Climate Resilience Working Group

March 18, 2026

nationalgrid

Today's Agenda

- **AMI – Emergency Remote Connect & Disconnect – Presented by: Rachel Stowell / Calli Moise – AMI Team**
- **MIT Wind/Icing Projection Updates – Presented by: Gavin MacLean – NY Climate Resiliency**
- **Flood Risk Modeling – Presented by: Peter Haswell – NY Climate Resiliency Lead**
- **EPRI P262: Physical Climate Risk & Resilience – Presented by: Gavin MacLean – NY Climate Resiliency**
- **Adirondack North Country Association – Climate Change Adaptation & Resilience Plan Progress**
- **Community and Stakeholder Updates and Feedback**

Emergency Remote Disconnect (ERDC):
A Safety Enhancement for Emergency Response

Emergency Remote Disconnect (ERDC) is a safety capability enabled by AMI smart meters that allows National Grid to **remotely de-energize a premise during an emergency, only at the request of on-site first responders.** ERDC is used to support emergency response—not replace it.

ERDC IS
- An **added safety tool** for emergency situations
- Requested **only by on-site first responders**
- Used to **de-energize power at the meter**
- Paired with **full National Grid field response**

ERDC IS NOT
- A replacement for traditional emergency response
- A substitute for field verification or inspections
- An indication that service is de-energized

Crews must treat all service as energized until National Grid personnel verify power is off

Benefits:

- ✓ **Safety**: Remote disconnection can enhance safety for first responders, emergency personnel, and customers by enabling a faster response time by reducing the need for a manual disconnection of service.
- ✓ **Customer protection**: By disconnecting service remotely, National Grid can prevent further damage to customer property and equipment during emergencies.
- ✓ **Fast response**: Ability to quickly disconnect power can help protect personnel and infrastructure.
- ✓ **Customer satisfaction:** The ability to reconnect a meter quickly after a disconnect..

MIT Wind/Icing Projection Updates

Background:

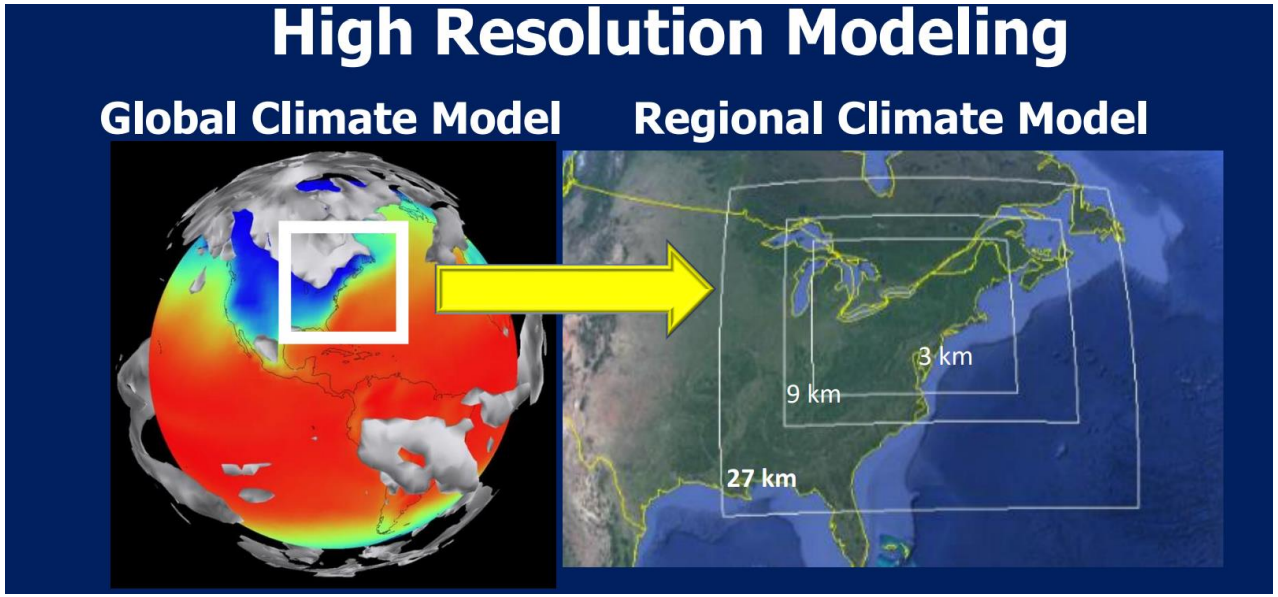
- Refresh of the original 2021 study
- Delivers hourly climate data across most of the Northeast in 3km resolution
- This time around we have expanded the scope to include data analysis

