

**AEIC GRID ADVANCEMENT PROGRAM • CHALLENGE BRIEF**

# Building a Weather and Wildfire Resilient Grid

*Challenge 01. The operating problem, why it is hard, and what the cohort will work.*

**Working session****Cadence****Eligibility****Join****Program**

Tuesday, August 11, 2026, 2:00 p.m. ET

Second Tuesday of every month, 2:00 p.m. ET

AEIC members and any electric utility

<https://aeicopscenter.org/grid-advancement>

AEIC Center for Operational Excellence

## The problem

Most of the grid was designed against a climate that no longer exists. The conductor, the clearances, the inspection cycles, and the outage protocols were all specified under historical assumptions about wind, heat, drought, and fuel load. Those assumptions have moved, and the infrastructure did not move with them.

The result is a grid that is being asked to hold reliability in conditions it was never rated for, in front of regulators and juries who have decided that wildfire ignition is a utility's problem to own.

## Why this is the first challenge

Because it is the one where the cost of being wrong is unbounded.

Every other challenge in this program is a question of dollars, schedule, or capability. This one carries catastrophic tail risk: lives, communities, and the kind of liability that has ended utilities. It is also the challenge where the gap between what a utility *plans* and what a utility *operates* is widest, and closing that gap is a problem no single company solves cheaply on its own.

It is also the one where we already have a room. The wildfire pilot drew 37 practitioners from roughly 18 utilities. Those people have already done a version of this work together. We are starting where the cohort already exists.

## Where utilities actually are

Nearly everyone is running some combination of the same three plays:

**Vegetation management.** Effective, expensive, and never finished. Cycle-based trimming is a calendar, not a risk model, and the calendar does not know which spans are dangerous this week.

**Hardening.** Covered conductor, stronger poles, and where the money exists, undergrounding. Real mitigation with real capex, deployed against a risk map that is usually a year old.

**Public Safety Power Shutoff.** The only tool that reliably prevents ignition, and it works by taking the grid away from customers. PSPS is the clearest expression of the bind: **it trades reliability against safety, and both are the utility's obligation.** Every hour of unnecessary de-energization is a cost borne by customers who were never at risk, and every hour of insufficient de-energization is a headline.

None of these are wrong. They are just what you do when your risk picture updates annually and your weather updates hourly.

## The hard part

The technology to do better mostly exists. Satellite and camera detection, high-resolution weather modeling, field sensors, machine-learning risk scoring, dynamic ratings, and fault-anticipation are all real and all deployed somewhere. The hard part is not the technology. It is these four things:

**1. Risk intelligence lives on the planning desk, not in the control room.** Wildfire mitigation plans are annual documents built by planners. Operating decisions get made in eight-hour shifts by people who cannot open a 400-page PDF. Most utilities have better risk data than their operators can act on, and the distance between those two facts is where ignitions happen. That distance is a structural gap between two functions, not a failure of either one.

**2. The data is in the wrong places and cannot move.** A real-time risk picture needs weather, vegetation, asset condition, and SCADA in the same view. Those live in four systems owned by three departments, and NERC-

CIP makes moving operational data across that boundary genuinely difficult, not merely annoying. This is the single most recurring barrier we see across every challenge in this program.

**3. The value is an avoided event, and an avoided event is hard to take to a rate case.** The return on wildfire mitigation is a fire that did not happen. Utilities are being asked to commit capital against a counterfactual, which makes this a genuinely unsolved business-case problem and not a spreadsheet exercise. Few utilities have a version of this case that has cleanly survived a regulator, and the ones that have did not get there alone.

**4. Precision is the whole game, and precision is expensive.** Anyone can de-energize a whole region. The utility that can de-energize three circuits instead of thirty saves customers, saves credibility, and saves the next rate case. That precision is bought with data quality, which is rarely funded and rarely owned, because it is the line item that shows up as nothing going wrong.

If you need one sentence to carry upstairs: **we can de-energize thirty circuits or three, and the difference between those two numbers is data quality. That is what we are asking you to fund.**

None of those four barriers is local to you. In some form, all four show up in all ten challenges in this program: the data that cannot cross the boundary, the value that is an avoided event, the work that falls between two functions, and the decision that has to be made without proof. If your list looks like this one, you are not behind. You are in the same room as everyone else.

And "we do not know" is a legitimate answer here. If you cannot say how old your risk picture is or how far it travels into operations, that is a finding, and it is worth more to this cohort than a confident number nobody can source.

## What the cohort will work

Not "what technology should we buy." The room is going to work the questions that actually block deployment:

- What does it take to get risk intelligence into the hands of an operator on shift, in a form they can act on in the moment?
- Which data actually has to move, and what have people genuinely gotten past NERC-CIP with?
- How are utilities building the business case for a fire that did not happen, and what has survived a regulator?
- Where is the honest line between hardening and de-energization, and how are people making that call?
- What has been tried and did not work? That is the most valuable hour in this program, and it is the one you can only get from peers who have actually tried it.

## What to bring

You do not need a solved problem. You need an honest one. Come with:

- One decision you are stuck on
- What your current risk picture is built from, and how often it refreshes
- The data you wish you had in the control room and cannot get there
- One thing you tried that did not work

If the honest answer to any of those is "we do not know," bring that. It is a finding, not a failure, and you will not be the only one saying it.

## What you get

- This brief, and a short video briefing, before the session
- The Flight Plan, a working pilot scaffold, inside InnovationWorks
- The session itself, with the utilities living this problem
- A retrospective afterward: what the cohort tried and what happened

## Join

**Tuesday, August 11, 2026, 2:00 p.m. ET.** Recruitment runs per challenge, so your wildfire people can come to this one without committing to all ten.

Open to AEIC members and to any electric utility. If you run a utility, you are welcome here.

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*Knowledge of one is the knowledge of all.*

*Sources: this challenge was developed from research of public utility filings, including the SFPUC 2025 Wildfire Mitigation Plan. The technology landscape for this challenge is maintained separately inside InnovationWorks.*