3.1
4	-6.2	-6.2

#### \*Based on the NYC Fiscal Year 2021/2022 Property Tax Fixing Resolution

1 Has this type of shift occurred in other years? Q. 2 Α. Yes. Generally, a review of the history demonstrates 3 this shift is the primary reason for the increase in 4 the Class 3 tax rate year over year (perpetuating the 5 inequity in Class 3). Any class with a market share greater than its share of the tax levy is receiving a 6 7 tax preference, which is absorbed by the other classes. Historically, Class 3 has been burdened by 8 9 this legislation, whereby its class share of the 10 property tax levy is more than double its market value. For fiscal year 2021/2022, Class 3 properties 11 12 were 3% of the total market value, but its share of 13 the property tax levy was 7%. I also see the potential

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1		for cap legislation as one of the factors that make
2		forecasting property taxes in New York City so
3		difficult. Even though there is cap legislation in
4		most years, it is not guaranteed.
5	Q.	Does New York City's tax fixing process facilitate
6		projecting the Company's future property tax
7		liabilities?
8	A.	No, it does not. The process can produce very
9		different results from one year to the next. Exhibit
10		(PTP-2) entitled "Consolidated Edison Company of
11		New York, Inc., Summary of Historic New York City
12		Property Tax Rates," which was prepared under my
13		direction and supervision, illustrates the volatility
14		of Class 3 and 4 rates over time.
15	Q.	Please provide a recent example of this tax rate
16		volatility.
17	A.	In fiscal year 2017/2018, New York City raised the
18		property tax rate for Class 3 property from 10.934% to
19		11.891%. This resulted in, more than a 9% increase in
20		the property tax rate from the prior year, while

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1		decreasing the property tax rate for Class 4 for,
2		10.574% to 10.514%, a decrease of 1%.
3	Q.	Can you provide an example of the effect of a tax rate
4		change for New York City?
5	A.	Yes. Absent any other changes in the forecast, a 5.0%
6		increase in fiscal year 2020/2021 ( <i>e.g.</i> , an increase
7		from 12.826% to 13.467% for Class 3 and an increase
8		from 10.694% to 11.229% for Class 4) in New York
9		City's tax rates above the rates I have used in my
10		forecast would increase Rate Year taxes by \$31.8
11		million for electric properties and \$7.2 million for
12		gas.
13	Q.	What property tax rates do you propose to use for
14		purposes of these proceedings?
15	A.	As discussed above, I selected tax rate changes that
16		are based on a five-year average of percent changes
17		for Classes 3 and 4. My forecasted property taxes
18		reflect escalations of the tax rates of 3.473% for
19		Class 3 and 0.071% for Class 4.

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Q. Do you expect the rate changes in each of the next
 several years to be equal to your forecasted 3.473%
 for Class 3 and 0.071% for Class 4 based on the five year average?

5 Α. New York City property tax forecasts are subject No. 6 to much uncertainty and actual tax rate changes can be quite volatile. For example, the New York City's tax 7 rates have increased as much as 18.5% from one year to 8 9 the next. I will address that subject later in my testimony, but I note that it is that degree of 10 11 possible variability that results in an inability to 12 reasonably forecast property taxes for the Rate Year, 13 even based on recent experience. It is also for these 14 reasons that a full property tax reconciliation is 15 justified and appropriate.

Q. Will you update the New York City tax rates during thecourse of these proceedings?

18 A. Yes, I will update my forecast for tax rate changes if19 available, during the course of these proceedings.

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1 Does the Company have a proposal regarding Ο. 2 reconciliation of property taxes for the Rate Year? 3 Yes. Given the variability and uncertainty discussed Α. 4 above, and the Company's very limited ability to 5 mitigate this variability and uncertainty, the Company 6 believes that an accounting and ratemaking mechanism that fully insulates customers and the Company from 7 property tax forecast variations is reasonable and 8 9 appropriate. The Accounting Panel describes this full and symmetrical property tax reconciliation mechanism 10 11 in its direct testimony.

12 Q. Do you believe that full and symmetrical property tax 13 reconciliation reduces the Company's incentive to 14 mitigate its property tax liability?

15 A. No, not at all. As I explain in greater detail later 16 in my testimony, and as the Company has explained in 17 numerous rate proceedings, meetings with the Staff of 18 the Department of Public Service ("Staff"), and annual 19 reports to the Commission of the Company's activities 20 regarding property taxes, the Company has a long

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1		history of actively fighting to reduce the Company's
2		property tax burden. Challenges to unfair
3		assessments, litigation, lobbying efforts to seek
4		favorable legislation, and aggressively pursuing
5		available property tax benefits are a normal course of
6		business for the Company.
7	Q.	Has the Commission previously approved the full
8		reconciliation of property taxes for a single-year
9		rate plan?
10	A.	Yes, in Case 08-E-0539, a rate case in which the
11		Commission established electric rates for Con Edison
12		on a litigated rather than settled basis and for a
13		single rate year ( <i>i.e</i> ., outside of the context of a
14		multi-year rate plan on settled terms).
15	Q.	In Case $08-E-0539$ , <sup>1</sup> did the Commission address concerns
16		that a full reconciliation would reduce the Company's
17		incentive to minimize property taxes?

 $<sup>^1</sup>$  Case 08-E-0539, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service.

1 Α. Yes. The Commission concluded that would not be the 2 In its Order Setting Electric Rates, issued case. 3 April 24, 2009 in Case 08-E-0539 (pp. 106-107), the Commission concluded: 4 5 We share DPS Staff's concern about removing an incentive for the Company 6 7 to minimize its property tax expenses. 8 However, the record in these cases 9 shows that the Company has aggressively 10 sought to minimize its property tax 11 Indeed, there is no assessments. 12 assertion to the contrary. Moreover, 13 our long-standing policy is that a 14 utility will be allowed to retain a 15 share of property tax refunds, 16 frequently in the 10-15% range, to the 17 extent it can be established 18 conclusively that the utility's efforts 19 contributed to that outcome. Taking 20 these two factors into account, we 21 conclude that the Company already has 22 and will retain an incentive to minimize its property tax assessments. 23 24 25 The Commission's conclusion and reasons remain valid 26 today. Accordingly, given the variability and 27 uncertainty we have discussed above and the incentives recognized by the Commission, a full and symmetrical 28 property tax reconciliation mechanism that serves to 29

- protect both customers and the Company from forecast
   variations is both reasonable and appropriate.
- 3 VII. EFFORTS TO MINIMIZE PROPERTY TAXES
- 4 Q. Please summarize the Company's efforts to minimize5 property taxes.
- A. The Company has aggressively challenged its property
  tax assessments in an effort to have its customers pay
  no more than its fair share of property taxes. The
  Company has been and remains very concerned with the
  level of property taxes in its service territory and
  the impact of these taxes on customers.
- 12 Q. Please discuss the Company's efforts to reduce13 property taxes.

14 A. As discussed earlier in my testimony, property tax
15 amounts are a function of a tax rate multiplied by an
16 assessed value. The Company has no influence on the
17 tax rates that municipalities set; therefore, the

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1 Company focuses on the fairness of assessed values set by the municipalities. 2 3 How do you determine which assessments should be Ο. 4 challenged? 5 Α. Each year I review our property assessments to determine if they fall within a range of 6 reasonableness under an RCNLD valuation. 7 This approach to valuation begins with the original cost of 8 9 property, which is then trended to the current time period using Handy-Whitman indices to arrive at an 10 11 estimated cost to reproduce the property today. That 12 valuation is then reduced by depreciation. The RCNLD 13 methodology develops what is considered the current 14 value of utility property and the method is used for valuation purposes by the ORPTS and the New York City 15 16 assessors. If the actual assessments vary 17 substantially from our RCNLD calculations, I file complaints with the applicable taxing authorities. 18 Ι first attempt to settle these complaints through 19 negotiation as I believe that a settlement is a more 20

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1 cost-effective way of reducing our tax burden than 2 costly prolonged litigation, which requires 3 independent appraisals and has uncertain outcomes. Ι 4 do, however, pursue litigation when my efforts fail to 5 result in what I believe to be a fair compromise. Please describe the tax controversy process. 6 0. As indicated, I monitor the assessed values of the 7 Α. Company's properties and take action for each property 8 9 that I believe is not fairly assessed. Each municipality's assessing authority publishes a 10 11 tentative assessment roll on an annual basis. The roll includes the annual tentative assessed values for 12 13 each property located in the jurisdiction. If a 14 taxpayer disagrees with the tentative assessment for their property, they may file an administrative 15 16 complaint during a designated grievance period. 17 During that period, in order to determine if any assessments should be challenged, the Company 18 undertakes a review of its assessments to determine 19 whether they fall within a range of reasonableness 20

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1 when calculated under RCNLD. In New York City, the 2 Company files a complaint with the Tax Commission, if 3 the tentative assessment is \$1 million or greater, and the calculated assessment variation based on the 4 5 Company's RCNLD calculation is greater than \$1 6 million. Outside of New York City, the Company files a compliant with the Tax Assessors office, if the 7 calculated market value variation based on the 8 9 Company's RCNLD calculation is greater than 25% and the property tax dollar amounts involved are 10 11 significant. The municipality must respond to the 12 administrative complaint and it has been the Company's 13 experience that complaints are denied. Accordingly, 14 after the tentative assessment roll becomes final, the Company files tax certiorari petitions with the 15 16 applicable court to formally contest the final 17 assessments. The Company makes every effort to settle these challenges by meeting with the assessors and 18 with town or city officials. However, when efforts to 19

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1 reach a fair compromise fail, the Company pursues 2 litigation. 3 Please discuss the Company's efforts to reduce Q. 4 property taxes in New York City. 5 Α. The Company has continued negotiations with the New 6 York City Law Department concerning the settlement of proceedings challenging the assessments on certain of 7 Con Edison's locally-assessed properties for the 8 9 fiscal years 1994/1995 through 2018/2019. In October 2018, Con Edison again filed real property 10 11 tax petitions with the New York City Tax Commission that seek reductions of Con Edison's 2018/2019 final 12 13 tax assessments on real property. The filings were 14 based on the real property tax assessment roll finalized in May 2018. Each year such applications 15 16 are filed for a great number of Con Edison's 17 properties that the Company views as over-assessed. Con Edison now has filings on approximately 25% of its 18 New York City properties dating back to fiscal year 19 20 1994/1995.

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1 Has the Company had any recent successes? Ο. 2 During 2013, Con Edison obtained a significant Α. Yes. 3 property tax refund from New York City. After 4 extended negotiations with the New York City Law 5 Department, we reached a settlement covering the production plant assets at the Hudson Avenue Station 6 for the years 1994/1995 through 2011/2012 and at the 7 Ravenswood and Astoria Stations, formerly owned by Con 8 9 Edison, for the years 1994/1995 through 1998/1999. As 10 a result of this settlement, the Company received a 11 lump-sum tax refund of \$140 million. In its February 21, 2014 order adopting rate plans in Con Edison Cases 12 13 13-E-0030, et. al.,<sup>1</sup> the Commission approved the 14 distribution of the refund in the manner provided for 15 by Con Edison's then applicable rate plans. This 16 distribution resulted in electric customers being

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<sup>&</sup>lt;sup>1</sup> Case 13-E-0030 - Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, et al, Order Approving Electric, Gas and Steam Rate Plans in Accord with Joint Proposal (issued February 21, 2014).

credited with approximately \$85.0 million, and steam 1 2 customers with approximately \$34.9 million. 3 Has the Company had any other recent successes? Q. 4 Yes. Beginning in the 1994/95 tax year and Α. 5 continuing through the 2013/14 tax year (together 6 the "Tax Assessment Years"), Con Edison commenced lawsuits against New York City in Supreme Court, 7 New York County, in order to challenge New York 8 9 City's assessments of the structures, machinery and equipment located at the 74<sup>th</sup> Street generating 10 11 station and its substation ("74<sup>th</sup> Street") and the 12 59<sup>th</sup> Street Steam generating station ("59<sup>th</sup> Street) 13 (collectively "the Properties") for the Tax 14 Assessment years.

15 Q. Please continue.

A. Appraisals were exchanged on the valuations of the
Properties and a trial regarding 74<sup>th</sup> Street was
scheduled for February 16, 17, and 18, 2016. Trial of
59<sup>th</sup> Street was to occur at a later date following the
74<sup>th</sup> Street trial. At the urging of the court, the

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1 parties engaged in extensive settlement negotiations 2 and eventually agreed to a reasonable compromise on 74<sup>th</sup> Street for the Tax Assessment Years. A consent 3 4 judgment was signed by the Judge on March 6, 2017 and 5 New York City paid the Company a cash refund on July 6 24, 2017 in the amount of \$30,789,354.97. The Commission approved the distribution of the refund in 7 the manner provided for by the Company's previous and 8 9 current rate plans. This distribution resulted in electric customers being credited with approximately 10 11 \$9.7 million, and steam customers with approximately \$16.5 million. 12

13 Q. Please continue.

14 Once New York City and the Company agreed to settle Α. 15 74<sup>th</sup> Street, New York City was willing to entertain settlement discussions for 59th Street. After months 16 17 of extensive negotiations, on December 13, 2017, the Supreme Court New York County approved a Stipulation 18 of Settlement for 59<sup>th</sup> Street for the Tax Assessment 19 In 2018, New York City paid the Company a 20 Years.

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total cash refund of \$19,782,824.38. The Commission
approved the distribution of the refund in the manner
provided for by the Company's current rate plans. This
distribution resulted in electric customers being
credited with approximately \$3.1 million, and steam
customers with approximately \$13.8 million.

7 Q. Please continue.

8 A. In October 2021, Con Edison again filed real property
9 tax petitions with the New York City Tax Commission
10 seeking assessment reductions for about 20% of its
11 Class 3 and Class 4 properties.

