Con Edison Climate Study Details Projected Impacts to Energy Systems Through the 21st Century

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NEW YORK, Dec. 20, 2019 (GLOBE NEWSWIRE) -- Extreme heat, coastal storm surge, inland flooding and more violent storms are the most significant climate-driven impacts to Con Edison's energy delivery systems and its customers through the 21 st century, according to a report issued today.

The report (coned.com/resilience), developed by Con Edison in collaboration with ICF and Columbia University's Lamont-Doherty Earth Observatory, leverages the latest available climate science data. The study evaluated present-day infrastructure, design specifications, and procedures against expected climate change to better understand its future impact on Con Edison's energy delivery systems. The company's electric, gas and steam systems are all subject to increased flooding from coastal storms, while the electric system is also challenged during periods of sustained heat.

Among the study's findings is an increase in days when the heat index will reach or exceed 103 degrees, from two days a year now to anywhere from seven to 26 days a year by 2050.

The 36-month study, authorized by the New York State Public Service Commission (NYPSC) as part of a collaborative created after Superstorm Sandy, describes historical and projected climate changes across Con Edison's service area in New York City and Westchester County.

"We recognize the global scientific consensus that climate change is occurring at an accelerating rate," said Tim Cawley, president of Con Edison. "While climate change's exact pace and effects are uncertain, the study provides a strong foundation upon which to plan, design, and invest in our energy delivery systems to better protect them and serve our customers."

To account for climate uncertainty, the study considered a range of potential climate futures reflecting both unabated and reduced greenhouse gas concentrations through time and evaluated extreme "stress test" scenarios.

The analysis identified the following most significant climate-driven risks to Con Edison's systems:

- Sea level rise
- Coastal storm surge
- Inland flooding from intense rainfall
- Hurricane-strength winds
- Extreme heat

While Con Edison already uses a range of measures to build resilience to weather events, the vulnerabilities identified in the study will guide the company's future strategy to strengthen its reliability and resilience against increasingly harsh weather.

The report estimates the company might need to invest between $1.8 billion and $5.2 billion by 2050 on targeted programs to protect its electric, gas and steam delivery systems and customers from the impacts of climate change. Con Edison will further evaluate future adaptation strategies and associated costs through the development of 5-, 10- and 20-year plans. Con Edison typically invests approximately $3 billion every year on its energy infrastructure.

Con Edison has been aggressive in upgrading its electric, gas and steam systems against severe weather. Following Superstorm Sandy, the company invested $1 billion over four years to protect its systems. After a pair of severe storms struck in quick succession in March 2018, Con Edison coordinated with Westchester County to spend an additional $100 million to fortify the electric delivery system in the areas that suffered the most devastation.

While the study assessed vulnerabilities within Con Edison's present-day systems to a future climate, an implementation plan must also consider the evolving market for energy services and potential changes to services and infrastructure driven by customers, government policy and external actions over time.

As a next step from the study, Con Edison will develop a detailed Climate Change Implementation Plan by the end of 2020 to operationalize the recommendations from this Climate Change Vulnerability Study. The Implementation Plan will consider updates in climate science; finalize an initial climate design pathway; integrate that pathway into agency specifications and processes based on input from subject matter experts; develop a timeline for action with associated costs and signposts; and recommend a governance structure. Similar to this study, the company will engage a stakeholder group for input on scope and to provide updates on a quarterly basis.

Comments of Participants/Stakeholders:

Jainey Bavishi, Director of the Mayor's Office of Resiliency:
"As climate change worsens, New York City's energy system must keep pace. This study is the first step towards understanding the climate threats facing critical infrastructure, and we look forward to working closely with the utility as they identify and develop resiliency investments for their electric, gas, and steam systems."

Elizabeth B. Stein, Senior Manager and Senior Attorney at Environmental Defense Fund:
"The energy infrastructure we invest in today will be with us for decades, so we must plan for the warmer future that science tells us is coming. The Climate Vulnerability Study will help Con Edison plan for reliability in a changing climate and represents an important initial step in the direction of

aligning energy system planning with New York's future energy needs."

Michael Gerrard, Professor at Columbia Law School and Director of the Sabin Center for Climate Change Law:
"This study advances the global state of the art in anticipating the impacts of climate change on critical infrastructure. It will help Con Edison to assure reliable service in the face of future floods, heat waves and other extreme events, and it will provide a template for other utilities to undertake similar work, as they should. I am gratified that the collaborative proceeding we helped launch after Superstorm Sandy has led to this study, and we look forward to participating in the upcoming work to act on the study's findings."

Radley Horton of Columbia's Lamont-Doherty Earth Observatory:
"Through this study, Con Edison took on some of the most vexing and pressing questions in climate science. They include how different climate variables like heat and humidity will interact in the future; how sequences of extreme weather might change, and how can we go beyond climate models to ask what a plausible worst-case scenario looks like for underappreciated hazards like extreme heat and extreme precipitation."

Anne Choate, ICF Senior Vice President:
"In the face of a changing climate, advancing resilience is crucial for maintaining critical infrastructure services. This report reflects Con Edison's commitment to understanding physical climate risks and builds a rich foundation for implementing resilience solutions. ICF appreciates the opportunity to partner with Con Edison throughout this landmark study; this effort will serve as a benchmark for utilities around the country."

Con Edison is a subsidiary of Consolidated Edison, Inc. [NYSE: ED], one of the nation's largest investor-owned energy companies, with approximately $12 billion in annual revenues and $56 billion in assets. The utility delivers electricity, natural gas and steam to 3.5 million customers in New York City and Westchester County, N.Y. For financial, operations and customer service information, visit conEd.com. For energy efficiency information, visit coned.com/energyefficiency. Also, visit us on Twitter and Facebook.

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