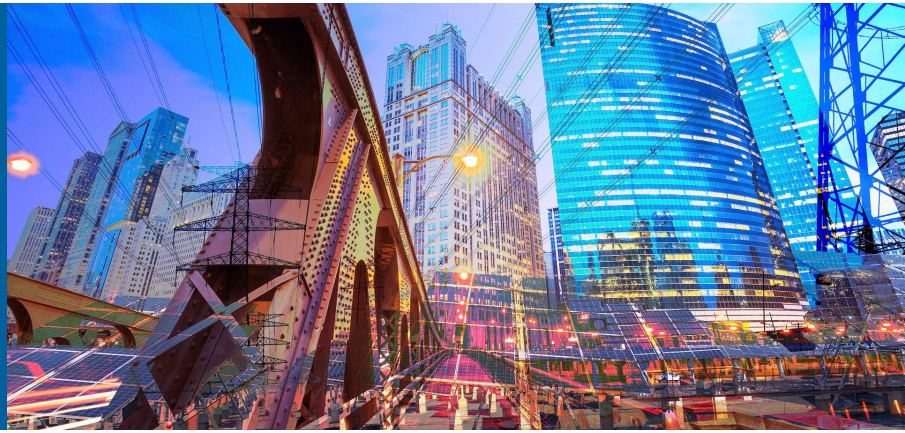
AEG CHICAGO 22Q3 STAKEHOLDER CHALLENGE: GRID MODERNIZATION



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INTRODUCTION

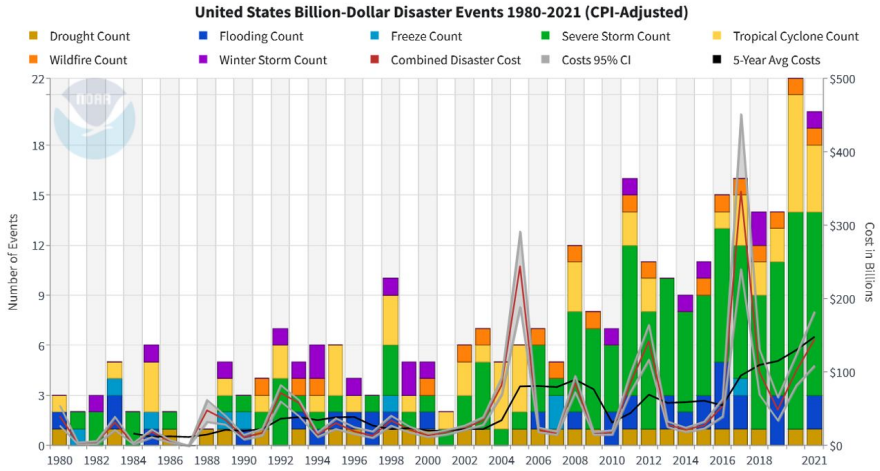
Center for Climate Resilience and Decision Science