12 Q. Please explain the Company's additional efforts to13 reduce property taxes.

14 Aside from litigation, Con Edison has for several Α. 15 years secured the tax benefits provided under the state law Industrial and Commercial Incentive Program 16 17 ("ICIP") in New York City. The ICIP was enacted to encourage the development, expansion and preservation 18 of commercial and industrial real estate. 19 The ICIP grants a property tax exemption for the additional 20

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real property taxes that would otherwise be payable as 1 2 a result of eligible industrial and commercial construction work. Con Edison has filed ICIP 3 applications for projects involving the construction 4 5 of new facilities and substations, substation 6 renovations, and substation upgrades. The Company filed for and received the exemption for 20 projects, 7 some of which involved multiple filings. Assuming 8 9 current tax rates, these exemptions will generate more than \$1 billion in tax savings over the course of 10 11 their benefit periods, which range from 12 to 25 12 years. Despite efforts by Con Edison to extend the 13 ICIP program, the program expired as of June 30, 2008. 14 Con Edison continues, however, to receive benefits for the projects that were eligible under ICIP. During the 15 2022/2023 fiscal year, Con Edison estimates that the 16 17 tax savings related to ICIP will amount to \$40 million. 18

19 Q. Does the Company challenge its special franchise20 taxes?

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1	Α.	Yes, the Company has open challenges on its special
2		franchise taxes in New York City. The Company
3		commenced proceedings in Supreme Court, Albany County
4		challenging the ORPTS special franchise full values
5		for New York City's 2013 through 2020 assessment
6		rolls. The court has consolidated the proceedings for
7		trial and discovery has been largely completed. The
8		trial is scheduled for March 7, 8 and 9, 2022.
9	Q.	Please continue.
10	A.	The special franchise complaints allege that the
11		ORPTS's application of the RCNLD methodology produces
12		anomalous results that significantly overstate the
13		value of special franchise property. The complaints
14		are based on the ORPTS not properly taking into
15		account the effects of:
16		• Changes in the cost of materials;
17		• Depreciation due to use of an artificial property

18 age ceiling in relation to the property's average 19 service life; and

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1		• The proper level of Economic Obsolescence ("EO")
2		and Functional Obsolescence ("FO").
3	Q.	Does the Company receive EO and FO benefits?
4	A.	Yes. Although we have challenged the amount of
5		obsolescence allowances in our special franchise tax
6		legal actions, Con Edison continues to apply for and
7		receive EO and FO benefits. A request for an EO
8		benefit is filed on electric and gas services and the
9		FO benefit is filed on the Company's gas low pressure
10		distribution mains. For 2022, we were approved for a
11		reduction for EO of 9% on our gas plant, which will be
12		applied to the 2022 New York City special franchise
13		full values. We were denied reductions for economic
14		obsolescence on our electric plant in New York City,
15		as well as our electric and gas plant outside of New
16		York City. We also requested a reduction for
17		functional obsolescence for excess capacity in the gas
18		distribution low pressure system from ORPTS. The ORPTS
19		will apply reductions for FO on the gas distribution
20		mains as follows:

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1		City of Yonkers 9%
2		Borough of Bronx 3%
3		Borough of Manhattan 6%
4		Borough of Queens 5%
5	Q.	Please discuss the Company's other efforts to reduce
б		property taxes in Westchester & Other.
7	A.	The Company aggressively challenges property tax
8		assessments outside of New York City. As detailed in
9		my annual Property Tax Reduction Reports filed with
10		the Commission, the Company has reached property tax
11		settlements with many of the cities, towns, and
12		villages in Westchester and Upstate. These settlements
13		cover a significant amount of the Company's property
14		outside of New York City and we continue to monitor
15		assessments in all of these areas to determine if
16		additional challenges are warranted.
17	Q.	Has the Company commenced any recent proceedings to
18		challenge property taxes outside of New York City?
19	A.	Yes. In 2021, the Company commenced proceedings
20		against the City of Peekskill, City of White Plains

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and the Town of Mt. Pleasant in Westchester County.
 Settlement negotiations between the Company and these
 municipalities are on-going.

4 Q. Please continue.

5 A. In 2020, the Company and the Town of Yorktown reached 6 a settlement agreement to reduce the assessed value 7 for the Hunter Brook substation to the market value 8 based on the Company's RCNLD calculation. The terms of 9 this settlement will yield tax savings on future 10 assessment reductions over four years beginning in 11 2021.

12 Q. Does the Company also pursue legislative avenues to13 mitigate its property tax liabilities?

14 Yes. Representatives of the Company have met with Α. 15 representatives from the New York State Department of 16 Taxation and Finance to discuss a proposal to 17 centralize property tax assessments. Central 18 assessment of the Company's non-special franchise property would lead to cost efficiencies, promote 19 uniform assessment practices and result in a lower 20

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likelihood of litigation challenging the method of
 determining assessments.

3 Q. How would the Company benefit under central 4 assessment?

5 Α. The Company has long supported and pursued central 6 assessment legislation. Con Edison believes that the ORPTS staff is in the best position to value utility 7 properties given their expertise and independence. 8 9 Central assessment by the ORPTS would provide for a uniform method of assessment state-wide, which would 10 11 reduce the number of separate tax grievances that Con 12 Edison files. In addition, the ORPTS property 13 assessments are generally more current and 14 transparent, as Con Edison is required to report all of its property additions to the ORPTS. Overall, the 15 16 ORPTS property assessments may result in tax 17 reductions on some of Con Edison's properties. The main goal of the proposal, however, is to establish 18 assessment uniformity, predictability and 19 transparency. In fact, central assessment could also 20

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provide some financial relief to local governments that must secure outside expertise to value certain complex utility properties and are frequently required to defend these assessments in court, resulting in appraisal and legal fees and property tax refunds resulting from successful legal challenges brought by utility companies.

What is the legislative status of central assessment? 8 Ο. 9 In December 2017, Chapter 510 of the Laws of 2017 was Α. 10 enacted, establishing a five-year pilot program 11 wherein all of Con Edison's Westchester properties that are valued locally were valued by the ORPTS 12 13 commencing January 1, 2018. The Governor's approval 14 message stated that the law would be amended to require the New York State Department of Tax and 15 16 Finance, in consultation with the Commission, to study 17 the viability of implementing central assessment for utility properties state-wide, with recommendations 18 due May 1, 2018. The required study was published in 19 20 November 2018 and both the NYS Department of Taxation

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and Finance and the Commission recommended Central
 Assessment for all utility companies.

3 Q. Please continue.

4 After the study was published, the Company met with State Α. 5 government officials to discuss the study 6 recommendations and implementing central property tax assessments by the Office of Real Property Tax Services 7 for all utility property located throughout the State. 8 9 The Company prepared draft legislation to effectuate 10 the recommendations and in May 2019 such legislation 11 was introduced in the Senate and the Assembly (S.5325-12 B (Harckham) / A8366 (Galef)) and in January 2021 was 13 reintroduced for the current legislative session 14 (S2971 (Harckham) / A3072 (Galef)). Although the 15 legislation has not yet passed, the Company has met with members of the Senate and Assembly and 16 legislative staff to advocate for its passage and will 17 continue to support this proposed legislation. 18

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- Q. Does the Company keep the Commission and Staff
   apprised of the Company's efforts to reduce its
   property tax obligations?
- 4 The Company prepares an annual report to the Α. Yes. 5 Commission of its efforts to reduce its property tax 6 obligations. The report is filed with the Commission each March. The Company also meets with Staff to 7 update them on property tax issues. Legislative 8 9 efforts and accounting and assessment issues have regularly been part of that agenda. 10
- 11 Q. Despite the Company's efforts to mitigate property 12 taxes, do the Company's property taxes continue to 13 increase?

14 Yes. The funds raised via the property tax levy are Α. often the major revenue source used to finance county 15 16 and local governments and public schools. The Company 17 bears an inordinate share of the levied tax obligations determined by the taxing authorities 18 seeking to raise the funds they determine are needed. 19 20 Those needs, in concert with the Company's activities

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resulting in increased capital investment, have
 historically resulted in higher tax bills for the
 Company despite successful Company challenges to
 assessed valuations of its property.

# 5 VIII. DISPOSITION OF PROPERTY TAX BENEFITS ON FUTURE 6 PROPERTY TAX REDUCTIONS

Q. Please discuss the Company's proposal regarding the
disposition of property tax benefits from property tax
settlements.

The Company's current electric and gas rate plans 10 Α. 11 provide that the Company shall retain an amount equal 12 to 14% of the property tax refunds and/or credits allocated to electric/gas operations against future 13 tax payments. Consistent with the Commission's long-14 15 standing policy of allowing utilities to retain a percentage of tax refunds to encourage them to 16 challenge taxes, the Company proposes to continue 17 these provisions with one modification. 18

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1 What modification is the Company proposing? Ο. 2 The Company proposes to modify the current mechanism Α. 3 to account for the costs to achieve (e.g., appraisal 4 fees and local counsel fees) for the most common 5 outcome of tax challenges: settlements involving 6 future assessment reductions that will result in future savings. 7

8 Q. Why is a modification needed to account for such costs9 to achieve?

Although the Company's efforts to seek tax refunds 10 Α. 11 occasionally produce actual refunds or credits, these 12 are extremely difficult to obtain from governmental 13 entities. A future assessment reduction is often the 14 solution to this problem because the Company obtains a property tax reduction and the governmental entity 15 avoids both the current cash outlay of a refund and 16 17 the administrative and political burden of obtaining internal approvals for a refund or credit. 18 Municipalities also prefer settlements for future 19 20 assessment reductions because they facilitate the

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1 municipalities' financial planning. There are also 2 overarching benefits to settlements in general, as 3 they avoid costly litigation for the Company and 4 municipalities, as well as help maintain a cooperative 5 working relationship between the parties. As settlements are the preferable outcome for 6 governmental entities and the Company alike, the 7 Company should be allowed to recover costs to achieve 8 9 tax savings resulting from property tax settlements. 10 This builds on the Commission's current sound 11 regulatory policy of providing the Company with a 12 meaningful incentive for its property tax reduction 13 efforts. This is also consistent with the approach 14 agreed to by parties to the recent O&R Joint Proposal in Cases 21-G-0073 and 21-E-0074. 15

16 Q. Does this conclude your direct testimony?

17 A. Yes, it does.

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COMPENSATION/BENEFITS PANEL

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#### COMPENSATION/BENEFITS PANEL

1	Q.	Would the members of the Compensation/Benefits Panel
2		("Panel") please state your names and business addresses?
3	Α.	Susan Carson, and my business address is 4 Irving Place,
4		New York, New York 10003. Virginia Fischetti, and my
5		business address is Merritt 7 Corporate Park, Building
6		201, Norwalk, Connecticut 06851. Joseph McDonald, and my
7		business address is 400 Atrium Drive, Somerset, New
8		Jersey 08873.
9	Q.	Ms. Carson, by whom are you employed and in what
10		capacity?
11	A.	I am employed by Consolidated Edison Company of New York,
12		Inc. ("Con Edison" or the "Company") as Director of
13		Benefits and Compensation.
14	Q.	Please briefly outline your educational and business
15		experience.
16	A.	I graduated from Fairleigh Dickinson University in 1985
17		with a Bachelor of Science degree in Accounting. I
18		received a Master of Science degree in Management from
19		the New Jersey Institute of Technology in 1997. I am a
20		Certified Public Accountant licensed in New Jersey.
21	Q.	Please describe your work experience.

#### COMPENSATION/BENEFITS PANEL

1 I have been employed by Con Edison for 15 years. I Α. 2 joined Con Edison in 2006 as the Director of Pension 3 Management with responsibilities for the investment of 4 all benefit plan assets. In November 2016, I assumed the 5 position of Director of Compensation. In 2020, that position was merged with the Director of Benefits, 6 7 resulting in my current position, Director of Benefits 8 and Compensation. From 1997 to 2006, I was employed by 9 Public Service Electric and Gas Company ("PSE&G") in a 10 variety of functional areas at the Director level 11 including pension management, investor relations, and 12 accounting. Prior to my employment with PSE&G, I worked 13 for several major corporations in a variety of accounting, long-range planning, and pension management 14 15 positions. 16 Please generally describe your current responsibilities. Q.

A. My current responsibilities as Director of Benefits and
Compensation include administration of the compensation
plans for non-officer management employees, officers of
Con Edison, and members of the Company's Board of
Directors ("Board"), as well as the development,

COMPENSATION/BENEFITS PANEL

1		implementation, communication, and administration of the
2		Company's employee benefit programs.
3	Q.	Have you previously submitted testimony in a rate case
4		before the Public Service Commission ("Commission")?
5	A.	Yes. I filed testimony in the most recent electric and
6		gas rate cases for Orange and Rockland Utilities, Inc.
7		("O&R") (Cases 21-E-0074 and 21-G-0073) and Con Edison
8		(Cases 19-E-0065 and 19-G-0066) ("2019 Con Edison Rate
9		Cases").
10	Q.	Ms. Fischetti, by whom are you employed and in what
11		capacity?
12	A.	I am a Partner and East Region Practice Leader for
13		Executive Compensation for Aon. I have worked with
14		energy companies such as Avangrid, Dominion, PSE&G, NRG
15		Energy Services, and Southern Company, in addition to Con
16		Edison and O&R.
17	Q.	What is Aon?
18	A.	Aon provides risk management services, insurance and
19		reinsurance brokerage, and human resource consulting
20		services worldwide. More information on Aon is available

21 at aon.com.

COMPENSATION/BENEFITS PANEL

Q. Please summarize your educational and professional
 background.

I am a graduate of Amherst College with a Bachelor of 3 Α. 4 Arts degree in Economics. I also have an MBA, Finance and International Business, from the New York University 5 Stern School of Business. Prior to joining Hewitt 6 7 Associates (now, Aon) in 1997, I worked as a benefit and 8 compensation consultant for Watson Wyatt (now Willis 9 Towers Watson) in New York. At Aon, my work includes the 10 benchmarking of total compensation, the design and 11 implementation of compensation strategies and 12 philosophies, pay structures, short-, mid-, and long-term 13 variable pay programs, and severance and change-incontrol benefits. 14

Q. Are you affiliated with any professional societies ororganizations?

17 A. Yes. I have spoken to audiences of the Society for Human
18 Resource Management on the topic of compensation and
19 published the cover article in the World of Work Journal
20 (4<sup>th</sup> quarter, 2005).

