Climate Risk and Resilience

April 11, 2024

Our Integrated Strategy

We are committed to meeting societal goals and our customer expectations. Our Long-Range Plans communicate the strategy, actions, and investments needed to advance towards the clean energy transition.

We developed this integrated strategy to achieve four strategic objectives

- **Clean Energy**: Economy-wide net-zero GHG emissions by 2050
- **Climate Resilience**: Increased resilience to adapt to climate change
- **Core Service**: World-class safety, reliability, and security
- **Customer Engagement**: Industry-leading customer experience

Building the Grid of the Future

Con Edison will invest in infrastructure and customer energy solutions.

Enable the expansion of the electric system

Build a more resilient system against climate change

Maintain focus on safety, reliability, and customer experience

Develop new grid capabilities

CLIMATE RESILIENCE JOURNEY

Progress of Climate Change Adaptation Work

Con Edison is committed to addressing climate risks and improving system resilience by taking actions to prevent, mitigate, and respond to the physical impacts of climate change.

Storm Hardening

(2013 - Present)

In the aftermath of Superstorm Sandy, we invested over $1.1 billion in increasing electric, gas, and steam resilience to sea level rise and storm surge, flooding, and heavy winds

First Climate Change Vulnerability Study and Implementation Plan

(2017 - 2022)

- Investigated potential impacts on energy systems using CMIP5 models provided by Columbia University
- Integrated climate into planning, design and operations

2023 Climate Change Vulnerability Study (CCVS) and Resilience Plan

- Updated Climate Study and developed a comprehensive 20-year climate resilience plan
- Basis for projections were CMIP6 models provided by NYS/Columbia University

2024+ Continued integration of resilience planning

Biennial progress reports to the Commission on the implementation of the Resilience Plan and performance of the adaptation measures

- Refresh Climate Study (2028)
- Issue a revised Climate Change Resilience Plan (2028)

Impacts of the Latest Climate Science

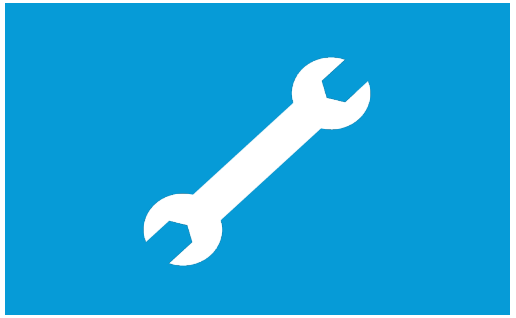
Con Edison's climate change vulnerability study (CCVS) estimates that heat impacts may occur sooner than previously anticipated, with more heat waves and increases in the frequency and intensity of certain extreme weather events.

Climate variables	Historical*	2030 Projections	2050 Projections
Maximum temperature (Days per year with maximum temperature >95ºF)	**4**	**17**	**32**
Heat waves (Number of 3-day heat waves with daily maximum temperature >90ºF)	**2**	**6**	**9**
Precipitation (Days with precipitation >2 inches)	**3**	**4**	**5**
Sea level rise (Sea level by 2050)	**-**	**9 in.**	**16 in.**
Extreme weather events (Frequency and intensity)	Projections indicate an increase in *frequency* and *intensity* of certain extreme weather events such as long duration heat waves and deluge rainfall, while tropical cyclones are expected to increase with intensity and more probable northeast tracks.		

*Historical Baseline for 1) Days per year over 95ºF is 1981-2010 (30 year); for 2) Sea level rise is 1995 - 2014

Our Strategies to Address Climate Risks

We developed a holistic approach and investment strategy to address climate risks to our electric system identified for the next 5-, 10-, and 20-year periods.



Prevent

Harden energy infrastructure and assets against **projected climate conditions** to **prevent outages**

Mitigate

Modify system design and flexibility to **mitigate disruptions** to customer service

Respond

Operational improvements to reduce recovery timeframe in **response to extreme weather**

2023 CLIMATE CHANGE RESILIENCE PLAN

Proposed Future Resilience Investments (2025-2029)

Con Edison has filed a Resilience Plan that outlines our proposed investments to enhance our climate resilience.