Updates:

- Meeting held between participating utilities and MIT on March 3rd
- We expect to get an updated version of the scope of work with revisions based on that last JU call
- Waiting to get the Terms and Conditions from MIT
- Working on getting the PO together

Proposed Project Elements

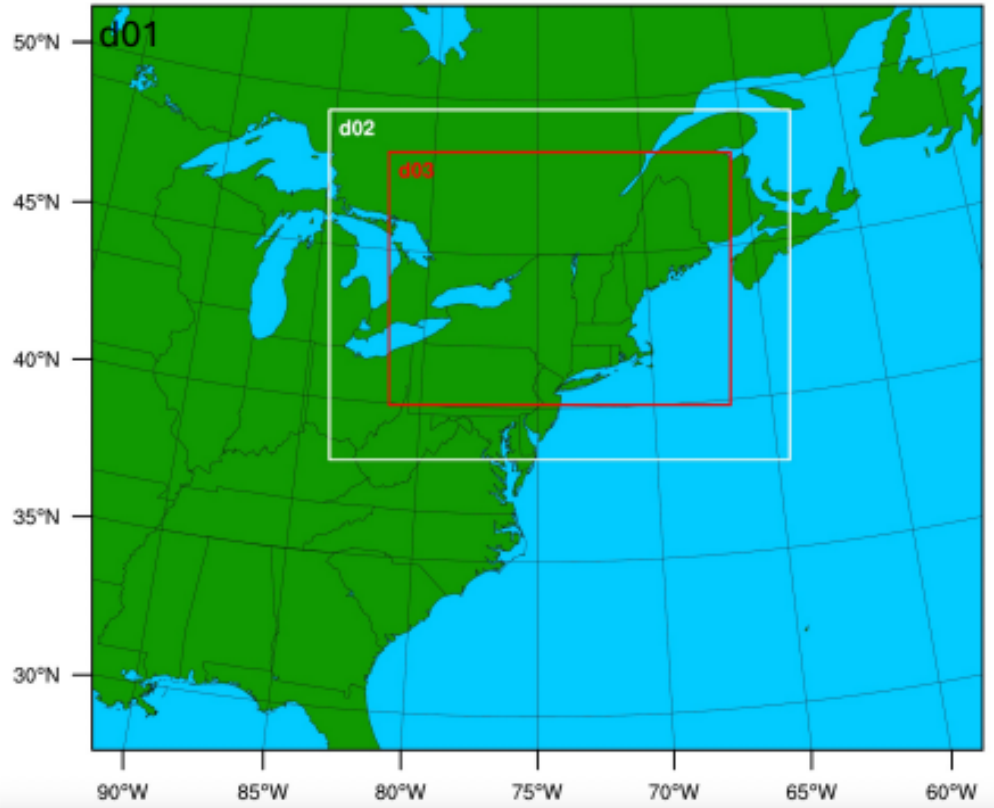
- Phase 1 – Historical Simulations (Reanalysis driven):
  - 2011-2025, 15-year simulation
  - ERA5 Reanalysis as boundary conditions
  - Nested domains: 27 km (d01), 9 km (d02)
- Phase 2 – Historical simulations (CMIP6 driven):
  - 2011-2025, 15-year simulation
  - CMIP6 GCMs as boundary conditions (at least 4 models)
  - Nested domains: 27 km (d01), 9 km (d02)
- Phase 3 – Future simulations (CMIP6 driven):
  - 2026-2040, 15-year simulation
  - Same CMIP6 GCMs as boundary conditions (at least 4 models)
  - Nested domains: 27 km (d01), 9 km (d02)



Phases 2 and 3 will provide ensemble-mean statistics as well as an assessment of the possible range of outcomes (and possibly more rigorous intra-ensemble variance statistics provided enough CMIP6 models are performed). For these proposed future simulations, use the SSP585 scenarios generated by the CMIP6 models.