Q. Have you previously testified and submitted testimony onbehalf of the Company before the Commission?

#### COMPENSATION/BENEFITS PANEL

1	Α.	Yes. I have testified and submitted testimony in
2		previous Con Edison electric, gas, and steam rate cases
3		and filed testimony in O&R's most recent electric and gas
4		rate cases.
5	Q.	Mr. McDonald, by whom are you employed and in what
6		capacity?
7	Α.	I am a Senior Partner and Local Practice Leader for
8		Retirement for Aon. I have worked with utilities such as
9		PSE&G, New Jersey Natural Gas, Southern Company, Entergy,
10		National Grid, and NiSource, in addition to Con Edison
11		and O&R.
12	Q.	Please summarize your educational and professional
13		background.
14	Α.	I am a graduate of Washington College with a degree in
15		Mathematics. At Aon, I am a market leader in the
16		Retirement practice and a consultant to clients on
17		benefits and retirement issues. I specialize in the
18		design and financing of retirement programs, pension
19		investments, and asset-liability management, and all
20		aspects of retirement valuation and administration
21		consulting. I have over 20 years of experience in

COMPENSATION/BENEFITS PANEL

1		consulting, having spent 12 years with Hewitt Associates
2		prior to its acquisition by Aon.
3	Q.	Do you belong to any professional societies or
4		organizations?
5	A.	I am a Fellow of the Society of Actuaries, an Enrolled
6		Actuary of the Joint Board, and am also a Chartered
7		Financial Analyst. I have spoken at numerous industry
8		conferences sponsored by organizations such as Pensions &
9		Investments, National Association of Corporate
10		Treasurers, The Conference Board, Utility Pension Fund
11		Study Group, Financial Executives International, and the
12		MegaCap Treasurer's Alliance, as well as a number of Aon-
13		sponsored conferences and webcasts on retirement topics.
14	Q.	Have you previously testified and submitted testimony on
15		behalf of the Company before the Commission?
16	A.	Yes. I submitted testimony in the 2019 Con Edison Rate
17		Cases, as well as $O\&R's$ most recent electric and gas rate
18		cases.
19		
20		PURPOSE OF TESTIMONY
21	Q.	What is the purpose of the Panel's testimony in these
22		proceedings?

#### COMPENSATION/BENEFITS PANEL

1 The purpose of our testimony is to demonstrate that the Α. 2 costs of the Company's benefits and compensation plans 3 are reasonable business expenses that should be recovered in rates. The Panel's testimony demonstrates that the 4 5 Company provides market-competitive benefits and compensation designed to attract and retain those 6 7 employees the Company requires to provide customers with 8 safe and reliable service, respond to extreme weather, 9 and implement the State's clean energy agenda. The 10 Company continues to manage proactively long-term liabilities such as those related to pensions and retiree 11 12 health care.

This testimony examines the overall level of employee 13 "Benefits" and "Compensation" and demonstrates that the 14 15 Company's level of benefits and compensation reflected in the revenue requirements of this filing in aggregate is 16 17 market-competitive and meets the Commission's standards for assessing the overall competitiveness and 18 reasonableness of such expenditures. The costs of the 19 20 Company's benefits and compensation plans constitute 21 reasonable business expenses that should be recoverable 22 in rates for the reasons discussed below.

#### COMPENSATION/BENEFITS PANEL

1	Q.	What elements of the Benefits package are reflected in
2		the revenue requirements of this filing?
3	Α.	Benefits are Active Health Benefits, vacation, life
4		insurance, disability; Retirement Benefits including the
5		Thrift Savings Plan ("TSP") and the Defined Contribution
6		Pension Formula ("DCPF"); and legacy pension and Other
7		Post-Employment Benefits ("OPEBs").
8	Q.	What elements of Compensation are reflected in the
9		revenue requirements of this filing?
10	A.	Compensation includes base salary, the variable component
11		of management pay, and long-term equity grants. This rate
12		filing, however, as explained above, does not seek cost
13		recovery for officer variable play and long-term equity
14		grants, even though those are ordinary business expenses.
15	Q.	Has the Commission articulated criteria to determine
16		whether the costs associated with a utility's benefits
17		and compensation plans should be recoverable in rates?
18	A.	Yes. In the Commission's February 21, 2014 rate order in
19		Con Edison's 2013 rate cases (Cases 13-E-0030, 13-G-0031,
20		and 13-S-0032 ("2013 Con Edison Rate Cases")), the
21		Commission approved a joint proposal that contained Con
22		Edison's agreement to include a comparison with a peer

#### COMPENSATION/BENEFITS PANEL

1		group comprised of similarly situated companies,
2		including both utilities and general industry, in its
3		next demonstration of the overall competitiveness and
4		reasonableness of its total benefits and compensation
5		package. In its June 26, 2014 rate order in the United
б		Water New York, Inc. rate case (Case 13-W-0295), the
7		Commission reaffirmed that to obtain recovery of variable
8		pay, a utility must demonstrate that the overall
9		compensation, including the variable pay component, is
10		reasonable relative to similarly situated companies.
11	Q.	Has the Commission addressed other criteria with respect
12		to evaluating recovery of costs associated with a
13		utility's benefits and compensation package?
14	A.	Yes. In its rate order in the 2013 Con Edison Rate Cases,
15		the Commission noted with approval Con Edison's
16		willingness to conduct its comparative
17		compensation/benefits study to achieve at least a 50
18		percent matching of positions to a blended peer group of
19		utilities and New York metropolitan employers.
20	Q.	What does the Panel address?
21	Α.	The Panel addresses: (1) a review that the Company
22		conducted, with the assistance of Aon, of Con Edison's

#### COMPENSATION/BENEFITS PANEL

1	total benefits and compensation package ("Review") in
2	2021 for non-officer management employees; (2) the
3	Company's compensation and benefit plans for non-officer
4	management employees; (3) officer and Board compensation
5	and benefit plans; (4) the Company's current Labor
6	Contracts with Local 1-2 and Local 3; and (5) employee
7	benefits costs.

8 Q. What is the purpose of the Review?

The purpose of the Review is to assess the market 9 Α. 10 competitiveness of the Company's Total Benefits and Compensation package for its management employees. 11 The 12 Company selected Aon to assist with the Review because 13 Aon is an industry leader in this type of review and has 14 the experience, survey data, and tools needed to analyze the competitiveness of various benefit and compensation 15 16 The Panel describes below the Review process, plans. 17 methodology, and results.

Q. In conducting the Review, did the Company evaluate its
benefits and compensation package compared to those
offered by similarly situated companies?

A. Yes. Consistent with Commission direction and typical
market practice, in assessing the overall competitiveness

#### COMPENSATION/BENEFITS PANEL

1		and reasonableness of the Company's benefits and
2		compensation package, the Review compared the Company's
3		package to those offered by a peer group of similarly
4		situated companies.
5	Q.	Were the peer companies limited to other utility
6		companies?
7	A.	No. Consistent with the Commission's direction, the
8		Company evaluated Total Benefits and Compensation
9		relative to a blended peer group of utility companies and
10		non-utility New York metropolitan general industry
11		companies.
12	Q.	What were the Review's overall findings with respect to
13		the blended peer group analysis?
14	A.	As explained below, the Review found that the Company's
15		benefit programs and compensation for its management
16		employees, as well as the combined benefits and
17		compensation package value, are within the +/- ten
18		percent range that is considered "competitive" with
19		respect to the blended peer group.
20	Q.	Do the rate requests in these proceedings include
21		compensation for officers of the Company?

#### COMPENSATION/BENEFITS PANEL

1	A.	The rate requests reflect only certain elements of
2		compensation for officers. The Company's compensation
3		program for officers includes base salary, annual
4		variable pay awards, long-term equity grants, and
5		benefits. This compensation constitutes a reasonable and
6		necessary business expense the Company must incur to
7		attract and retain qualified leaders to direct and
8		oversee the safe and reliable operations of the Company.
9		To limit contested issues and mitigate its proposed rate
10		increase, the Company is not seeking to recover annual
11		variable pay and awards of long-term equity grants for
12		officers. The Company's decision not to seek recovery in
13		this case, however, is for this filing only.
14	Q.	Do the rate requests in these proceedings include
15		compensation for members of the Board who are not
16		employees of the Company?
17	A.	Yes. For members of the Board who are not employees of
18		the Company, the Company is seeking to recover in rates
19		their Board compensation, which includes an annual
20		retainer (that varies depending on committee assignments)
21		and a long-term equity grant. This compensation is a
22		reasonable and necessary business expense the Company

COMPENSATION/BENEFITS PANEL

1		must incur to attract and retain qualified, non-employee
2		directors to oversee the Company.
3	Q.	Please briefly address the Company's Labor Contracts with
4		International Brotherhood of Electrical Workers, AFL-CIO
5		Local 1-2 and Local 3.
6	A.	These Labor Contracts constitute fair and equitable
7		contracts that include benefits and compensation programs
8		that will allow the Company to continue to attract and
9		retain qualified employees and that will reflect the
10		needs of all stakeholders - employees, customers, and
11		regulators - and support the long-term sustainability of
12		the Company.
13	Q.	Does the Panel address employee benefit expenses?
14	A.	Yes. This direct testimony explains the forecast of
15		employee benefit expenses for management employees and
16		members of Local 1-2 and Local 3.
17	Q.	Does the Panel address the impact of the COVID-19
18		pandemic on benefit costs?
19	A.	Yes, and we summarize here. At the onset of the pandemic,
20		the self-insured medical program administered by Cigna
21		(which represents approximately 75 percent of the
22		eligible employees), experienced lower claim levels.

#### COMPENSATION/BENEFITS PANEL

1		Claims continue to remain volatile as the direct and
2		indirect impacts of COVID-19 mandates, medical practices,
3		and longer-term implications on survivors are ongoing.
4	Q.	Does the Panel expect the impact of the COVID-19 pandemic
5		to result in lower claim costs for the Rate Year (i.e.,
6		calendar year 2023) than have occurred historically?
7	Α.	No. Claim costs were lower than typical for most of 2020,
8		as employees and covered dependents appear to have
9		delayed elective services. Beginning in early 2021, the
10		Company experienced an increase in claim costs and, by
11		mid-year 2021, monthly claims were trending at previous
12		levels. We do not know if this represents a "catch up" of
13		deferred treatments and procedures that will moderate
14		over the next few months. The Company will continue to
15		monitor this issue and address it if necessary in the
16		update testimony.

17

#### REVIEW METHODOLOGY

18 Q. Please provide an overview of the general approach of the19 Review.

A. The Review compared Con Edison's management employee
benefits and compensation package values to external
benchmark data for the following components:

COMPENSATION/BENEFITS PANEL

1		• Employee benefits (including active healthcare,
2		insurance coverages, and retirement contributions);
3		• Base salary;
4		• Variable pay; and
5		• Long-term equity grants.
б	Q.	Please describe the peer companies that were used in the
7		Review to analyze the competitiveness and reasonableness
8		of the Company's management benefit plan designs and
9		annual benefit and compensation package values.
10	Α.	A peer group of 50 companies (the "2021 Blended Peer
11		Group") was used for comparison purposes, including 25
12		utility peers and 25 New York metropolitan general
13		industries peers.
14	Q.	Is the Panel sponsoring an exhibit in connection with the
15		2021 Blended Peer Group used in this analysis?
16	Α.	Yes. Please see EXHIBIT (CBP - 01) entitled "Blended
17		Peer Group and Geographic Differentials."
18		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 01)
19	Q.	Was this exhibit prepared by you or under your direct
20		supervision?
21	Α.	Yes.
22	Q.	Please describe the 2021 Blended Peer Group.

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1 The 25 utility peer companies have similar operations to Α. 2 Con Edison and have employees with similar experience and 3 skills in the utility industry as Con Edison. The 25 New York metropolitan general industry peers include general 4 industry companies with headquarters located in the New 5 York metropolitan area (i.e., New York, New Jersey, and 6 7 Connecticut), and have a significant number of salaried 8 and hourly employees located in the New York metropolitan 9 area. These companies have similar operations to Con 10 Edison in its non-utility-specific areas such as finance, information technology, human resources, and legal. 11 12 Together this group of 50 companies is representative of 13 the labor market for management employees at Con Edison. The 2021 Blended Peer Group also reflects a sample that 14 15 has available data for both compensation and benefit benchmarking based on survey participation. 16 17 Did Aon conduct this Review using the same methodology it Q. 18 used in previous Company rate case filings with the 19 Commission? 20 Yes, it did. This is the third electric rate case for Α. 21 which Con Edison has conducted a review based on a blended peer group. 22

COMPENSATION/BENEFITS PANEL

1	Q.	Did Aon use the same blended peer group that it used to
2		review compensation and benefits in previous Con Edison
3		rate case filings?
4	A.	No. Aon establishes the blended peer group for each rate
5		case filing based on current benefit and compensation
6		survey participation. Aon works to maintain consistency
7		in the blended peer group from rate case to rate case
8		filing. However, not all blended peer group companies
9		participate in surveys every year and merger and
10		acquisition activity also modifies the pool of companies
11		available for the blended peer group.
12	Q.	Does the change in the composition of the 2021 Blended
13		Peer Group impact the overall findings of the analysis?
14	A.	No. There is a sufficiently large enough sample size
15		such that the selected companies continue to maintain a
16		balance between New York Metropolitan General Industry
17		and utility companies. The companies used for
18		benchmarking depends on their annual survey participation
19		and whether they meet specific criteria (e.g., being a
20		utility or being located in the New York Metropolitan
21		area). See EXHIBIT (CBP - 01), "Blended Peer Group

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1 and Geographic Differentials," which lists the companies 2 in the 2021 Review. 3 Did the Company use the 2021 Blended Peer Group for both Ο. 4 the benefits design benchmarking and the Total Benefits 5 and Compensation positional analysis? 6 Α. Yes. 7 What is included in the employee benefits value analysis? Ο. 8 Α. There are two components to the benefits value analysis. 9 The first component is the employee benefits design 10 analysis, which compared the design features of the 11 benefits programs at Con Edison (e.q., health plan co-12 payments, deductibles, and co-insurance, net of employee 13 premium contributions) to the design features of the benefits programs at the members of the 2021 Blended Peer 14 15 Group. The second component is the benefit design value 16 17 The benefit design value analysis includes a analysis. pay-weighted assessment of the program features that are 18 based on salary (e.g., life insurance formulas, thrift 19 20 savings plan company match percentages, and the 21 definition of covered pay).