Prevent

- Selective Undergrounding
- Non-Network Resiliency
- Substation Operations Storm Hardening
- Submersible Equipment
- Critical Facilities
- Green Infrastructure and Rewilding
- Living Shorelines and Nature-Based Solutions
- Substation Enclosure Upgrade

Mitigate

- Primary Feeder Resiliency
- Erosion Protection and Drainage Upgrade
- Non-Network Resiliency Cutout Upgrade
- Heat Mitigation for Worker Safety

Respond

- Substation Loss Contingency
- Storm Resilience Center
- Storm Technology Advancements
- Emergency Outage Communications
- Micronet Weather Station Expansion

Building Resilience is a Shared Goal

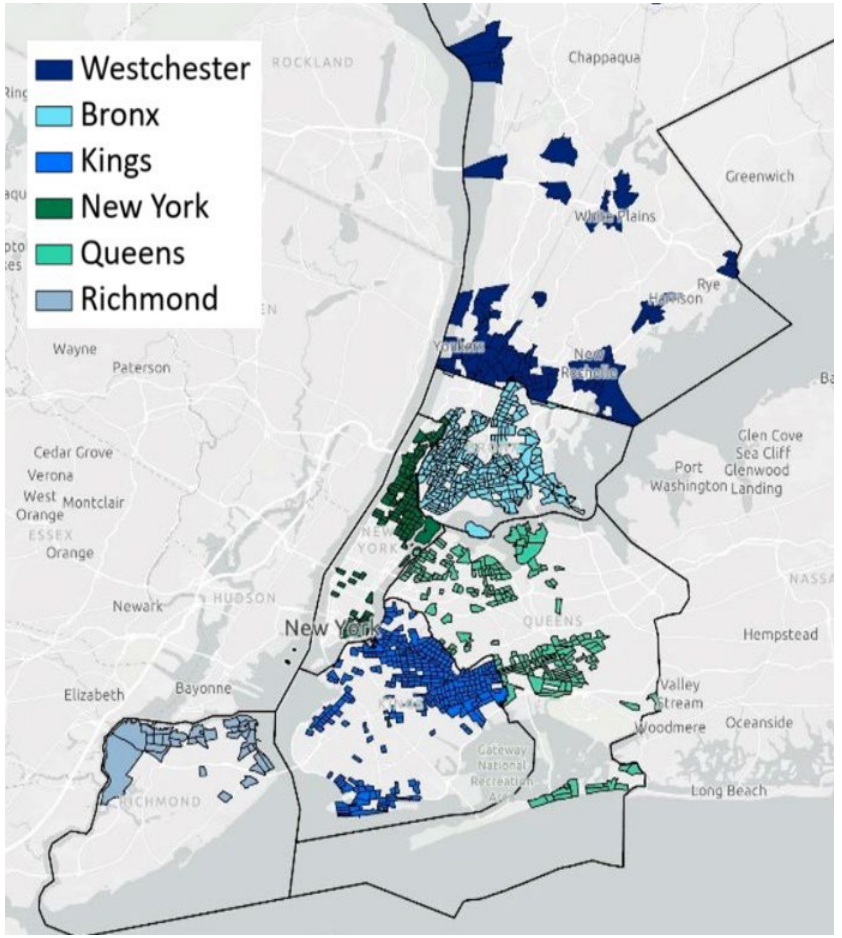
Building resilience requires collaboration and input from numerous stakeholders, including utilities, regulators, regional planners, and many others.

- As utilities build more resilient infrastructure, they should continue to communicate with stakeholders on how they are incorporating the impacts of climate change
- Customers and other stakeholders should also develop their own adaptation solutions and resilience plans
- Frameworks and policies should support multi-stakeholder collaboration to enable a more resilient electric grid

Equity Considerations

Future biennial reporting regarding project impacts to disadvantaged communities (DACs)

- Reporting on investments in DACs
- Comparing customer outages in DAC vs. non-DAC areas
- Screening criteria for selective undergrounding



Reference Links

Con Edison's Climate Change Resilience Plan

- Website: Our Climate Change Resiliency Plan
  - http://www.conEd.com/resilience
- Full Plan: 2023 Climate Change Resilience Plan
- Two-page summary:
  Climate Change Resilience Report - Summary