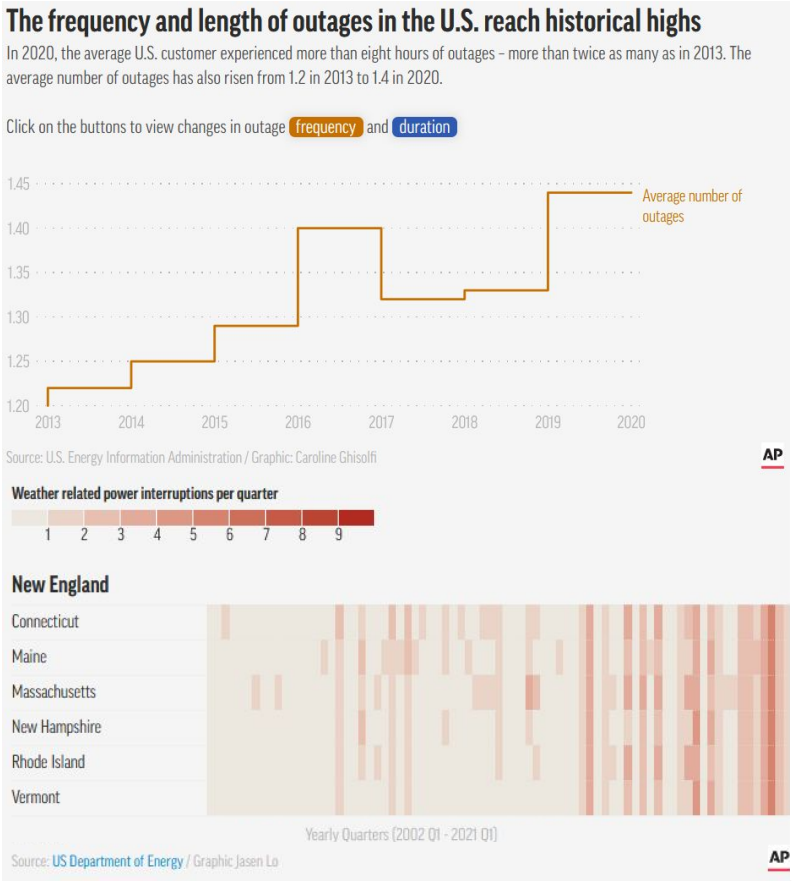
- The Center for Climate Resilience and Decision Science (CCRDS) conducts research and analysis to enable unmatched climate-risk informed decision-making and adaptation planning for public and private stakeholders facing a variety of climate-related challenges around the world.
- We believe in:
  - A ***quantitative, data-driven approach*** to climate resilience decision-making
  - Access to ***actionable, relevant local-scale projections*** about future climate
  - Providing the tools and analyses that ***enable proactive climate resilience actions***
- The CCRDS is comprised of a multidisciplinary scientific team that collaborates with research partners to ensure that climate risk-informed decision-making is contextualized in socio-economic, infrastructure, environmental, and fiscal realities so that mitigation actions are grounded in science and practicable for immediate implementation.

CRITICAL PROBLEM

A modernized grid is a resilient grid, but…

- Our grid is increasingly less able to cope with the worsening impacts of climate change
- We are spending more and more each year recovering from climate-related natural disasters





KEY OBSTACLE TO OVERCOME

A Fractured Approach to System-Level Resilience

- The grid functions as an ***interdependent system*** of components—generation, transmission, distribution, consumer

System Resilience = Σ Component Resilience

- Increased (climate) resilience in the grid requires an ***integrated, coordinated, system wide*** approach to planning and investment, yet…

  …our current approach is ***fractured, stove-piped, and not well coordinated***

- Data-driven decision-making and proactive climate action ***work better, working together***

BENEFITS & CONSEQUENCES

Benefits of Addressing

- **A more climate resilient grid = more climate resilient communities**
- **More holistic, system-wide resilience**
  - Minimize possibility of blind spots, potential for cascading failures, disruptions
  - Increase potential for cascading benefits
- **More targeted, actionable science**
  - Fewer duplicative studies, planning efforts
  - More collaborative planning tools, risk quantification
- **More efficient, robust capital planning**
  - Better future-proofing capital investments
  - Cost-sharing and/or co-benefits of investment

Consequences of Not Addressing

- **Communities will be hit harder by the impacts of climate change**
- **Incomplete, gap-ridden system resilience**
  - Incomplete understanding of individual system resilience
  - “You don’t know what you don’t know…”
- **Inaction paralysis**
  - Tendency to admire complexity of problem, not act
  - Pursue studies that don’t provide satisfactory outcomes, or leave questions unanswered
- **Unnecessary or ineffective spending**
  - Incomplete picture of risk could prioritize low-return or unnecessary investments

FINAL STATEMENT

Regarding Grid Modernization, to achieve Chicago's Climate, Health & Equity goals, a critical obstacle to collectively overcome in 12 months is…

…an uncoordinated and unnecessarily fractured approach to climate resilience action. Chicagoland needs a more coordinated, equity-focused, system-wide approach to climate resilience in order to ensure a reliable, modernized grid for <u>all</u> communities throughout the region, into the future.

THANK YOU

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