



# Aligning Distributed Energy Resources Interconnection Policy and Regulation in New Orleans

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# Notice

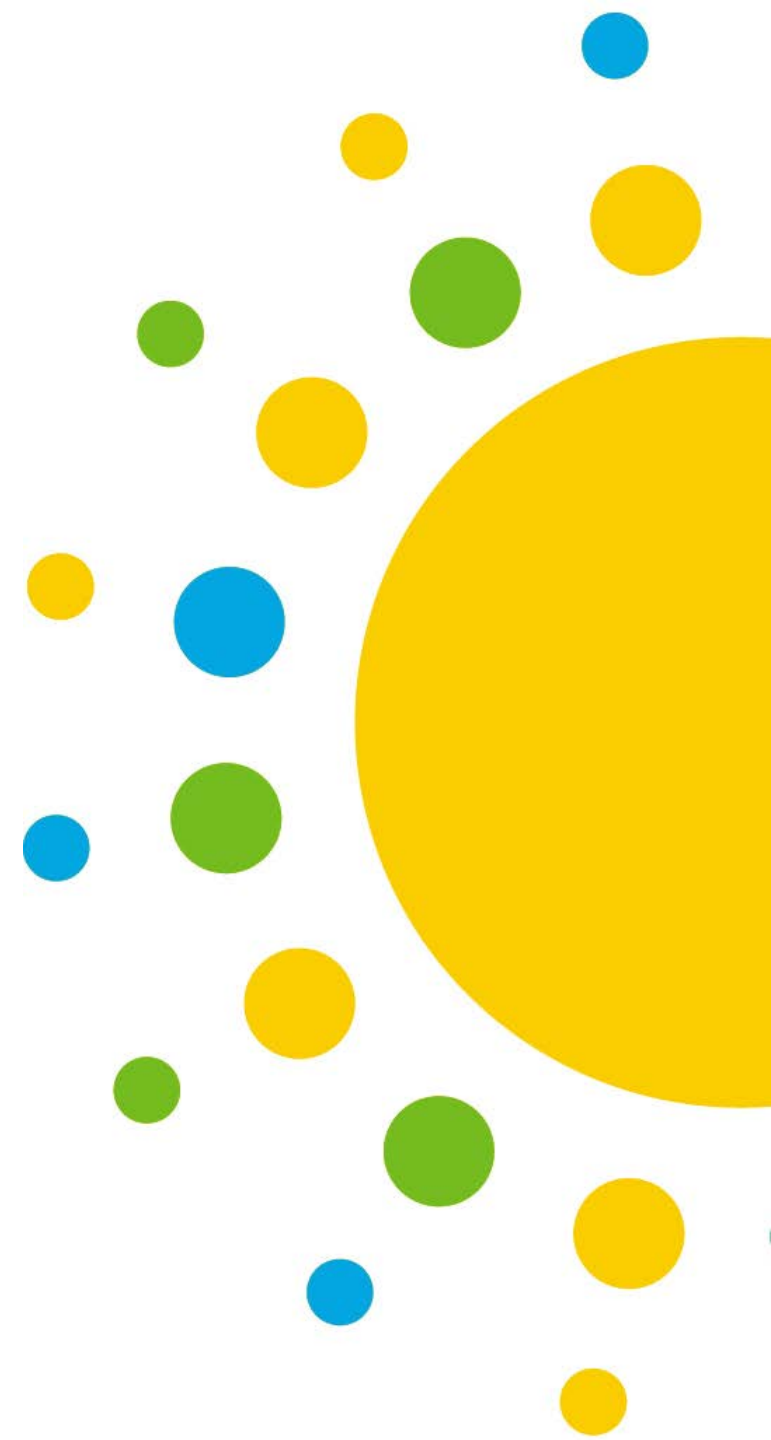
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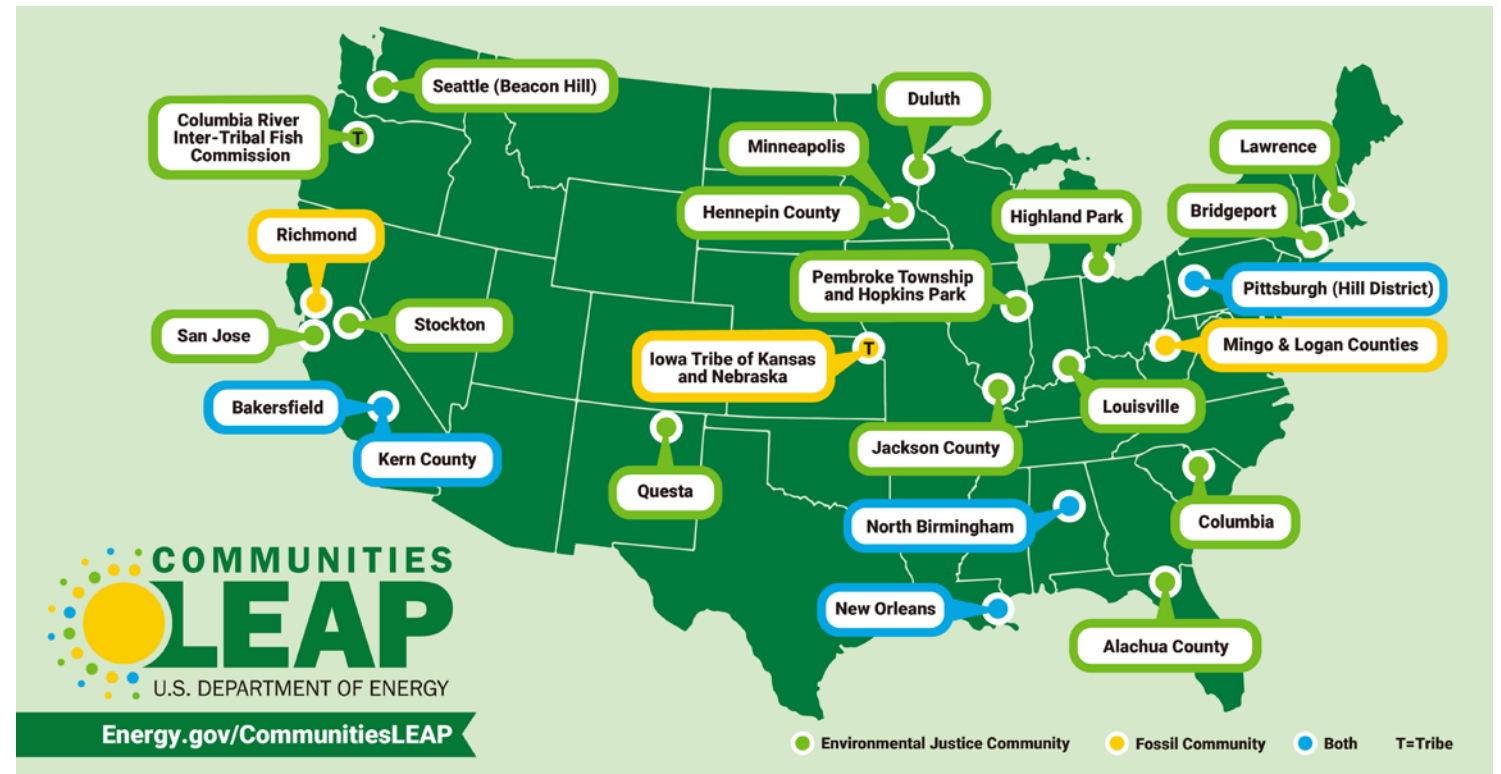
# About Communities LEAP