Proposed Project Elements

- Phase 4 (Optional) – Extended Future (CMIP6-driven)
  - 2041–2055 (extension of Phase 3)
  - CMIP6 GCMs as boundary conditions (at least 4 models)
  - Optional further extension: 2056–2070
  - Nested domains: 27 km (d01), 9 km (d02)
- Phase 5 (Optional) – High-Resolution Simulations
  - 3 km horizontal resolution
  - Nested domains: 27 km (d01), 9 km (d02), 3 km (d03)
  - Time periods: Phase 2 (2011-2025) & Phase 3 (2026-2040)
  - CMIP6 sub-selection (likely single model)

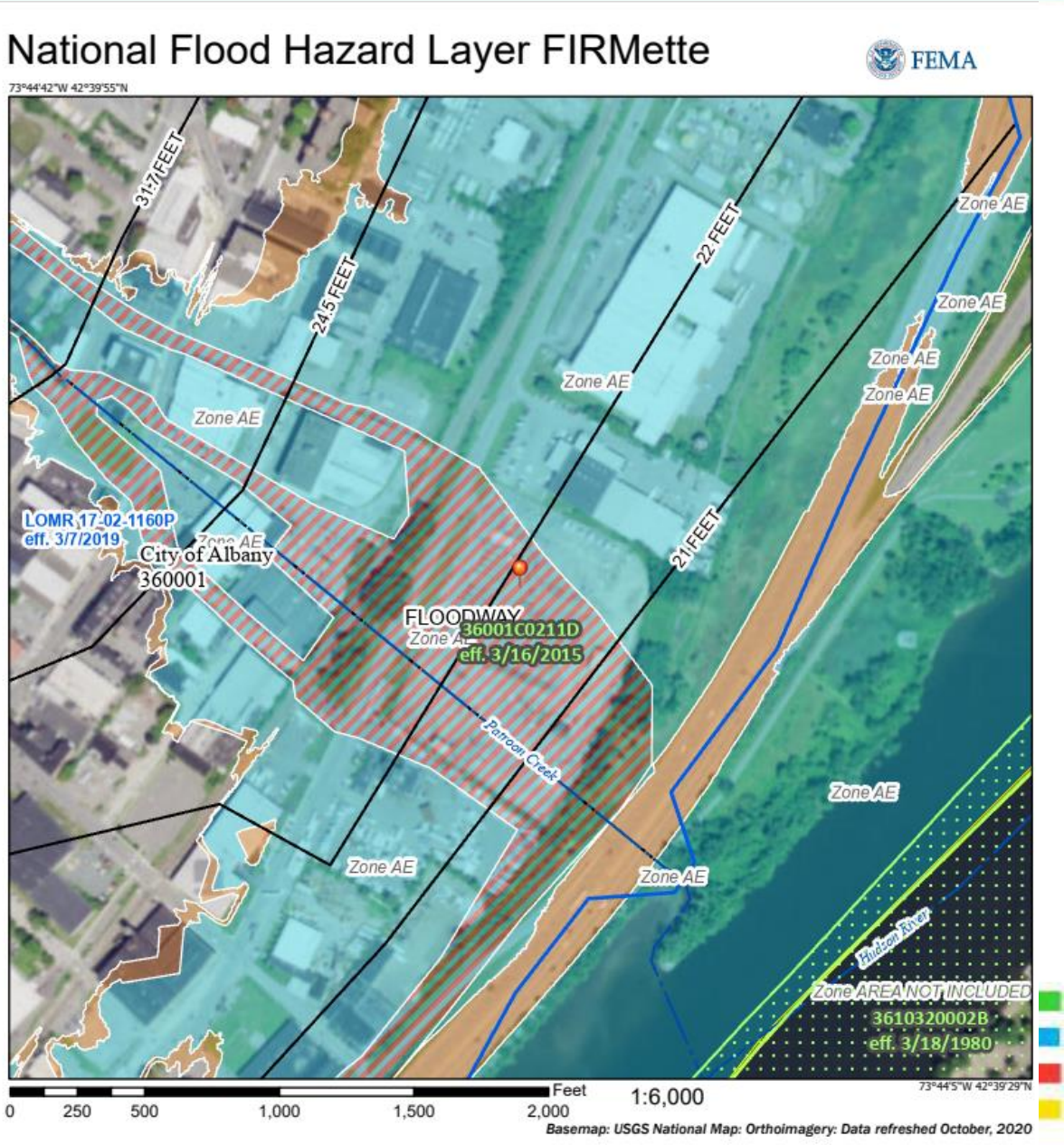


Similar to Phases 2 and 3: We could provide ensemble-mean statistics as well as an assessment of the possible range of outcomes (and possibly more rigorous intra-ensemble variance statistics provided enough CMIP6 models are performed). For these proposed future simulations, use the SSP585 scenarios generated by the CMIP6 models.