22 Q. Please continue.

#### COMPENSATION/BENEFITS PANEL

1	A.	The annual benefit design value at Con Edison was
2		measured against the annual benefit design value at the
3		members of the 2021 Blended Peer Group to compare how
4		compensation-based benefit programs affect the total
5		value of the benefits packages. If, for example, an
6		employee at Company A earns more pay than an employee at
7		Company B in the same position, then the value of the
8		Thrift Savings Plan Company match (e.g., six percent of
9		pay) to the employee at Company A will be higher. The
10		employee benefit analysis performed in this manner allows
11		for a more accurate comparison of the value of a benefits
12		package than an analysis that is performed on a pay-
13		neutral basis.
14	Q.	Please describe the process used to assess the benefit
15		designs of Con Edison's benefits programs and the
16		benefits programs of its peer companies.
17	Α.	The benchmarking of employee benefits design was done
18		using Aon's Benefit Index $\tilde{P}$ ("Benefit Index"). The
19		Benefit Index is a premier tool for comparing the
20		relative worth of one company's benefits programs to

21 those offered by a group of other companies. Companies

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have used the Benefit Index since the 1970's to make such
 assessments.

3 How were benefit design competitiveness assessments made? Ο. Benefit Index results are reached using a very specific 4 Α. 5 process. Actuarial techniques measure the total value a representative population of employees would derive from 6 7 Con Edison's benefits program and the benefits programs 8 of each of the members of the 2021 Blended Peer Group. 9 All retirement income, death, disability, health, and 10 paid time-off benefits (such as vacation and paid 11 holidays) offered to newly hired employees are included. 12 This actuarial analysis reflects the benefits that each 13 program would be expected to pay during a year or the present value of the benefits employees would be expected 14 15 to earn during a year but receive in the future. The same employee population and assumptions are used when 16 17 measuring the values for each of the programs. This standardization verifies that the differences are 18 attributable to plan designs, not pay levels. The impact 19 20 of pay level difference is assessed in the benefit design 21 value analysis of the Review. Finally, the benefit 22 design features of Con Edison's benefits program were

COMPENSATION/BENEFITS PANEL

1		compared to the average for the peer companies' programs
2		to arrive at a relative benefit design result reported by
3		the Benefit Index.
4	Q.	What is a Benefit Index benefit design result?
5	Α.	A Benefit Index benefit design result of 100.0 would be
6		assigned if Con Edison's benefits exactly equaled the
7		average of the benefits package value offered by the peer
8		companies. Generally, differences in the overall benefit
9		package value are not considered significant or material
10		until they exceed ten percent ( $i.e.$ , less than 90.0 or
11		greater than 110.0 as compared to Con Edison). A Benefit
12		Index benefit design result within this range would be
13		viewed as "competitive."
14	Q.	Which benefits programs are included?
15	Α.	The benefits analyzed included the following programs to
16		which an annualized value was attributed:
17		• All Pre-Retirement Benefits: Pre-retirement benefits
18		reviewed included hospital, medical, prescription drug,
19		dental, and vision, and sick, short- and long-term
20		disability, and paid vacation and holidays; and

#### COMPENSATION/BENEFITS PANEL

1		• All Post-Employment Benefits: Post-employment benefits
2		reviewed included pension, and Thrift Savings 401(k)
3		Plan.
4	Q.	Is the Panel sponsoring an exhibit in connection with the
5		Benefit Index results used in this analysis?
6	A.	Yes. Please see the exhibit entitled "BENEFIT INDEX
7		RESULTS."
8		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 02)
9	Q.	Was this exhibit prepared by you or under your direct
10		supervision?
11	A.	Yes.
12	Q.	Please explain the information set forth in EXHIBIT
13		(CBP - 02).
14	A.	This exhibit summarizes the details of the results of the
15		Benefit Index analysis of the current Con Edison benefit
16		plan designs, including a comparison to the 2021 Blended
17		Peer Group.
18		In aggregate, the Con Edison benefit plan is within a +/-
19		ten percent range ( <i>i.e.</i> , between 90 and 110) that is
20		considered "competitive" with respect to the 2021 Blended
21		Peer Group with a Benefit Index design score of 109.2.

#### COMPENSATION/BENEFITS PANEL

1	Q.	Did the Panel also analyze the competitiveness and
2		reasonableness of the Company's management compensation
3		components?
4	Α.	Yes.
5	Q.	How was the compensation competitiveness assessment made?
6	A.	The compensation competitiveness assessment included a
7		comparison of base salary, annual variable pay (at
8		target), and long-term equity grants for Con Edison
9		management positions and for the 2021 Blended Peer Group
10		positions. The annualized value of each pay component is
11		included in the analysis ( <i>e.g.</i> , annual base salary).
12	Q.	What data sources were used for the Review?
13	A.	Two data sources were used, both of which were applied to
14		the 2021 Blended Peer Group: (1) the 2021 Aon Benefit
15		Index Database; and (2) the 2021 Willis Towers Watson
16		Compensation Survey.
17	Q.	Was the compensation survey data adjusted for geography?
18	Α.	Yes. It is a common industry practice to use national
19		compensation data for analyzing non-officer management
20		level roles. However, given Con Edison's metropolitan
21		New York location, a location with a significantly higher

than national cost of labor, a geographic adjustment was 22

21

#### COMPENSATION/BENEFITS PANEL

1		applied to the national data (i.e., those utility members
2		of the 2021 Blended Peer Group located outside the New
3		York metropolitan area) to account for this cost of labor
4		difference relative to the 2021 Blended Peer Group data
5		used in the Review.
6	Q.	How many non-officer management positions and employees
7		were included in the Review?
8	Α.	To provide a robust representation of the Company's non-
9		officer management employee base Aon compared
10		approximately 62 percent of the Con Edison non-officer
11		management employees ( <i>i.e.</i> , over 3,100 employees) across
12		the Company's pay structure to the 2021 Blended Peer
13		Group companies.
14	Q.	Is 62 percent coverage sufficient to draw valid
15		conclusions from the Review?
16	A.	Yes. The positions in the analysis covered various
17		functional areas including Central Operations, Electric
18		Operations, Gas Operations, Finance, Accounting, Customer
19		Operations, Human Resources, Engineering, Information
20		Resources, and Law, among others, and all of the non-
21		officer management salary bands at Con Edison: 1L/1H,
22		2L/2H, $3L/3H$ , and $4L/4H$ . The results of the analysis,
COMPENSATION/BENEFITS PANEL

1		therefore, are representative of Con Edison's pay
2		positioning across the entire non-officer management
3		employee population.
4	Q.	Why were some Con Edison non-officer management positions
5		excluded from the Review?
б	A.	In performing the positional analysis, benchmark jobs
7		were identified for over 99 percent of Con Edison's non-
8		officer management employees. Of the over 99 percent
9		"benchmark" jobs, there was sufficient 2021 Blended Peer
10		Group data to provide analysis for 62 percent of Con
11		Edison's non-officer management employees.
12	Q.	Why were some "benchmark" jobs not included in the
13		Review?
14	A.	For some benchmark jobs, there was insufficient data to
15		include the positions in the Review. In performing the
16		positional analysis Aon adhered to the United States
17		Department of Justice safe harbor guidelines, which
18		indicate the need for a minimum of five data points with
19		no more than 20 percent of the sample from any single
20		peer company. If fewer data points were available for a
21		benchmark position, Aon excluded that position from the
22		Review.

### COMPENSATION/BENEFITS PANEL

1	Q.	Is the Panel sponsoring an exhibit in connection with the
2		positions included in the Review?
3	A.	Yes. Please see the EXHIBIT (CBP - 03) entitled
4		"CENSUS."
5		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 03)
6	Q.	Was this exhibit prepared by you or under your direct
7		supervision?
8	A.	Yes.
9	Q.	Please explain the information set forth in EXHIBIT
10		(CBP - 03).
11	A.	This exhibit lists all non-officer management positions
12		at Con Edison, and whether the position was included in
13		the Review. Positions were excluded for one of the
14		following reasons:
15		• "Insufficient Benchmark Data (less than five
16		comparator matches)" indicates the Con Edison
17		position is a benchmark position but there is
18		insufficient 2021 Blended Peer Group data to include
19		the position; or
20		• "Non-Benchmark Job" indicates the Con Edison
21		position is not similar to any survey benchmark

### COMPENSATION/BENEFITS PANEL

1		positions in terms of functional responsibilities,
2		job duties, and/or organizational level.
3	Q.	Is the Panel sponsoring an exhibit in connection with the
4		competitive positioning of Total Benefits and
5		Compensation of Con Edison non-officer management
6		positions benchmarked as part of the Review?
7	Α.	Yes. Please see the EXHIBIT (CBP - 04) entitled
8		"TOTAL BENEFITS AND COMPENSATION RESULTS."
9		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 04)
10	Q.	Was this exhibit prepared by you or under your direct
11		supervision?
12	A.	Yes.
13	Q.	Please explain the information in EXHIBIT (CBP - 04).
14	A.	This exhibit identifies the Con Edison employee positions
15		included in the comprehensive review as compared to the
16		2021 Blended Peer Group. This exhibit includes the
17		following information:
18		• Band;
19		• Con Edison title and department;
20		• Benchmark code, functional area, and title;

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1		$\bullet$ Market Total Benefits and Compensation at the 50 <sup>th</sup>
2		percentile (median) and average; and
3		• Variance for each Con Edison position to market
4		using the median and the average.
5	Q.	What did Aon's analysis indicate when comparing Con
6		Edison to the 2021 Blended Peer Group?
7	A.	In the aggregate, Aon found Con Edison' non-officer
8		management Total Benefits and Compensation package value
9		to be "market competitive." Con Edison's Total Benefits
10		and Compensation was 4.9 percent below the 2021 Blended
11		Peer Group median (or 95.1 percent of the median). Using
12		the average, Con Edison's total Benefits and Compensation
13		was 6.3 percent below the 2021 Blended Peer Group average
14		(or 93.7 percent of the average). While below the market
15		median and average, Con Edison's total Benefits and
16		Compensation package is considered to be within a market
17		competitive range of plus or minus ten percent in
18		aggregate.
19	Q.	Why did Aon compare Con Edison Total Benefits and
20		Compensation to the median, but compared the Con Edison

21 benefit designs to the average for the Benefit Index?

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Median and average are both reasonable methods to make 1 Α. 2 observations in a data analysis, and either may be used 3 when performing a Total Benefits and Compensation analysis. However, the use of median is an industry 4 5 practice in Total Benefits and Compensation studies because the median normalizes a data sample by placing 6 7 equal emphasis on each observation, thereby mitigating 8 the influence of extreme outlier values, if any. In 9 benefit design review, program design elements exhibit 10 much less variation than pay levels. Therefore, it is a 11 standard industry practice to use market average or 12 market typical design when analyzing program design 13 features. How did Aon combine the Benefit Index results with the 14 Q. 15 compensation benchmarking to develop the Total Benefits and Compensation package value? 16 17 Aon followed a standard methodology consistent with Α. industry practice and that Aon used in the 2019 Con 18

Edison Rate Case. First, Aon determined which positions at Con Edison matched positions among the 2021 Blended Peer Group, based on a comparison of functional responsibilities, job duties, and organizational levels

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1		for which data is available from the survey sources.
2		Next, Aon compared the benefit and compensation data for
3		each of these positions at Con Edison to the benefit and
4		compensation data for the same positions among the 2021
5		Blended Peer Group companies. Finally, Aon aggregated
6		these results to evaluate Con Edison's overall
7		competitive position relative to the 2021 Blended Peer
8		Group median and average.
9	Q.	Is the Panel sponsoring an exhibit in connection with the
10		results of the Aon analysis?
11	A.	Yes. Please see the EXHIBIT (CBP - 05) entitled
12		"SUMMARY OF RESULTS."
13		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 05)
14	Q.	Was this exhibit prepared by you or under your direct
15		supervision?
16	Α.	Yes.
17	Q.	Please explain the information set forth in EXHIBIT
18		(CBP - 05).
19	A.	This exhibit identifies the aggregate results of the
20		Review Aon performed, relative to both the median and
21		average of the 2021 Blended Peer Group by each component
22		of Total Benefits and Compensation discussed above:

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1		• Base Salary;
2		• Target Cash Compensation (sum of Base Salary and the
3		variable component of management pay);
4		• Total Direct Compensation (sum of Target Cash
5		Compensation and long-term equity grants);
6		• Total Benefit Value (estimated annual value of
7		employee benefits); and
8		• Total Benefits and Compensation (sum of Total Direct
9		Compensation and Total Benefit Value).
10	Q.	Please summarize the 2021 Blended Peer Group analysis
11		findings with respect to Base Salary.
12	A.	The base salary benchmarking result of 94.1 percent
13		indicates that the salaries of the Con Edison positions
14		included in the benchmarking are 5.9 percent below the
15		median of the 2021 Blended Peer Group.
16	Q.	Please provide a summary of the 2021 Blended Peer Group
17		analysis findings with respect to annual variable pay.
18	A.	The Con Edison variable component of management pay lags
19		the market. As a percentage of total cash compensation
20		Con Edison's variable pay represents 8.6 percent. The
21		median for the 2021 Blended Peer Group is 12.8 percent
22		and the average is 13.6 percent.

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1	Q.	Is the Panel sponsoring an exhibit in connection with the
2		findings regarding the variable pay component of
3		management pay?
4	Α.	Yes. Please see the EXHIBIT (CBP - 06), entitled
5		"ANNUAL VARIABLE PERFORMANCE-BASED PAY COMPARISONS."
6		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 06)
7	Q.	Was this exhibit prepared by you or under your direct
8		supervision?
9	Α.	Yes.
10	Q.	Please explain the information set forth in EXHIBIT
11		(CBP - 06).
12	Α.	This exhibit identifies the annual variable pay component
13		of management pay opportunity for non-officer management
14		employees in each Con Edison Band, as compared to the
15		market range or target variable pay among the 2021
16		Blended Peer Group companies at equivalent Band levels.
17	Q.	Please summarize your findings.
18	Α.	In summary, the compensation elements - base salary and
19		variable pay - both lag peer groups with an overall Total
20		Cash Compensation value of 90.4 percent as compared to
21		the Blended Peer Group median or $50^{th}$ Percentile- just
22		inside the +/- 10 percent that is considered competitive.

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1 Once the value of long-term equity and benefits are 2 added, the Company Total Benefits and Compensation falls 3 within the +/- 10 percent with an overall combined value 4 of 95.1 percent of the benchmark companies' median. The 5 results of the Review demonstrate that the cost of the 6 total benefits program and compensation, including the 7 variable and long-term equity component of non-officer 8 management base compensation, are appropriately incurred 9 business expenses. Accordingly, the Company has included 10 the costs of these programs in the electric and gas 11 revenue requirements.