- The U.S. Department of Energy's Communities LEAP (Local Energy Action Program) pilot supports community-driven action plans for clean energy-related economic development.
- This opportunity is open to low-income, energy-burdened communities that experience environmental justice challenges and/or direct economic impacts from reducing reliance on fossil fuels.
- Communities LEAP reflects the Biden-Harris Administration's commitments to:
  - Combat climate change through community-led transitions toward a more equitable and sustainable future.
  - Deliver 40% of the overall benefits of federal climate, clean energy, affordable and sustainable housing, clean water, and other investments to communities that have been historically marginalized, underserved, and overburdened by pollution.



# 24 Competitively Selected Communities

- The Communities LEAP pilot provides customized, high-quality technical assistance to 24 communities to develop clean energy-related economic development pathways.
- In each community, coalitions of local partners contribute to project oversight and delivery.
- The National Renewable Energy Laboratory (NREL) is the primary technical assistance (TA) provider.

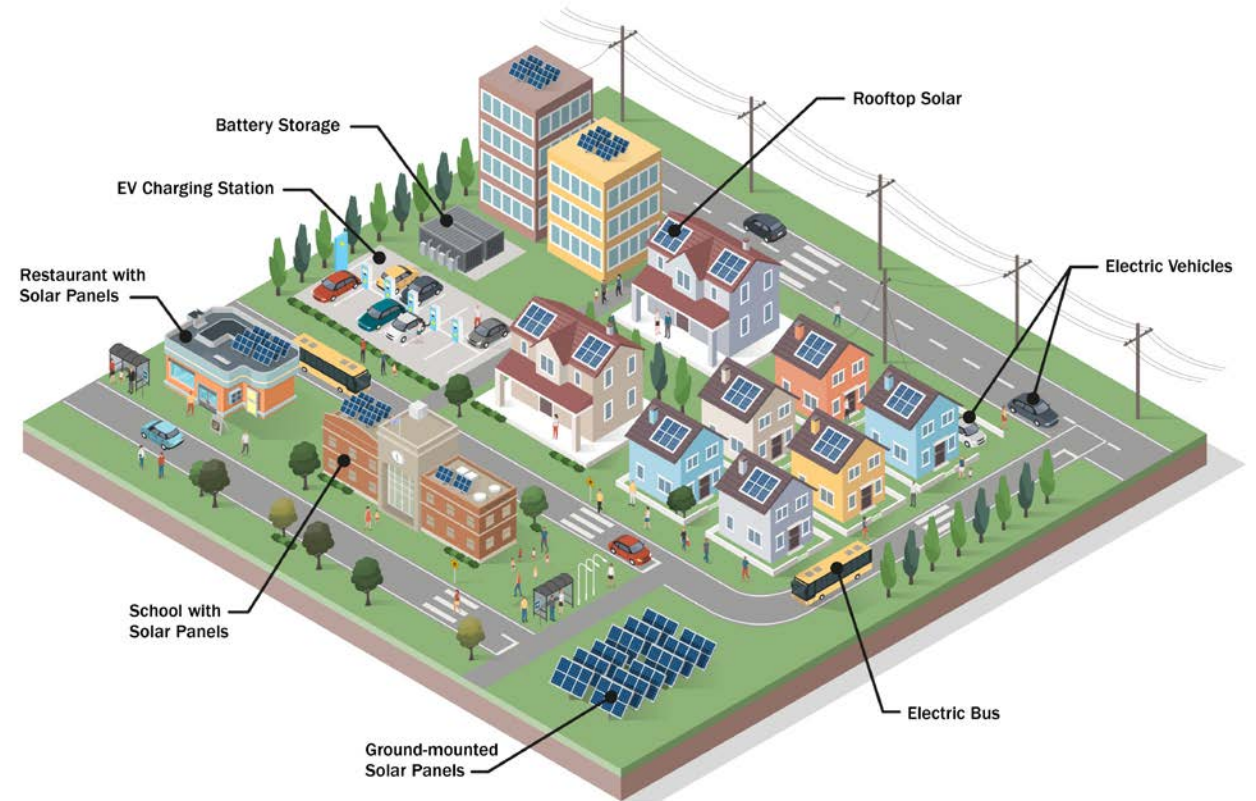


# Microgrids & Energy Security

The City of New Orleans (CNO) applied to the Department of Energy Communities LEAP pilot for technical assistance with “district scale microgrid technologies” to increase grid resilience for multiple facilities, in other words *Area Microgrids*.