Flood Risk Modelling

We are working out a contract to have Jupiter Intelligence apply climate projections to predict the future flood risk for Riverside substation:

- The core of this pilot is to get in-depth future flood data for Riverside Substation
- With this information National Grid will be able to make a more informed decision of the right course of action
- We already have identified that Riverside is at a high risk for flooding, but this information will allow us to take a future-looking approach

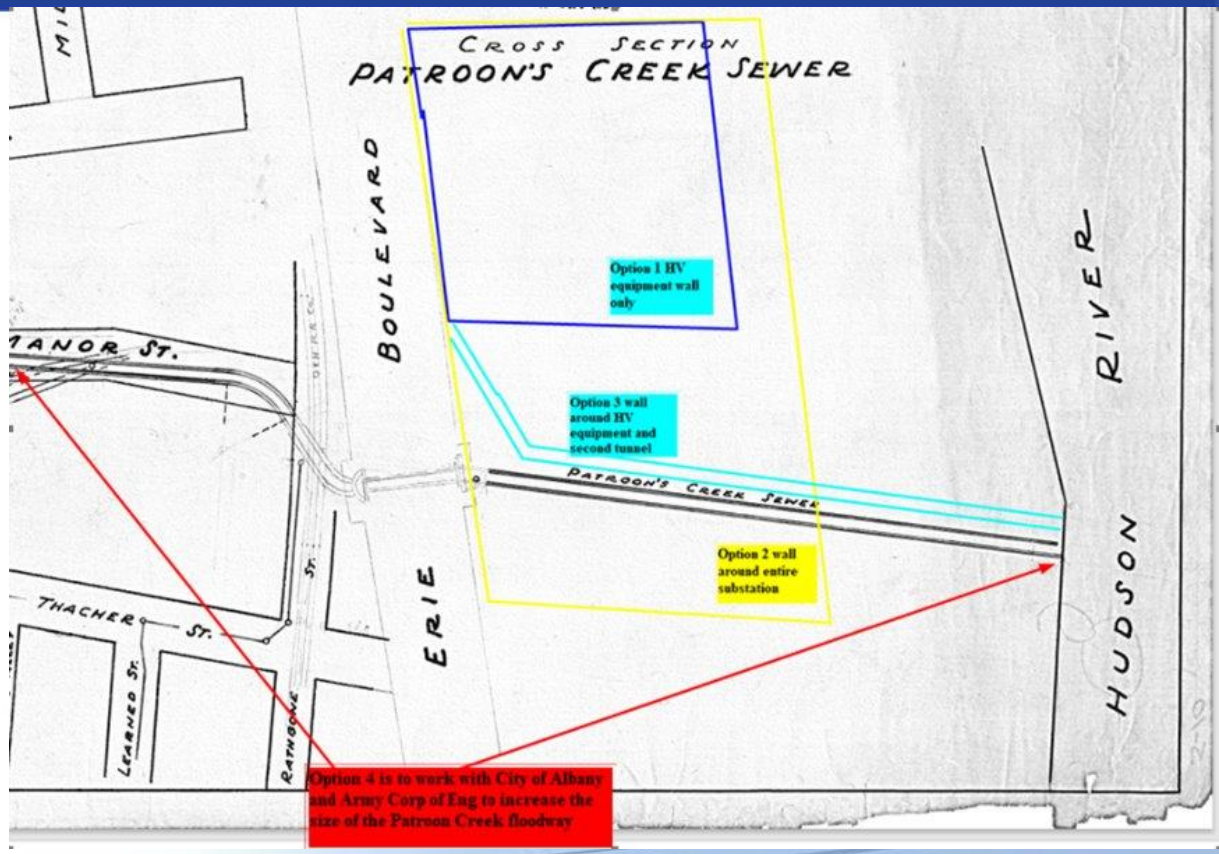


Example of Flood Focus from Jupiter Intelligence

Flood Risk Modelling

Deliverables:

- 1 meter resolution output
- Develop 1-in-10, **100**, 500… year probabilities
- Project different time horizons (2050, 2080…)
- Include different types of flooding (rainfall, river…)
- Consider worst case as well as most likely climate scenarios
- Return data in .GeoTIFF file format used by our substation engineering and design groups

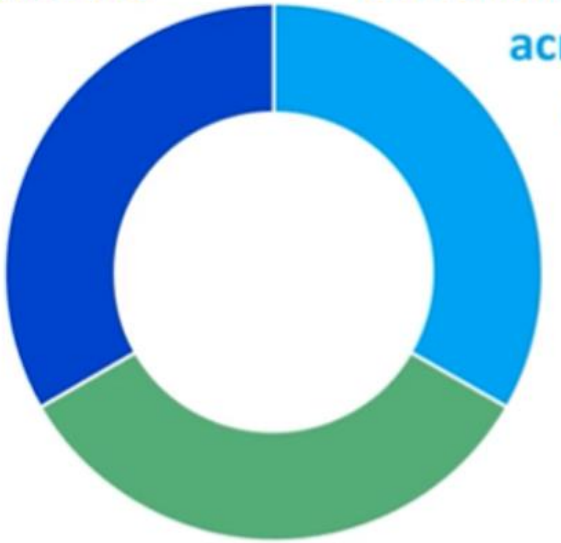


Physical Climate Risk & Resilience: The Basics

What are the climate risks relevant to the electric power sector?

How are they expected to change?

How can we represent current and future risks across all aspects of the electric power sector in models and tools?



If the risks are deemed too large, what can we do to manage them?

How do we evaluate and prioritize options?

P262A will tackle these questions and the ways that they intersect

Research is designed to aid analysts, modelers, decision-makers, and stakeholders in understanding the full ecosystem of physical climate risk and strategies to manage these risks

EPRI P262A: Physical Climate Change and Resilience

P262A will tackle risk and *Resilience* from several angles

With technical advances in...

Climate Data Knowledge and Relevance

- Understand, quantify, and model complex hazards
- Track and evaluate new data sources for power system applications
- Study tradeoffs and limitations in climate data use
- Benchmark climate extremes for planning across scales

Method and Analysis Needs

- Address needs within a specific tool or process to better handle climate risk
- Develop, evaluate, and compare novel capabilities and implementation options within tools
- Provide and refine inputs for asset vulnerabilities, loads, and scenarios

Investment Decision Making

- Explore robust decision-making approaches under deep uncertainty
- Demonstrate use of decision criteria for valuing resliience, including societal impacts, health, and equity
- Evaluate sensitivities to data and modeling scoping decisions

Integrated Modeling Capabilities

- Improve understanding of full-system resilience across generation, transmission, distribution, and customers
- Streamline touchpoints between tools for consistent climate data, load, and technology assumptions
- Explore coordinated planning among stakeholders or regions

Foundational Efforts:

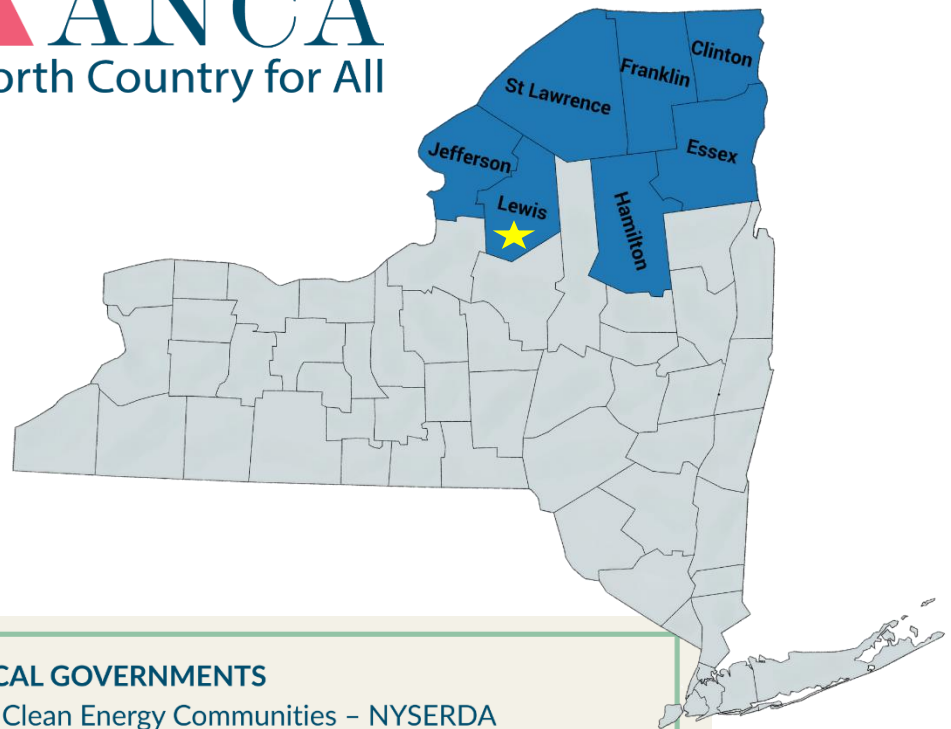
Climate READi	Climate READi Framework Coordination	Education and Outreach	Climate Data Services	CRAG Engagement	Tracking Climate Risk Developments

Project Ideas for 2026

Project Title	Technical Focus Area	Potential Collaborations
Evaluating the Use of Global Warming Levels in Long-Term Planning	Climate Data Knowledge and Relevance	Technology Innovation
Tracking High-Risk Climate Hazards: How are Storm Events Changing?	Climate Data Knowledge and Relevance	
Decision-Making under Deep Uncertainty for Generator Site Adaptation Investments	Investment Decision Making	Nuclear Risk and Safety Management
Unpacking Resilience Metrics for Planning and Performance Tracking	Investment Decision Making	Distribution Planning, Resource Adequacy
Assessing Wide-Area High-Stress Climate Events with the Risk Screening Tool	Integrated Modeling Capabilities	Resource Adequacy
Managing Climate Risk: Creating an Adaptation Catalog for Power System Applications	Method and Analysis Needs	Generation Resilience, Asset-class experts
Risk-Informed Siting: Building Climate Risk into the Cost of New Assets	Method and Analysis Needs	Resource Planning
Evaluating Potential Changes in Planned Outage and Seasonal Maintenance Windows	Integrated Modeling Capabilities	Transmission Operations

Adirondack North Country Association – Climate Change Adaptation & Resilience Plan Progress

ANCA
A North Country for All



LOCAL GOVERNMENTS
- Clean Energy Communities – NYSERDA
- Climate Smart Communities – NYS DEC + NYSERDA