COMPENSATION/BENEFITS PANEL

1		COMPENSATION PROGRAM FOR NON-OFFICERS
2	Q.	Please describe the Company's overall compensation
3		philosophy.
4	Α.	The Company's philosophy is to provide compensation that
5		is competitive with the median levels of compensation
б		provided by a peer group of similarly situated companies.
7		This approach to setting compensation levels permits the
8		Company to be reasonably competitive in the labor market
9		and to be able to attract, and fairly compensate,
10		employees important to the success of the Company. In
11		targeting the median levels for compensation measured
12		against a market competitive norm, the Company has taken
13		a conservative, low-cost approach, which benefits its
14		customers.
15	Q.	Does the base compensation for Con Edison's non-officer
16		management employees include both base salary and a
17		variable pay component?
18	Α.	Yes.
19	Q.	Has the Commission addressed standards for recovery of
20		the variable component of management pay?
21	Α.	Yes, the Commission has addressed this topic. For
22		example, in its Order Denying Petitions for Rehearing

#### COMPENSATION/BENEFITS PANEL

1 and/or Clarification, issued on November 21, 2011, in 2 Case 10-E-0362 (pp. 5-6) ("2011 O&R Rehearing Order"), 3 the Commission clarified what it expects a utility to show to support customer funding of total compensation 4 5 for its employees. First, the Commission rejected the "artificial distinction" between traditional compensation 6 7 and incentive-based compensation and expressly recognized 8 that "variable compensation and incentive plans are 9 common management tools" to encourage improved 10 performance and overall operations. Thus, the Commission 11 stated that it is reasonable for a utility to present "a 12 comparable total compensation study of similarly situated 13 companies" that shows "total compensation including incentive compensation for a class of employees," and 14 15 described any concern about the relationship of incentive plan goals to customer interests as "substantially 16 17 diminished." Indeed, the Commission stated that if the plan "does not promote employee behavior" contrary to 18 customer interests or Commission policies, then the plan 19 20 "may contain financial, budgetary or other goals" that 21 benefit both shareholders and customers "even if the relative benefits are unquantified." In other words, it 22

### COMPENSATION/BENEFITS PANEL

1		would not be a sufficient ground to disallow funding in
2		rates if, in addition to benefiting customers, the
3		incentive plan benefits shareholders.
4	Q.	Is Con Edison unusual in its inclusion of a variable pay
5		component as part of base compensation?
6	Α.	No. As the Commission has recognized, tying a portion of
7		employees' base compensation to performance is
8		commonplace both in American business generally and for
9		public utilities as well.
10	Q.	Please continue.
11	Α.	The variable pay component of base compensation in the
12		Company's Management Variable Pay ("MVP") program is
13		earned only if the Company reaches pre-set financial and
14		operating performance goals. These goals are directly
15		linked to specific measurable standards consistent with
16		the Company's goal of providing safe and reliable service
17		to customers, resilience in response to extreme weather,
18		and implementing the State's clean energy agenda.
19	Q.	How do the measures in the Company's variable pay program
20		align with other companies?
21	Α.	The use of financial measures in annual incentive
22		programs is very common. In the 2020 Annual Incentive

### COMPENSATION/BENEFITS PANEL

1		Plan Design Survey - U.S. Highlights, WillisTowersWatson
2		("WTW") surveyed over 280 organizations in the United
3		States and found that the most common measures were those
4		related to profitability (77 percent) and strategic
5		business on-financial (e.g., operating metrics, customer
6		satisfaction, customer acquisition costs) (58 percent).
7	Q.	Please describe the MVP component of base compensation as
8		it applies to the Company's non-officer management
9		population.
10	A.	The MVP component of base compensation is earned only if,
11		and to the extent that, the Company achieves pre-set
12		performance goals that are directly linked to specific
13		measurable standards consistent with the Company's
14		achievement of its goals cost-effectively. These
15		performance goals encompass employee and public safety,
16		operational excellence, environmental and sustainability
17		objectives; operating and capital budgets; timely
18		completion of high priority capital and operating
19		projects and programs; and adjusted net income.
20	Q.	Are there any management employees who do not participate
21		in the MVP program?

### COMPENSATION/BENEFITS PANEL

A.	Yes. As discussed by the Customer Energy Solutions Panel,
	certain employees in the Energy Efficiency Department
	participate in a commission-based program in lieu of the
	MVP program. These employees were excluded from the
	Company's calculation of MVP for the Rate Year.
Q.	What is the eligibility requirement for all other
	management employees?
A.	All other Con Edison management employees who demonstrate
	satisfactory performance are eligible for an MVP award.
Q.	Please describe how the MVP component of the Company's
	non-officer management compensation works.
A.	The "Target Fund" for the MVP component is first
	determined by multiplying the base salary of all eligible
	employees as of December 31 by their respective target
	percentage.
Q.	Can the Target Fund be adjusted?
A.	Yes, the Target Fund can be increased or decreased based
	on the actual performance results compared with the pre-
	set performance goals for that year.
Q.	Please continue.
A.	The Target Fund available for distribution is established
	based on four weighted components: performance goals (50
	А. Q. А. Q. А. Q. А.

#### COMPENSATION/BENEFITS PANEL

1 percent), operating budget (15 percent), capital budget 2 (15 percent), and net income (20 percent). A sliding 3 scale of 0 percent to 120 percent is applied to each component based on actual outcomes. The actual amount to 4 5 be distributed each year is determined by multiplying the Target Fund by the actual performance results for the 6 7 four performance criteria components. Variable pay 8 amounts awarded will vary among employees based on the 9 target percentage for the position, and an assessment of 10 their individual performance. An Eligible Employee with 11 unsatisfactory performance will not qualify for variable 12 pay.

13 Q. How was the amount of variable pay included in the 14 revenue requirement calculated?

15 A. The amount of variable pay included is set by the Target 16 Fund level, *i.e.*, the assumption is that there is no 17 adjustment. This amount expressed as a percentage of 18 total cash compensation equals 8.6 percent. As indicated 19 above, the median for the Blended Peer Group is 12.8 20 percent and the average is 13.6 percent.

Q. What happens if the amount of the variable component ofmanagement pay allowed in rates is not achieved?

### COMPENSATION/BENEFITS PANEL

1	Α.	If the goals are not fully achieved, and the Target Fund
2		amount of variable pay recoverable from customers is not
3		paid out. Consistent with the Company's current electric
4		and gas rate plans, the Company proposes to continue to
5		credit customers with the difference.
6	Q.	What happens if the results for the MVP exceed the target
7		levels?
8	A.	Only the target levels are included in the current rate
9		request. Customers will not pay for any MVP performance
10		above the target level.
11	Q.	Does the Company have a plan document that describes its
12		variable pay plan?
13	A.	Yes.
14	Q.	Is the Panel sponsoring an exhibit describing the
15		Company's variable pay plan?
16	A.	Yes. Please see the EXHIBIT (CBP - 7) entitled
17		"Management Variable Pay Program."
18		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 7)
19	Q.	Was this exhibit prepared by you or under your direct
20		supervision?
21	Α.	Yes.

### COMPENSATION/BENEFITS PANEL

1	Q.	How do the four components of the MVP - performance
2		goals, capital budget, operating budget, and net income
3		measure results that benefit customers?
4	A.	The performance indicator goals address Employee and
5		Public Safety with measures such as motor vehicle
6		collisions and gas-made-safe time; Environment and
7		Sustainability measures include measuring success of
8		energy efficiency programs; Operational Excellence
9		includes electric, gas and steam reliability measures;
10		and Customer Experience measures includes customer
11		appointments, estimated restoration times, and first-call
12		resolution measures. The selection of the 20 measures
13		reflects the Company's focus on delivering to its
14		customers safe and reliable utility service in a cost-
15		effective manner.
16	Q.	Is the Panel sponsoring an exhibit listing the Company's
17		performance indicators?
18	Α.	Yes. Please see the EXHIBIT (CBP - 8) entitled
19		"2019, 2020, and 2021 Performance Goals."
20		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 8)
21	Q.	Was this exhibit prepared by you or under your direct
22		supervision?

#### COMPENSATION/BENEFITS PANEL

1 A. Yes.

2 Q. How do customers benefit from the attainment of these3 performance goals?

4 To the extent that such goals are achieved, customers Α. 5 benefit directly. The Company's concerns for customer satisfaction, providing a high level of service, and 6 7 overall safety are demonstrated by the way the variable 8 component of management compensation is linked to 9 particular goals. For example, the Company's customer 10 focus is measured by the goals for Customer Project Completion dates, first-call resolution, and customer 11 12 appointments. Similarly, the Estimated Time for 13 Restoration goal demonstrates Con Edison's commitment to service reliability. 14

15 How do customers benefit from the Company attaining the Ο. 16 Capital and Operating Budgets and Net Income goals? 17 Because Con Edison competes for capital in a capital-Α. intensive industry, achieving net income and capital and 18 operating budget levels that attest to the Company's 19 20 financial strength and stability benefits customers by 21 giving the Company access to capital at a reasonable 22 cost. If the Company did not achieve these goals, it

### COMPENSATION/BENEFITS PANEL

1		could be more expensive for the Company to access the
2		financial markets, and thus more expensive for customers.
3	Q.	How does the Company measure its operating and capital
4		budget performance?
5	A.	The Company uses two elements to measure its operating
6		and capital budget performance - total dollars against a
7		budget with modifiers that can increase or decrease the
8		results compared to just the budget dollars.
9	Q.	How do the modifiers provide benefits to customers?
10	Α.	The modifiers measure the Company's costs and schedule
11		against certain identified key projects and programs. The
12		modifiers verify that the Company is spending operating
13		and capital budget on key projects which benefit customer
14		reliability, safety, and environmental issues in a cost-
15		effective manner.
16	Q.	Please discuss how the modifiers operate.
17	Α.	A manager is assigned to each project and program and is
18		responsible for monitoring and tracking expenditures
19		versus budget and completing the work on schedule. These
20		modifiers also demonstrate the Company's internal
21		controls and cost tracking detail that are used to manage
22		our overall capital and operating budgets.

### COMPENSATION/BENEFITS PANEL

1	Q.	How many projects and programs were identified to be
2		measured for the Capital Budget?
3	Α.	The Company identified 25 projects and programs. These
4		projects and programs include major capital projects and
5		ongoing capital programs that comprise a significant
6		portion of the capital budget.
7	Q.	Is the Panel sponsoring an exhibit in connection with
8		capital projects and programs?
9	Α.	Yes. Please see EXHIBIT (CBP - 9) entitled "2021
10		CAPITAL BUDGET MODIFIERS."
11		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 9)
12	Q.	Was this exhibit prepared by you or under your direct
13		supervision?
14	Α.	Yes.
15	Q.	How many programs were identified to be measured for the
16		Operating Budget?
17	Α.	The Company identified 12 programs to be measured for the
18		Operating Budget.
19	Q.	Is the Panel sponsoring an exhibit in connection with
20		operating budget programs?
21	Α.	Yes. Please see the EXHIBIT (CBP - 10) entitled
22		"2021 OPERATING BUDGET MODIFIERS."

COMPENSATION/BENEFITS PANEL

1		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 10)
2	Q.	Was this exhibit prepared by you or under your direct
3		supervision?
4	Α.	Yes.
5	Q.	Do you have any other general comments on the Company's
6		performance indicator goals?
7	A.	Yes. When it comes to the variable component of
8		management pay, it is sound policy to use an approach
9		that relies on a combination of targets that encourage
10		employees to meet customer and State policy goals in a
11		cost-effective manner. For example, focusing on
12		operational excellence while considering budgetary
13		concerns inevitably results in lower costs to customers.
14		Conversely, a single-minded focus on meeting budgets
15		without a focus on prudent business management can result
16		in unsatisfactory customer service and unnecessary costs
17		over time. This is why the Company balances its financial
18		and performance goals.
19	Q.	Please summarize your testimony regarding non-officer
20		variable pay.
21	A.	As we have explained, the Commission has expressly
22		recognized that employee compensation plans may include

#### COMPENSATION/BENEFITS PANEL

1 "financial, budgetary or other goals" unless the plan 2 promotes employee behavior contrary to customers' 3 interests or Commission policies, and that such a plan may benefit both customers and shareholders even if the 4 5 relative benefits are not quantified. Con Edison's nonofficer variable pay's financial goals are not contrary 6 7 to customers' interests. Indeed, as discussed above, the 8 goals, which include the operating and capital budget, if 9 achieved, will benefit customers over the long run and 10 meet the Commission's test for a recoverable cost. 11 Nevertheless, the Company has proposed to keep variable 12 pay subject to an asymmetrical reconciliation mechanism, 13 *i.e.*, customers are reimbursed if Con Edison underachieves but do not have to pay more if the Company 14 15 overachieves. Turning to another aspect of compensation, please 16 Q. 17 describe equity grants for non-officer management 18 employees. 19 Equity grants are awarded to management employees who Α. 20 contribute to the future success and growth of the 21 Company. The Management Development and Compensation Committee of the Company's Board ("MDC Committee"), the

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#### COMPENSATION/BENEFITS PANEL

1 administrator of the equity grant program, authorizes 2 granting equity awards in the form of performance based 3 restricted stock ("PBRS") to non-officer management employees in bands 3 and 4, and time-based restricted 4 5 stock ("TBRS") to management employees in bands 1 and 2. The equity grants provide the right to receive one share 6 7 of Con Edison common stock (or a cash payment equal to 8 the fair market value of one share of Con Edison common 9 stock) for each stock unit granted, subject to the 10 satisfaction of certain pre-established long-term 11 performance objectives.

12 Q. How are equity grants determined for non-officer13 management employees?

14 Non-officer management employees are eligible to receive Α. 15 PBRS and TBRS equity grants. However, it has been the Company's practice to limit equity grants to 16 17 approximately 20 to 25 percent of the total number of non-officer management employees based on recommendations 18 from their Senior Officers and an assessment of each 19 20 recommended employee's past performance and potential to 21 contribute to the Company's future success.

