

Energy Conservation and Management (ECAM)

Microgrids for Wildfire Mitigation and Resilience Water and Natural Resources Interim Committee

The Problems – 1 of 3



Forest wires can cause fire. But that's very rare in NM – only 1% of NM wildfires have been started by remote lines.

The Problems – 2 of 3



**Remote customers can be expensive to serve (long lines or undergrounding).
This can raise costs for everyone (capex cost is averaged across all customers).**

The Problems – 3 of 3



Public Safety Power Shutoffs (PSPS). Remote locations, communities & medically dependent New Mexicans can be left without power when RECs and IOUs need to proactively shut off the grid to prevent wildfire ignition from extreme weather events.

A solution: Microgrids for Residential and Community Buildings



Microgrids are small, local energy systems (usually made up of solar panels and batteries) that can power homes or buildings even when the main grid goes down.

They're often placed at the edge of the larger grid and help communities keep the lights on during emergencies, reduce strain on the overall system, and lower energy costs by using clean power and storing it for later use

Microgrids as a Solution for Wildfire Mitigation and Resilience

Microgrids can:

- **Ease the impact of PSPS's, as remote customers retain electricity during PSPSs to reduce wildfire risk.**
- **In some cases, reduce cost of grid buildout, thus lowering costs for everyone.**
- **During regular times, allow for peak shaving, thus lowering costs for everyone.**
- **During regular times, allow for arbitrage, lowering costs for individual customers.**

Example: Green Mountain Power in Vermont “Zero outages initiative”

Deploys batteries to certain locations, such as end-of-the-line, at-risk community members, and community centers.

The batteries remain controlled by the utility or Co-op.

During regular times: arbitrage, peak shaving.

During outages: no outage!



Challenges with microgrids:

High Upfront Cost (good lifetime cost)

Utility ownership of solar + storage can help reduce lifetime costs, but PRC rules and regulatory clarity are still evolving.

Technology-dependent

Microgrids work best when paired with smart buildings or grid-enabled infrastructure—still limited in many areas, especially rural communities.

Vehicle integration is promising but young

EVs can serve as (very large) mobile batteries (V2G/V2H), but only select models support it, and federal standards are still needed.

Limited duration

Most microgrids provide backup for only a few days—often sufficient, but scaling for longer outages increases cost.

How to pay for **grid-edge distribution (and storage)** – 1 of 4

SEP Energy Efficiency Revolving Loan Fund - Federal

- What: EMNRD awards loans for energy efficiency audits, upgrades and retrofits to increase building efficiency and comfort in commercial buildings with a public purpose
- Total Funding Amount: \$5.4m (revolving)
- Eligible Entities: homeowners and building owners.

Energy Efficiency and Conservation Block Grant (EECBG) - Federal

- What: Funding to support a wide range of energy efficiency and clean energy initiatives, including: municipal upgrades, building improvements to meet energy codes, and deployment of renewable energy systems.
- Total Funding Amount: \$1,758,250
- Eligible Entities: cities, counties, municipalities, and state government.

How to pay for **grid-edge distribution (and storage)** – 2 of 4

Preventing Outages While Enhancing Resilience (POWER) - Federal

- What: Grants to prevent outages and enhance grid resilience
- Total Funding Amount: \$14,369,462 (so far – years 3 of 5)
- Timeline: Program runs May 23, 2023 until April 30, 2028.
- Eligible Entities: electric grid operators, electricity storage operators, electricity generators, transmission owners and operators, distribution providers and fuel suppliers

Grid Modernization Fund – State

- What: Grants for grid modernization
- Total Funding Amount: \$70 M
- Timeline: Program runs July 1, 2025 through June 30, 2028
- Eligible Entities: cities, counties, tribes and muni's.

*Summit
coming soon*

How to pay for grid-edge distribution (and storage) – 3 of 4

Solar For All - Federal

- What: Grants to build residential low-income solar, including single-family, multi-family and shared solar.
- Total Funding Amount: \$156m (\$400k in-kind)
- Program Status: Awarded; currently planning
- Timeline: Currently in planning; estimated operational by late 2025
- Eligible Entities: low-income New Mexicans and New Mexican communities.

How to pay for **grid-edge distribution (and storage)** – 4 of 4

New Solar Market Development Tax Credit

- What: A refundable and transferrable tax credit for residential and commercial solar in NM.
- Tax Credit Amount: Up to 10% of the equipment, materials, and labor costs of a solar system – residential or commercial. May not exceed \$6,000.
- Total Funding Amount: \$30,000,000 per year.
- Eligible Entities: non-taxable entities and renewable infrastructure developers.

**Supplemental \$20m approved by the legislature in 2024 for those systems, otherwise eligible, which were rejected in 2020 – 2023 due to the lower annual cap in those years.

Clean Car Income Tax Credit

- What: Tax credit to support the purchase or lease of clean vehicles (EVs, plug-in hybrids, and fuel cell vehicles). The vehicles can be new or used.
- Tax Credit Amount: For individuals, varies from \$3000 to \$640. No yearly aggregate cap on credits (individual credits vary in size depending on the vehicle and the year purchased).
- Timeline: May 15, 2024 to December 31, 2033.

*Charger
credit too*

How to pay for Community Resilience Centers that use Microgrids – 1 of 2

Much of the above, plus:

ESCO program – Energy Services Contracting

- What: An ESCO contractor pays for the (sometimes steep) upfront costs; the resilience center pays them back monthly from the utility savings. Payback over 10 – 30 years. ECAM is a third-party reviewer
- Funding-to-date: ECAM has overseen over \$770m in ESCO projects in NM

Innovation in State Government Fund

- What: Funding to increase state agency capacity to implement climate change policy through the development of agency action plans.
- Total Funding Amount: \$2.5m for EMNRD (\$13.5m across nine agencies)
- Eligible Entities: state agencies

How to pay for Community Resilience Centers that use Microgrids – 2 of 2

Includes “providing technical support”

Local Solar Access Fund

- What: Grants to plan, design, construct, purchase, install and equip solar energy systems
- Total Funding Amount: \$20m, managed by NMFA
- Eligible Entities: counties, municipalities, school districts, land grants-merced, or Indian nations, tribes, pueblos

Clean Energy finance partner

- What: An "in-house" clean energy finance team that can offer low-interest loans, interest rate buydowns, loan loss reserve, “fronting” for grants or tax credits, and other needed clean energy financing.
- Eligible Entities: Entity partnering alongside ECAM on clean energy financial support.

ECAM support

- 1 In-house clean energy finance team
- 2 CleanEnergy.nm.gov
- 3 Energy coaches

To consider

1. Clarifying the statute and/or PRC regulations around virtual power plants (VPPs) and behind-the-meter electricity generation
2. “Sandboxes” for utilities to test different microgrid regulations, cost structures and technology
3. How to properly value (e.g., compensate) these grid-edge services
4. Tax credit or incentives for batteries

CleanEnergy.nm.gov



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