RESIDENTS + SMALL BUSINESSES + NONPROFITS
- Clean Energy Hubs – NYSERDA

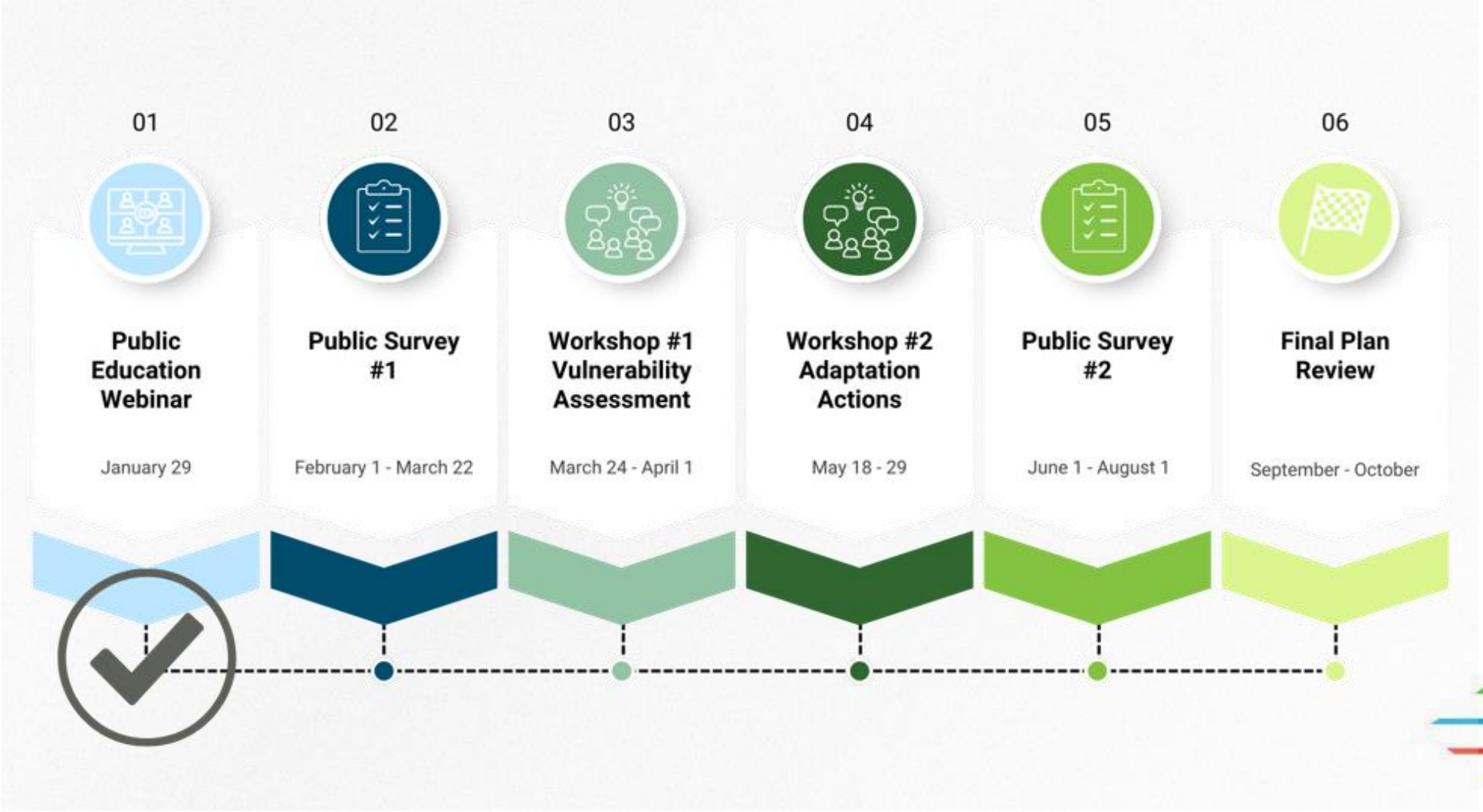
REGION-WIDE
- Workforce development
- Electric vehicle transportation
- Annual climate & energy conference

The Adirondack North Country Association (**ANCA**) is partnering with **Lewis County** to complete a Climate Change Adaptation & Resilience Plan (**CCARP**). ANCA received funding through the DEC Climate Smart Communities (**CSC**) Technical Assistance contract to complete a county-wide adaptation & resilience plan.

A **Climate Change Adaptation and Resilience Plan (CCARP)** helps a community:
- Identify current and future climate change impacts and risks
- Generate, adopt, and implement effective measures to help the community adapt to change.
- Explore ways to increase overall community resilience.

ANCA
A North Country for All

The Lewis County CCARP will be community led. Vulnerabilities will be identified and prioritized by stakeholders and the public. Adaptation strategies will be beneficial for the community and align with the community's vision for the future.



Delivering on our commitments

Timeline

2025
- File updated/approved Climate Change Resilience Plan (CCRP)
- Update standards & specifications, and initiate projects
- Align projects and budgets with the outcome of the Niagara Mohawk rate case

2026
- Begin to implement projects and changes initiated in 2025
- Initiate vegetation study & update to MIT study

2027
- Prepare and file first biennial update on status of CCRP implementation

2028
- File updated CCRP (due every 5 years)

Community Updates & Feedback

Let’s hear from you!

Next Steps

Understanding local concerns and priorities is important to National Grid. To that end, we will meet twice annually to seek your feedback and recommendations to be incorporated into our Resilience Plan implementation and the development of future 5-year updates.

We also look forward to hearing about emergency planning and resilience efforts happening in your communities.

Thank you to our presenters and thank you for your attendance!