COMPENSATION/BENEFITS PANEL

1 Why should the Company be permitted to recover the cost Q. 2 of equity grants? 3 Equity grants are part of an overall total compensation Α. 4 package for non-officer management employees that is 5 below the median compensation levels compared with the Blended Peer Group. The form of compensation, in this 6 7 case equity grants as opposed to cash, should not 8 influence the recoverability of compensation cost. The 9 Company provides equity grants to non-officer management 10 employees to retain quality employees critical to the 11 Company's success. Payouts for Band 3 and 4 employees 12 are made only after the consistent demonstration of achieving performance indicators over a three-year 13 14 period. Equity grants are a component of the overall 15 compensation and benefits package for non-officer 16 management employees and are a necessary and reasonable 17 business expense incurred by the Company in order to attract and retain talented employees necessary to 18 provide safe and reliable service, respond to extreme 19 20 weather events, and implement the State's clean energy 21 agenda.

COMPENSATION/BENEFITS PANEL

1	Q.	How much is reflected in the revenue requirement for
2		equity grants?
3	Α.	As reflected in the Other Compensation element of expense
4		shown in Accounting Panel Exhibit AP-3, the revenue
5		requirements reflect the following amounts for equity
6		grants: \$5.1 million for electric and \$1.0 million for
7		gas.
8		
9		
10		COMPENSATION PROGRAM FOR OFFICERS
11	Q.	Please describe the Company's officer compensation
12		package.
13	Α.	The Company's compensation package for its officers
14		includes market-competitive benefits and compensation
15		designed to attract and retain qualified officers.
16	Q.	What are the elements of the Company's compensation
17		program for its officers?
18	Α.	The elements of the Company's compensation program are
19		the same for officers as they are for non-officer
20		management employees — base salary, a variable pay
21		component, and long-term equity grants that are
22		competitive with the median levels of officer

COMPENSATION/BENEFITS PANEL

1 compensation provided by a peer group of similarly 2 situated companies. 3 How do the benefits and compensation of the officers Ο. 4 compare to the median? 5 Α. Based on the Review conducted by Aon, Company officers' 6 Total Benefits and Compensation is 5.0 percent below the 7 Blended Peer Group median. 8 Q. Please describe how the Company established compensation levels for officers. 9 10 Α. The MDC Committee of the Board establishes, reviews, and 11 administers the Company's officer compensation program. 12 The MDC Committee retains Mercer, a wholly-owned 13 subsidiary of Marsh & McLennan Companies, Inc., as an independent consultant to provide it with information, 14 15 analyses, and recommendations regarding officer 16 compensation. 17 How does Mercer benchmark officer compensation? Q. Mercer uses an industry peer group of publicly-traded 18 Α. 19 utility companies and general industry companies to 20 benchmark the compensation paid to all officers. 21 Were Company officers included in the Review conducted by Q. 22 Aon?

### COMPENSATION/BENEFITS PANEL

1	A.	Yes, while the MDC Committee as described above
2		establishes and approves officers' compensation, the
3		Company instructed Aon to include officers as part of the
4		external benchmarking of Total Benefits and Compensation
5		of the Review.
6	Q.	How do the benefits and compensation of the officers
7		compare to the median?
8	Α.	Aon found that officers' Total Benefits and Compensation
9		is 5.0 percent below the 2021 Blended Peer Group median.
10	Q.	Are Aon's benchmark findings consistent with the
11		information prepared by Mercer for the MDC Committee?
12	Α.	Yes. Mercer's analysis focuses on officers' base salary,
13		variable pay, and long-term equity grants commonly
14		referred to as "Total Direct Compensation." Mercer's
15		benchmarking also includes utility and general industry
16		companies. Aon was able to compare the Company's
17		officers' Total Direct Compensation with the Total Direct
18		Compensation of the 2021 Blended Peer Group. The Aon
19		findings indicate the Company officers' Total Direct
20		Compensation is in line with the median of the 2021
21		Blended Peer Group or 92.8 percent of the Blended Peer
22		Group.

COMPENSATION/BENEFITS PANEL

1	Q.	Did Aon use the same blended peer group to conduct the
2		Review of officers' benefits and compensation and the
3		non-officer Review?
4	Α.	Yes. Aon used the 2021 Blended Peer Group for both.
5	Q.	How many officer management positions were included in
6		the Review of Total Benefits and Compensation?
7	Α.	Thirty-eight of the Company's forty-four officers were
8		included in the Review or approximately 83 percent of the
9		Con Edison officer management employees.
10	Q.	Is 83 percent coverage sufficient to draw valid
11		conclusions from the Review?
12	A.	Yes. The officers in the analysis included the President
13		and Chief Executive Officer, President, Chief Financial
14		Officer, General Counsel, and senior officers (Senior
15		Vice Presidents) and officers (Vice Presidents) covering
16		the following functional areas: Electric Operations, Gas
17		Operations, Finance, Accounting, Customer Operations,
18		Human Resources, Engineering, Information Resources, and
19		Law. The results of the analysis, therefore, are
20		representative of Con Edison's pay positioning across the
21		entire officer management employee population.

COMPENSATION/BENEFITS PANEL

1	Q.	Why were some Con Edison officer management positions
2		excluded from the Review?
3	Α.	As with some non-officer benchmark positions, the 2021
4		Blended Peer Group companies reported insufficient data
5		to the compensation survey sources. In addition, one
6		officer role is a non-benchmark job.
7	Q.	Is the Panel sponsoring an exhibit in connection with the
8		positions included in the Review?
9	Α.	Yes. Please see EXHIBIT (CBP - 11) entitled "OFFICER
10		CENSUS."
11		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 11)
12	Q.	Was this exhibit prepared by you or under your direct
13		supervision?
14	Α.	Yes.
15	Q.	Please explain the information set forth in EXHIBIT
16		(CBP - 11).
17	Α.	This exhibit lists all officer management positions at
18		Con Edison, and whether the position was included in the
19		Review. Positions were excluded for one of the following
20		reasons:
21		• "Insufficient Benchmark Data (less than five
22		comparator matches)" indicates the Con Edison

COMPENSATION/BENEFITS PANEL

1		position is a benchmark position but there was
2		insufficient 2021 Blended Peer Group data to include
3		the position; or
4		• "Non-Benchmark Job" indicates the Con Edison
5		position is not similar to any survey benchmark
б		positions in terms of functional responsibilities,
7		job duties, and/or organizational level.
8	Q.	Is the Panel sponsoring an exhibit in connection with the
9		competitive positioning of Total Benefits and
10		Compensation of Con Edison officer positions benchmarked
11		as part of the Review?
12	Α.	Yes. Please see EXHIBIT (CBP - 12) entitled "TOTAL
13		BENEFITS AND COMPENSATION RESULTS - OFFICERS."
14		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 12)
15	Q.	Was this exhibit prepared by you or under your direct
16		supervision?
17	Α.	Yes.
18	Q.	Please explain the information set forth in EXHIBIT
19		(CBP - 12).
20	A.	This exhibit identifies the Con Edison officer positions
21		included in the Review as compared to the 2021 Blended

COMPENSATION/BENEFITS PANEL

1		Peer Group. This exhibit includes the following
2		information:
3		• Con Edison title;
4		• Benchmark title;
5		• Con Edison Total Benefits and Compensation;
6		$\bullet$ Market Total Benefits and Compensation at the 50 $^{\rm th}$
7		percentile (median) and average; and
8		• Variance for each Con Edison position to market
9		using the median and the average.
10	Q.	What did Aon's analysis indicate when comparing Con
11		Edison to the 2021 Blended Peer Group?
12	Α.	In the aggregate, Aon found Con Edison's officer
13		management Total Benefits and Compensation package value
14		to be "market competitive." Con Edison's officer
15		management Total Benefits and Compensation was 5.0
16		percent below the 2021 Blended Peer Group median. The
17		result is low relative to the median but considered to be
18		within a market competitive range of plus or minus ten
19		percent in aggregate. When compared to the average, the
20		result of 85.2 percent is below a market competitive
21		range of plus or minus ten percent in aggregate because
22		several of the comparison companies had significantly

### COMPENSATION/BENEFITS PANEL

1		higher short-term and long-term incentives than the
2		median, thereby skewing the average.
3	Q.	Is the Panel sponsoring an exhibit in connection with the
4		results of the Aon analysis?
5	Α.	Yes. Please see EXHIBIT (CBP - 13) entitled "SUMMARY
6		OF RESULTS - OFFICERS."
7		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 13)
8	Q.	Was this exhibit prepared by you or under your direct
9		supervision?
10	Α.	Yes.
11	Q.	Please explain the information set forth in EXHIBIT
12		(CBP - 13).
13	A.	This exhibit identifies the aggregate results, relative
14		to both the average and the median of the Review Aon
15		performed using the 2021 Blended Peer Group by each
16		component of Total Benefits and Compensation discussed
17		above:
18		• Base Salary;
19		• Target Cash Compensation (sum of Base Salary and the
20		variable component of officer pay);
21		• Total Direct Compensation (sum of Target Cash
22		Compensation and long-term equity grants);

### COMPENSATION/BENEFITS PANEL

1		• Total Benefit Value (estimated annual value of
2		employee benefits including non-qualified benefits
3		earned under supplemental retirement plans); and
4		• Total Benefits and Compensation (sum of total Direct
5		Compensation and Total Benefit Value).
6		The Review demonstrates that all overall benefits
7		and compensation are competitive with the median levels
8		of officer compensation provided by the 2021 Blended Peer
9		Group, that is, less than ten percent below median as
10		determined by the Review. Therefore, officer benefits
11		and compensation costs, including variable pay and long-
12		term equity grants, represent a reasonable business
13		expense that should be fully recoverable.
14	Q.	Is the Company seeking to recover all elements of officer
15		benefits and compensation, <i>i.e.</i> , base salary, the
16		variable pay component, and long-term equity grants, in
17		this rate filing?
18	Α.	No. As noted above, the Company has elected not to seek
19		recovery of the variable pay component and long-term
20		equity grants provided to the Company's officers, even
21		though the cost of these two elements of officer
22		compensation are reasonable and necessary business

### COMPENSATION/BENEFITS PANEL

1		expenses the Company must incur to attract and retain
2		officers. The Company's decision not to seek recovery of
3		these costs is for this rate filing only.
4		DIRECTORS' COMPENSATION
5	Q.	Please explain the compensation package for members of
6		the Company's Board.
7	A.	Compensation for members of the Board, who are not
8		employees of the Company, includes annual board and
9		committee chair retainers and annual long-term equity
10		grants.
11	Q.	Please describe how the Company establishes compensation
12		levels for Board members.
13	Α.	The Corporate Governance and Nominating Committee (the
14		"Committee") of the Board establishes and approves the
15		Board's compensation program. The Committee retains
16		Mercer to provide information, analyses, and
17		recommendations regarding director compensation. The
18		Committee directs Mercer to (1) assist the Committee by
19		providing competitive market information on the design of
20		the director compensation program; (2) advise the
21		Committee on the design and administration of the
22		director compensation program, and (3) inform the

### COMPENSATION/BENEFITS PANEL

1		Committee on director compensation trends among the
2		Company's compensation peer group and broader industry.
3	Q.	Please describe the current level of annual retainers and
4		equity grants.
5	Α.	Each non-employee member of the Board receives an annual
6		retainer of \$115,000, and the Lead Director ( <i>i.e.</i> , the
7		liaison between the Company's Chief Executive Officer and
8		the independent, non-executive directors) receives an
9		additional annual retainer of \$35,000. The retainer for
10		the Non-Executive Chairman for 2021 was \$160,000. The
11		Chair of the Management Development and Compensation
12		Committee receives an additional annual retainer of
13		\$20,000. The Chair of the Safety, Environment,
14		Operations and Sustainability Committee receives an
15		additional annual retainer of \$15,000. The Chair of the
16		Corporate Governance and Nominating Committee receives an
17		additional annual retainer of \$15,000. The Audit
18		Committee Chair receives an additional annual retainer of
19		\$30,000 and each Audit Committee member receives an
20		additional annual retainer of \$15,000. Each director is
21		also allocated an annual equity grant of \$150,000 of
22		deferred stock units following their election at the

COMPENSATION/BENEFITS PANEL

1		annual stockholders meeting. The annual long-term equity
2		grants are automatically deferred until the director's
3		termination of service from the Board.
4	Q.	How often is the compensation for non-employee Board
5		members evaluated?
6	A.	Mercer conducts the assessment of non-employee Board of
7		Director compensation every two years with the Committee
8		to align Directors' compensation with market levels.
9	Q.	When was the most recent assessment completed?
10	A.	Mercer conducted the most recent assessment in 2020; the
11		next assessment is scheduled for 2022.
12	Q.	Is the Company currently recovering all three elements in
13		its rates?
14	A.	No. In the 2019 Con Edison Rate Cases, the Company
15		elected not to seek recovery of the annual long-term
16		equity grants provided to non-employee Board members in
17		order to limit the number of matters at issue in those
18		cases. In not seeking recovery, however, the Company
19		specifically reserved the right to seek recovery in
20		future rate filings.
### COMPENSATION/BENEFITS PANEL

1	Q.	Is the Company proposing in this filing to recover long-
2		term equity grants provided to non-employee Board members
3		in the Rate Year?
4	A.	Yes.
5	Q.	Please explain why.
6	A.	Mercer found that the Company's total Directors'
7		compensation is aligned with the median levels of both
8		the Company compensation peer group and a general
9		industry ( <i>i.e.</i> , \$10-\$15 billion total market
10		capitalization) group. Accordingly, the Commission
11		should find that the Company's elements of Directors'
12		compensation, including long-term equity grants, are (1)
13		a reasonable cost of attracting and retaining qualified
14		non-employee directors, (2) commonly included in board of
15		directors' compensation plans, and (3) a market-based
16		compensation package. These elements are therefore a
17		legitimate cost of doing business that should be
18		recovered in rates.
19		UNION CONTRACTS
20	Q.	What portion of the Company's work force is unionized?
21	A.	As noted above, two unions support employees of Con
22		Edison, Local 1-2 and Local 3. Combined, these unions