## Energy Security factors include:

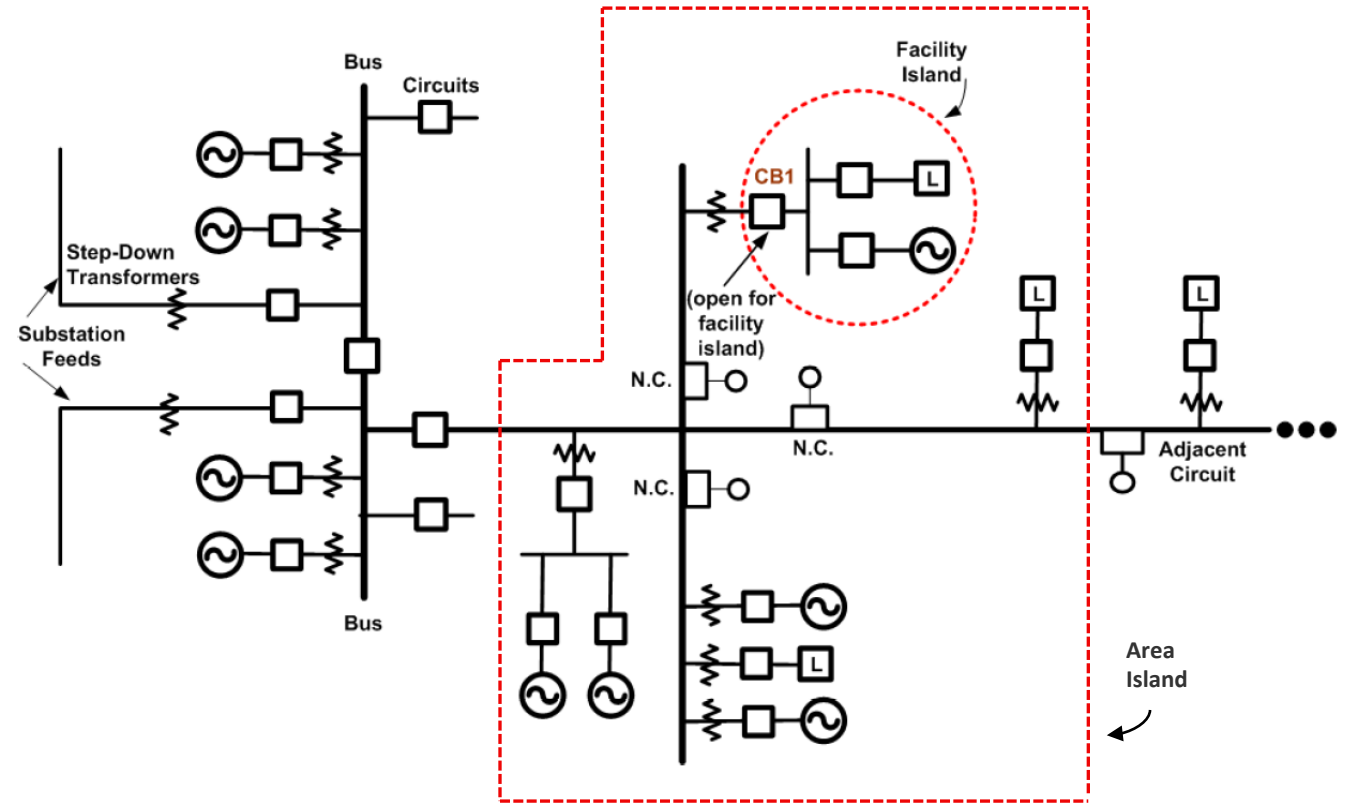
- Resiliency
- Sustainability
- Safety



# Microgrids & Energy Security

Three levels of microgrid:

- Facility
- **Area (multiple facilities)**  
– from campus to community
- Regional scale



Line diagram of a typical grid with both a facility island and area island indicated in red.

# Microgrid Definition & Benefits

A microgrid is a coordinated energy and electrical distribution system with dispatchable resources capable of both grid interactive and autonomous operation that:

- Encompasses load and generation, including multiple distributed energy resources (DER) — from traditional diesel gensets to renewable energy and storage (can't be just energy storage).
- Able to disconnect *and parallel* with the local utility (not *emergency back-up generation*).
- Intentionally “islands” as part of a planned operation and may include sophisticated monitoring and controls—including load, generation, and stored energy management.

## **Intentional Islands (microgrids):**

- Isolate itself from the grid when utility disturbances occur and reconnect when the grid is stable.
- Provide power to essential loads during extended grid outages.
- Typically, incorporate renewables to extend the fuel supply of conventional generators to deliver a potentially limitless power supply for continued operation of selected loads.
- Improve overall system reliability and power quality.

# Distributed Energy Resource Standards for Distribution Interconnection

## Unintentional Islanding

Under no circumstances will a Customer's DER be allowed to sustain an island condition *with any part of the Company's Distribution System beyond the Point of Common Coupling* due to potential damage to Company or other Customers' equipment.

(Entergy, 2021. Available at: [https://cdn.energy.com/userfiles/utility/standards/conn\\_small\\_elec\\_generators.pdf](https://cdn.energy.com/userfiles/utility/standards/conn_small_elec_generators.pdf) )

**Dialogue:** Absent specific regulatory guidance, Entergy New Orleans (ENO) has excluded island conditions from any part of its system (i.e., “area island”) because the utility is focused on safe, reliable, least-cost delivery. Yet, this is misaligned with the expressed goals of CNO and the Communities LEAP project, which includes implementing area microgrids for resilience and energy security. However, CNO and ENO share the goals of delivering safe, reliable, and cost-effective service, and that applies to the Communities LEAP project for area islands.



# Current Policy

- Absent City of New Orleans interconnection policy, Entergy New Orleans (ENO) technical interconnection requirements are the current de facto policy for interconnection in New Orleans.
- ENO policy defines “unintentional islanding” in Section 2.0 but does not define “intentional islanding” or “intentional area islanding.”
- ENO’s policy does not decide the categories for normal and abnormal operating performance requirements.
- ENO’s policy requires disconnection for unintentional islands when abnormal operating conditions occur to prevent damage to ENO or customer’s equipment, even though modern power system engineering techniques can now mitigate the risk (Section 1.1.2.4 – A. Unintended Islanding).
- ENO’s policy does not provide the technical requirements for *intentional islanding and/or intentional area islanding* in subsection 3.42 – Categories for Distribution-Level Interconnections.
- Refer to IEEE Std. 1547-2018, "[Informative Annex B: Guidelines for DER performance category assignment](#)" (page 98).

# Potential Strategies to Advance Microgrid Solutions in New Orleans

- Begin collaborative stakeholder process to address these identified issues.
- Include *Intentional Island* and *Intentional Area Island* in Section 2.0 Definitions.
- Add case(s) for Intentional Islanding in *Introduction and Summary of Interconnection Types*, and in subsection 3.42.
- Adopt [IEEE Standard 1547](#)-2018. (A summary of key takeaways by NREL can be found [here](#).)

# Thank you

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