COMPENSATION/BENEFITS PANEL

1		represent approximately 7,100 employees or approximately					
2		56 percent of the Company's total workforce.					
3	Q.	What is the effective date and term of the current					
4		collective bargaining agreements with the two unions?					
5	A.	On June 21, 2020, the Company and Local 1-2 entered into					
6		a four-year contract that will expire on June 22, 2024.					
7		On June 16, 2021, the Company and Local 3 entered into a					
8		four-year contract that will expire on June 21, 2025.					
9	Q.	Please describe the wage increases included in each of					
10		these contracts.					
11	Α.	Both contracts provide for annual increases of 3 percent					
12		per year over the length of each contract. In addition,					
13		both contracts provide for escalation to the maximum pay					
14		rate for top titles following specific service and					
15		performance criteria.					
16	Q.	Were there any changes in the health benefits offered to					
17		employees under either of these contracts?					
18	Α.	Yes. Both contracts eliminated the co-insurance option,					
19		consistent with actions the Company took for its					
20		management population in 2019. With the introduction of					
21		the High Deductible and the Essential Health Plans, this					

COMPENSATION/BENEFITS PANEL

1		option no longer provided differentiated coverage					
2		compared to the co-pay plan.					
3	Q.	Did the contracts provide for any other changes in health					
4		benefits?					
5	A.	Yes. Both contracts provided for changes in employee					
б		contributions, deductibles, and co-pays for medical and					
7		prescription services over the length of the contracts.					
8	Q.	Are the health care benefits of union employees provided					
9		in the same manner as management employees?					
10	Α.	Yes. The medical benefits are provided through a self-					
11		insured arrangement with Cigna acting as the claim					
12		administrator. There are also Health Management					
13		Organization ("HMO") plans available to all Con Edison					
14		employees. Prescription, vision, and dental coverage is					
15		also available.					
16	Q.	Do the unions negotiate with the Company as to their					
17		members health care plan contributions?					
18	A.	Yes. A critical part of the negotiation with the union					
19		leadership is the cost of health benefits. The unions					
20		represent the interests of their members and while the					
21		unions are keenly aware of constantly rising healthcare					

### COMPENSATION/BENEFITS PANEL

1		costs, they are clear in their intention to keep cost					
2		increases to a minimum for their members.					
3	Q.	Please discuss the changes in the amounts that Local 1-2					
4		employees will contribute toward health care coverage					
5		over the length of the current contract.					
6	A.	Over the length of the current contract, contributions					
7		for the Cigna co-pay plan will increase 16.7 percent for					
8		individual coverage and 13.4 percent for family coverage.					
9		For 2022, approximately 60 percent of Local 1-2 members					
10		enrolled in the Cigna co-pay plan.					
11	Q.	Please discuss the changes in the amounts that Local 3					
12		employees will contribute toward health care coverage					
13		over the length of the current contract.					
14	A.	Over the length of the contract, contributions for the					
15		Cigna co-pay plan will increase 13.2 percent for					
16		individual coverage and 12.5 percent for family coverage.					
17		In addition, changes were made to the co-pay for office					
18		visits with both primary care physicians and specialists.					
19		For 2022, approximately 72 percent of Local 3 employees					
20		enrolled in the Cigna co-pay plan.					
21	Α.	What role do plan design changes play in controlling					
22		costs for the Company's union population?					

### COMPENSATION/BENEFITS PANEL

1	A.	There are differences in the co-pay, deductibles, and
2		other limits that develop over the process of negotiating
3		the entire contract. While not significant, these
4		differences do reflect the priorities of each union for
5		their members. Plan design changes in co-pay,
6		deductibles, and other limits are negotiated with annual
7		increases to maintain cost sharing.
8	Q.	Describe the retirement benefits offered to new hires of
9		Local 1-2.
10	Q.	New hires represented by Local 1-2 may choose which
11		pension plan/formula they want to receive. New hires
12		make this election within 60 days of hire and that
13		decision is irrevocable. In addition, new hires are
14		eligible to participate in the Thrift Savings Plan
15		(401(k)), whereby they will receive Company-matching
16		contributions based on their contributions and the limits
17		outlined in the collective bargaining agreement.
18	Q.	Can you describe the retirement choices for Local 1-2 new
19		hires?
20	A.	Local 1-2 employees may choose receiving their retirement
21		benefits under the Cash Balance formula contained within
22		the Company's defined benefit retirement plan or through

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1		the Defined Contribution Pension formula ("DCPF")					
2		contained within the Company's defined contribution					
3		Thrift Savings Plan ("TSP").					
4	Q.	Is there any difference in the benefits provided by the					
5		Company to the employee under these two retirement plans?					
6	Α.	No. The formula for both plans is the same - a					
7		percentage of compensation based on each employees' age					
8		plus service ("points").					
9	Q.	Is the cost of the Cash Balance and DCPF to the Company					
10		determined in the same manner?					
11	Α.	No. The accounting for the Cash Balance formula follows					
12		the accounting standard for Defined Benefit pension					
13		plans, including forecasted interest rates, demographic					
14		assumptions, asset returns, and expected retirements.					
15		For the DCPF, the cost is "pay-as-you-go," where the					
16		Company makes quarterly cash contributions to the					
17		participants' DCPF account.					
18	Q.	What retirement benefits are offered to new hires of					
19		Local 3?					
20	Α.	As of June 25, 2017, new hires represented by Local 3					
21		participate in the DCPF plan. They do not have the					
22		option of receiving their retirement benefits under the					

### COMPENSATION/BENEFITS PANEL

1		Cash Balance formula contained within the Company's
2		defined benefit retirement plan, as described above for
3		Local 1-2.
4	Q.	Do both unions participate in the Thrift Savings Plan?
5	Α.	Yes, members of both unions are eligible to participate
б		in the Thrift Savings Plan and receive a Company match
7		for any contributions they make. The specific amounts
8		eligible for matching and the limit for the Company
9		contribution are part of the negotiations, with increases
10		provided annually to encourage employee participation in
11		the plan. Note provisional employees (currently under
12		100) do not receive company match.
13		EMPLOYEE BENEFIT EXPENSES
14	Q.	Did the Panel prepare the exhibits entitled "CONSOLIDATED
15		EDISON COMPANY OF NEW YORK, INC., ADMINISTRATIVE AND
16		GENERAL EXPENSES-EMPLOYEE WELFARE EXPENSES"?
17	Α.	Yes.
18	Q.	Were these exhibits prepared by you or under your direct
19		supervision?
20	A.	Yes.
21		See EXHIBIT (CBP-14) (Electric) entitled

### COMPENSATION/BENEFITS PANEL

1		"CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.,					
2		ADMINISTRATIVE AND GENERAL EXPENSES-EMPLOYEE WELFARE					
3		EXPENSES" (Electric) and EXHIBIT (CBP-15) (Gas)					
4		entitled					
5		"CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.,					
6		ADMINISTRATIVE AND GENERAL EXPENSES-EMPLOYEE WELFARE					
7		EXPENSES"					
8		(Gas).					
9		MARK FOR IDENTIFICATION AS EXHIBIT (CBP - 14)					
10		(Electric) and EXHIBIT (CBP-15) (Gas).					
11	Q.	Please describe these exhibits.					
12	A.	Page 1 of each exhibit is a summary of the Company's					
13		forecast of employee benefit expenses for the Rate Year,					
14		based on costs incurred in the Historic Year (i.e.,					
15		October 1, 2020 - September 30, 2021). Lines 1 through					
16		16 show costs for the Company's employee benefit					
17		programs, and lines 18 through 22 show health care costs					
18		net of employee payroll contributions for health care					
19		benefits. Total employee welfare expenses are shown on					
20		line 24. Total employee benefit expenses, net of					
21		capitalized amount, is a summary of projected health care					
22		costs and employee deductions for the Rate Year.					

COMPENSATION/BENEFITS PANEL

1	Q.	Please describe the change in the Total Employee Welfare
2		Expense from the Historic Year to the end of the Rate
3		Year ( <i>i.e.</i> , December 31, 2023).
4	A.	Over the 27-month period between the end of the Historic
5		Year and the end of the Rate Year, total costs for
6		Employee Welfare Expenses are projected to increase by
7		\$24,047,000(electric) and \$4,942,000 (gas) or a total of
8		approximately \$29 million. This represents an overall
9		increase of 11.4 percent overall or less than 5 percent
10		per year.
11	Q.	Please describe the methods used for escalating employee
12		benefit costs.
13	A.	Three different methods are used to escalate Historic
14		Year costs to the Rate Year costs. First, a labor
15		escalation factor of 6.77 percent is used to escalate
16		employee benefit costs that are a function of salaries
17		and wages. For example, the Thrift Savings 401(k) Plan
18		provides a Company match to employees for a portion of
19		their plan contributions; this is escalated using the
20		labor escalation factor. Second, a non-labor escalation
21		factor of between 3.6 percent and 5.1 percent is used to
22		escalate specific employee benefit costs that are

### COMPENSATION/BENEFITS PANEL

1		unrelated to salaries and wages, such as stock purchase
2		plan matching contributions and employee wellness
3		programs. The third factor, health care costs, was
4		derived in a less direct manner, as actual claims
5		experience for the Historic Year were muted due to the
6		COVID-19 pandemic, as described above.
7	Q.	Please describe the level of health care costs reported
8		for the Historic Year.
9	A.	For the 12 months ended September 30, 2021 Hospital $\&$
10		Medical Insurance costs (line 20, Exhibit CBP-14 and CBP-
11		15) were \$167,864,000 (electric) and \$34,503,000 (gas),
12		respectively.
13	Q.	How did you project Hospital & Medical Insurance Costs
14		for the Rate Year?
15	A.	The Company developed the projection for calendar year
16		2023 costs using three elements: (1) a normalization
17		adjustment of \$13.1 million (combined electric and gas)
18		against the Historic Year costs to reflect the impact of
19		the COVID-19 pandemic on delayed/deferred treatments, (2)
20		the impact of continued employee migration to lower-cost
21		plans (High Deductible and Essential Health Plans), and

COMPENSATION/BENEFITS PANEL

1		(3) medical inflation of 5 percent for the self-insured					
2		program and 8 percent for the HMO plans.					
3	Q.	How did you determine the normalization adjustment to					
4		account for the impact of the COVID-19 pandemic on the					
5		Historic Year costs?					
6	A.	The impacts of the COVID-19 pandemic started in March					
7		2020, so the most recent 12-month period that did not					
8		have any COVID-19 pandemic impact was the 12 months ended					
9		September 30, 2019. While the amount of medical cost					
10		inflation can be volatile, to simplify the calculation,					
11		the Company assumed a 3 percent increase year-over-year					
12		for each of the 12-month periods ended September 30, 2020					
13		and 2021.					
14	Q.	What was the result of this analysis?					
15	Α.	The table below provides the calculation used to					
16		determine the \$10.8 million normalization adjustment for					
17		electric and the \$2.3 million normalization adjustment					
18		for gas related to the Historic Year.					
19							

#### COMPENSATION/BENEFITS PANEL

Electric	Historical - Year ending 9/30		
	2019	2020 2	
TOTAL - ACTUAL	168,437	155,219	167,864
Change from Prior Period (\$000)		(13,218)	12,645
Percentage Change from Prior Period		-7.8%	8.1%
	<u>2019 Tre</u>	nded at 3% O	verall
	<u>2019</u>	<u>2020</u>	<u>2021</u>
TOTAL - TRENDED at 3%	168,437	173,490	178,728
Change from Prior Period (\$000)		5,053	5,238
Percentage Change from Prior Period		3.0%	3.0%
NORMALIZATION of Test Year			10,864
Gas	Historical - Year ending 9/30		
	<u>2019</u>	<u>2020</u>	<u>2021</u>
TOTAL - ACTUAL	34,620	31,904	34,503
Change from Prior Period (\$000)		(2,716)	2,599
Percentage Change from Prior Period		-7.8%	8.1%
	2019 Trended at 3% Overall		
	<u>2019</u>	<u>2020</u>	<u>2021</u>
TOTAL - TRENDED at 3%	34,620	35,659	36,736
Change from Prior Period (\$000)		1,039	1,077
Percentage Change from Prior Period		3.0%	3.0%
NORMALIZATION of Test Year			2,233

2 Q. Did the Company make any other normalization adjustments3 to reflect the impact of the COVID-19 pandemic?

1

4 A. Yes, several programs had diminished usage due to COVID-

5 19 restrictions on gatherings so the actual expenses for

6 the Historic Year do not reflect "steady state" for

### COMPENSATION/BENEFITS PANEL

1		programs such as employee development, health screenings,
2		and child-care services. Conversely, programs such as the
3		military duty allowance were higher than normal because
4		of the extended deployment of employees with military
5		service requirements.
6	Q.	Does the projection of health care costs include any
7		program changes?
8	A.	Yes. The projection for health care costs includes the
9		impact of plan design changes implemented for 2022, such
10		as the elimination of the co-insurance health plan choice
11		for Local 3 employees, as well as increases in the amount
12		of employee payroll contributions.
13	Q.	Are any other impacts on health care costs anticipated in
14		the revenue requirement?
15	A.	Yes. As more employees move to the high deductible and
16		Essential Health Plan, a greater portion of the overall
17		cost will be borne by employees. Ongoing migration to
18		these plans serves to mute the impact of the annual 5
19		percent assumption for medical inflation for the self-
20		insured plan and 8 percent for the HMOs so the Company
21		projects that the overall cost increase for the entire

### COMPENSATION/BENEFITS PANEL

1		employee welfare program, including health care costs, in
2		the range of 3.5 percent per year.
3		HEALTH CARE PROGRAMS
4	Q.	Has the Company made any changes in its health care
5		plans?
6	A.	The Company made changes to health plan deductibles, co-
7		payments, and employee payroll contributions made during
8		the Historic Year and expected to be made for the Rate
9		Year. In addition, the Company eliminated one of the
10		higher-cost health plan choices for employees of Local 1-
11		2 and Local 3, effective January 1, 2022.
12	Q.	Does the Company self-insure its health care benefits
13		programs?
14	A.	Yes, the Company self-insures its primary health care
15		plans and fully insures its HMO plans. For the self-
16		insured programs, the Company contracts with Cigna, CVS
17		Health, and MetLife to process claims and provide other
18		administrative services.
19	Q.	Is self-insuring the most cost-efficient way for the
20		Company to administer its health care benefits programs?
21	A.	Yes. So long as the aggregate claim costs are somewhat
22		predictable and measurable, self-insurance is less costly

#### COMPENSATION/BENEFITS PANEL

1 than purchasing insurance that provides similar coverage 2 from a commercial insurance company. The Company is in 3 the position to self-insure its health care benefit programs because claims costs in the aggregate are 4 5 generally predictable and measurable. The Company has a large enough employee and dependent population to be able 6 7 to estimate the amount that needs to be set aside to pay 8 for future claims. In return for assuming the risk of 9 setting aside sufficient funds to pay the actual claims 10 costs, the Company achieves cost savings through the 11 elimination of the carrying costs that commercial 12 insurers pass on to their insurance consumers, such as 13 premium taxes, risk charges, state mandates as well as the additional administrative costs associated with 14 15 fiduciary responsibility.

16 Q. What is the Company's approach to controlling rising 17 health care costs?

18 A. Over the past decade, the Company introduced new plans
19 such as the High Deductible and Essential Health Plans to
20 encourage employees and their families to be better
21 consumers of medical services. In exchange for lower
22 monthly contributions, the employee is responsible for a

### COMPENSATION/BENEFITS PANEL

1		higher portion of the annual deductibles and the out-of-
2		pocket limits. These limits are much higher than those
3		under the co-pay plan. The net result for these plans is
4		the employee bears a greater portion of the claims cost
5		than the Company, which helps to mitigate the overall
6		increase in claim dollars and allows employees to make
7		better informed decisions when seeking care.
8	Q.	How have employees accepted the High Deductible and
9		Essential Health Plans?
10	A.	The introduction of these plans, especially for the
11		management population, generated a strong response with
12		enrollment in these plans now representing 48 percent of
13		the management population based on 2022 enrollment. The
14		High Deductible Plan, and to a greater extent the
15		Essential Health Plan, have not been as widely accepted
16		by the union employees, mainly because the contributions
17		for the traditional co-pay plan have been managed through
18		the negotiation process and do not necessarily reflect
19		the true cost of the benefit. Only 12 percent of the
20		Local 1-2 and 6 percent of the Local 3 population
21		participated in the High Deductible and Essential Health
22		Plans for 2022.

#### COMPENSATION/BENEFITS PANEL

-	1	Ο.	What	drives	the	cost	of	health	care
---	---	----	------	--------	-----	------	----	--------	------

2	A.	Increases in health care costs are driven by increased
3		use of medical procedures and high-cost specialty
4		prescription drugs, as well as the availability and
5		projected utilization of new high-cost medical
6		procedures, treatments, and devices.

7 Q. Please provide an example.

8 A. A hospitalization in 2021 might involve more tests, more
9 procedures, more supplies, and use of different

10 technology than for the same condition a few years ago or 11 the use of new treatments for previously untreatable

12 terminal conditions.

13 Q. Discuss the role of advanced medical technologies in14 health care costs.

15 A. New medical technologies (such as brain implant 16 therapies for spinal cord injuries or other neurological 17 injuries) raise the cost of medical services because 18 they are not designed to compete with existing 19 technologies. Rather, they are designed and introduced 20 into the market to enhance the ability of medical 21 professionals to save the lives of patients.

22 Q. Are costs for pharmaceutical solutions also increasing?

### COMPENSATION/BENEFITS PANEL

1	Α.	Yes. A large portion of the increased spending for
2		prescription drugs is attributed to an increase in
3		utilization for high-cost specialty drugs used for the
4		treatment of complex, chronic, or rare conditions such as
5		various forms of cancer, rheumatoid arthritis, immune
6		disorders, and endocrine-related diseases.
7	Q.	What actions has the Company taken to mitigate rising
8		prescription costs?
9	A.	The Company works with CVS to identify programs and
10		services that can influence the overall cost of
11		prescription drugs for our employees. Since 2018, CVS
12		has implemented programs that have saved a cumulative \$30
13		million in prescription costs.
14	Q.	Can you describe how these cost savings were achieved?
15	Α.	Yes. One of the largest components of prescription costs
16		is specialty drugs. They represent about 44 percent of
17		the annual gross cost of prescription drugs to the
18		Company. Specialty Guideline Management was introduced
19		to provide prior authorization (doctor's need to receive
20		approval to prescribe), step therapy (start with non-
21		specialty drugs), and day-1 utilization management
22		control (to keep close tabs on the prescribing doctor and

### COMPENSATION/BENEFITS PANEL

1		the results achieved from the recommended treatment) to
2		promote safe and appropriate utilization of specialty
3		drugs both before and throughout the course of therapy.
4	Q.	Are there other CVS programs in place that address
5		specialty drugs?
6	Α.	Yes, the Advanced Control Specialty Formulary utilizes
7		exclusions, new-to-market drug management, tiering
8		strategy combined with the Specialty Guideline Management
9		noted above to support the clinically appropriate
10		utilization and cost-effectiveness of specialty drug
11		therapy. Limits have also been applied to the quantity
12		of specialty medications so their efficacy can be
13		evaluated so that dosages do not exceed the upper limit
14		of safe and appropriate thresholds.
15	Q.	Has the Company introduced changes for non-specialty
16		drugs in order to reduce prescription costs for the
17		Company?
18	Α.	Yes. The Company has implemented prior authorization
19		requirement for non-specialty drugs. This process
20		defines a set of criteria by which a drug may be covered,
21		and are in place to support the safe, effective, and
22		appropriate utilization of medication.

COMPENSATION/BENEFITS PANEL

1	Q.	Have there been changes to reduce the cost of
2		prescriptions for employees?
3	A.	Starting in 2022, certain preventative drugs will no
4		longer require a co-pay for participants covered under
5		the High Deducible and Essential Health Plans. This
6		change is intended to help people maintain medication
7		compliance for chronic conditions and to better control
8		those conditions with the expectation that it will
9		minimize health care intervention costs over the long-
10		term.
11	Q.	Are there any other steps that the Company is taking to
12		mitigate health care costs?
13	A.	Yes. The Company conducts periodic audits of the health
14		and welfare plan vendors to confirm the correct
15		processing of claims, in accordance with the plan
16		specifications for each of the health care options. The
17		Company completed audits for Cigna hospital and medical
18		plans and CVS through 2019. In 2022, the Company will
19		perform audits for of 2020 and 2021 claim activity. Upon
20		completion of the audits, if there are any overpayments
21		to health care providers, the Company will recover those
22		overpayments. In addition, the Company continues to

COMPENSATION/BENEFITS PANEL

1		review annually its cost-sharing arrangement with the
2		employees to maintain a reasonable and competitive cost-
3		sharing level with employees.
4	Q.	Has the Company taken steps to encourage employees to
5		adopt healthy habits?
6	A.	Yes. The Company continues to promote healthy behaviors
7		using a variety of financial incentives, employee
8		sponsored programs and educating them on the additional
9		benefits and services available to them from Cigna and
10		CVS. In addition, employees may receive financial
11		incentive through the annual wellness credits if they
12		participate in a medical screening each year.
13	Q.	What has been the impact of the COVID-19 pandemic on the
14		Company's health programs?
15	A.	Costs associated with the COVID-19 pandemic fall into
16		three categories - testing, treatment, and vaccine costs.
17		From March 2020 through October 2021, the Company's
18		testing costs have totaled \$9.5 million - representing
19		about 57,600 individual tests. Treatment costs,
20		including 51 high dollar claims, have totaled another \$12
21		million. Finally, the Company has incurred vaccine costs
22		totaling \$245,000 for 6,724 individuals.

COMPENSATION/BENEFITS PANEL

1	Q.	What impact will the COVID-19 vaccine mandate have on the
2		Company's health care costs?
3	Α.	The Company will bear the anticipated cost of providing
4		weekly testing for employees with medical or religious
5		exemptions from the vaccine mandate.
6		OTHER BENEFITS
7	Q.	Does the employee benefit expenses projection include any
8		program changes?
9	Α.	Yes. Beginning in 2021 for management and Local 1-2
10		employees, the auto-enrollment level for the 401(k) was
11		increased from 2 percent to 3 percent (to reflect the
12		impacts of new hires) and the auto-escalate ceiling was
13		increased from 10 percent to 15 percent for all
14		participating employees. A similar change will be made
15		for Local 3 beginning in 2022. The impact of this change
16		is an increased Company match due to the higher levels of
17		employee contributions.
18	Q.	Is the Company making any changes to the Group Life
19		Insurance program since the last rate case?
20	Α.	Yes. Under the collective bargaining agreement with Local
21		3, the Company-paid group life insurance benefit will

### COMPENSATION/BENEFITS PANEL

1		increase in 2022 from \$50,000 to \$100,000. This follows
2		a similar change made for Local 1-2 effective for 2021.
3 4 5 6		LEGACY PENSION AND POST EMPLOYMENT BENEFITS OTHER THAN PENSIONS
7	Q.	What is the status of the Company's legacy defined
8		benefit retirement plan ("Legacy Retirement Plan")?
9	Α.	With the exception of new Local 1-2 employees who have a
10		choice, the Legacy Retirement Plan is closed to all new
11		employees. Local 1-2 employees that do not pro-actively
12		elect to participate in the cash balance formula of the
13		defined benefit retirement plan are enrolled in the
14		defined contribution pension formula.
15	Q.	How many active employees are still covered by the Legacy
16		Retirement Plan and accrue benefits under that plan?
17	Α.	As of January 1,2021, there were 11,073 active employees
18		in the Legacy Retirement Plan, including 3,769 (or 34
19		percent) covered under the Cash Balance formula.
20	Q.	What is the demographic profile of the employees covered
21		under the Legacy Retirement Plan?
22	Α.	The average age of the current active participants is
23		45.7 years with an average service of 16.6 years. For the
24		14,103 retirees, surviving spouses, beneficiaries, and

#### COMPENSATION/BENEFITS PANEL

1		disabled participants receiving benefits under the Legacy
2		Retirement Plan, the average age is approximately 74 and
3		the average annual benefit is approximately \$42,000/year.
4		There are also 1,154 former employees who are entitled to
5		future benefits with an average value of \$9,900/year.
6	Q.	Have there been any changes in the retirement plan?
7	A.	Yes, the Company will add the lump-sum payout option for
8		Local 3 employees beginning in 2022. This option was
9		added for management employees beginning in 2017.
10		Instead of taking a lifetime monthly pension payment,
11		retiring employees can take a single lump-sum payment of
12		their accrued benefit. By settling the obligation to the
13		employee with the lumpsum payment, the Company's
14		retirement plan investment, longevity, and interest rate
15		risks have been eliminated.
16	Q.	What is the current status of the supplemental retirement
17		income plan ("SRIP")?

18 A. Because the SRIP provides management employees upon
19 retirement with the portion of their earned retirement
20 benefit that could not be paid under the tax-qualified
21 plans due to federal tax law limitations, the closure of

COMPENSATION/BENEFITS PANEL

1		the qualified Retirement Plan to new management employees
2		in 2017 resulted in the closure of the SRIP.
3	Q.	Are there ongoing costs associated with the Retirement
4		Plan and SRIP?
5	A.	While the Retirement Plan is closed to virtually all new
6		participants and the SRIP is completely closed, those in
7		the plans prior to their respective closure date continue
8		to accrue benefits under the plans. Defined benefit
9		plans are subject to accounting treatment under ASC 715
10		Compensation - Retirement Benefits where the accumulated
11		and projected cost of providing the benefits under the
12		plans are spread out over the life of the participants -
13		active and retired.
14	Q.	Please describe the Company's OPEB programs.
15	A.	The Company's OPEB programs are comprised of the Retiree
16		Health Program, which includes major medical,
17		hospitalization, vision, and pharmaceutical benefits.
18		The Company also offers a limited retiree term life
19		insurance program.
20	Q.	What is the status of the Company's OPEB plans?
21	Α.	Under the Retiree Health Program, the Company offers
22		employees who retire with at least 75 points (calculated

### COMPENSATION/BENEFITS PANEL

1		by adding age and years of service, with each year
2		equaling one point), and their eligible dependents, a
3		voluntary contributory Retiree Health Program.
4	Q.	What is included in the Retiree Health Program?
5	Α.	The Retiree Health Program offers enrolled retirees
б		different coverage options including several HMOs, a
7		prescription drug plan, and comprehensive hospital,
8		medical, and vision care plans with a network of
9		participating providers. Once a retiree or covered
10		dependent becomes eligible for Medicare, the Retiree
11		Health Program coordinates his or her health care
12		expenses with Medicare. For Medicare-eligible retirees,
13		Medicare is the primary payer of hospital and medical
14		claims, and the Retiree Health Program is the secondary
15		payer. Under the prescription drug plan, once a retiree
16		and covered dependent become eligible for Medicare Part
17		D, retirees may continue their coverage under the Retiree
18		Health Program or enroll in the Medicare program for
19		their prescription drug coverage.

Q. Does the Company provide any life insurance benefits forretirees?

### COMPENSATION/BENEFITS PANEL

1	Α.	The Company provides certain retired management employees
2		retiree term life insurance benefits of \$25,000 at no
3		cost to the retiree, as well as a contributory
4		supplemental group term life insurance benefit. Upon
5		retirement, retired union employee may also purchase
6		supplemental group term life insurance benefits.
7		Currently, retiring union employees may purchase up to
8		\$30,000 of coverage in units of \$10,000. The cost of the
9		contributory portion of the supplemental retiree life
10		insurance program is partially paid for by the Company.
11	Q.	Are all employees eligible for retiree health care?
12	A.	Yes, but only those who retire under the final-average or
13		career average pension formula will be entitled to a
14		contribution from the Company.
15	Q.	Describe the population of employees who are not eligible
16		for subsidized retiree medical coverage?
17	A.	All employees retiring under the DCPF or the Cash Balance
18		formula are not eligible for any retiree health benefits
19		contributions. If they meet the eligibility requirements
20		and enroll in the Retiree Health Program, they will be
21		responsible for paying the full cost of Retiree Health
22		coverage offered through the Company.

### COMPENSATION/BENEFITS PANEL

1	Q.	What portion of the current active population is not
2		eligible for retiree medical benefits in retirement?
3	Α.	There were 5,991 active employees covered under the Cash
4		Balance and DCPF formula as of December 1, 2021, which
5		represents about 45 percent of the current active
6		employee population.
7	Q.	What has been the increase in retiree contributions for
8		health care benefits?
9	A.	Retirees eligible for retiree health coverage have seen
10		premium increases of 10 percent per year for the last
11		several years.
12	Q.	Were there any initiatives with respect to the Company's
13		OPEB programs that were considered and rejected?
14	A.	No.
15	Q.	Does that conclude your testimony?
16	Α.	Yes, it does.