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NASEO

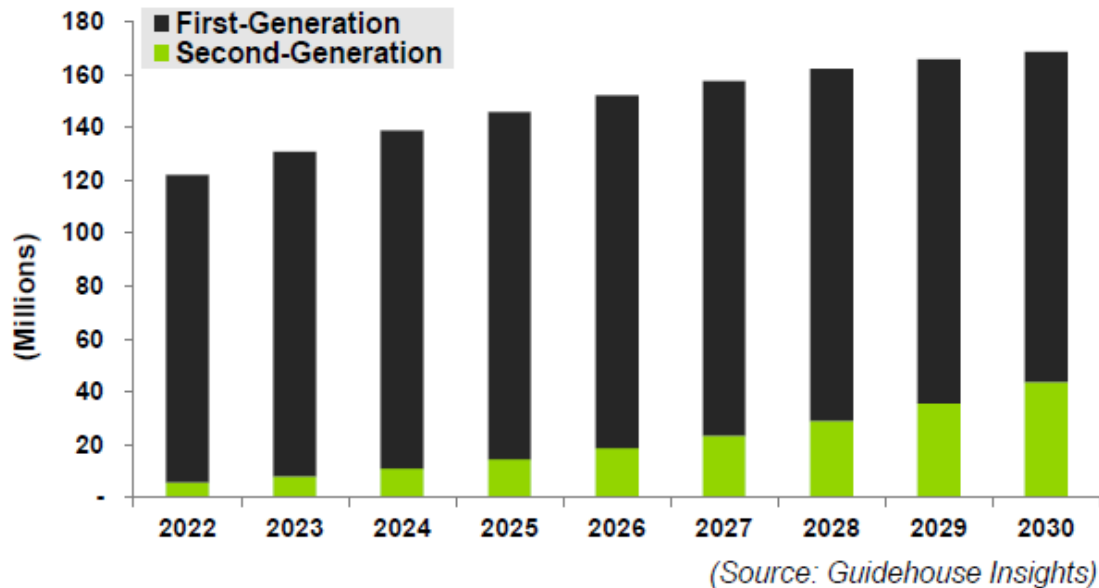
*National Association of
State Energy Officials*

A Clean and Resilient Electric System for Increased Demand Growth: Integrated Distribution System Planning – Turning Policy into Market Guidance

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Integrated Distribution System Planning, Why Now is the Time

Smart Meter Installed Base by Technology, US: 2022-2030



- Smart meter installations across the US during the late 2000s and early 2010s under the American Recovery and Reinvestment Act of 2009 are aging:
 - 53 million smart meters will be 12 years old or older by 2025
 - *Nearly 87 million reaching this age by 2030,*
- *Second-generation smart meters are expected to grow from ~6% of US smart meters in 2022 to ~25% in 2030.*

Integrated Distribution System Planning, State Energy Office Roles in Turning Policy into Market Guidance

“Integrated Distribution System Planning (IDSP) provides a systematic approach to ***satisfy customer service expectations and state and utility objectives for grid planning and design***”

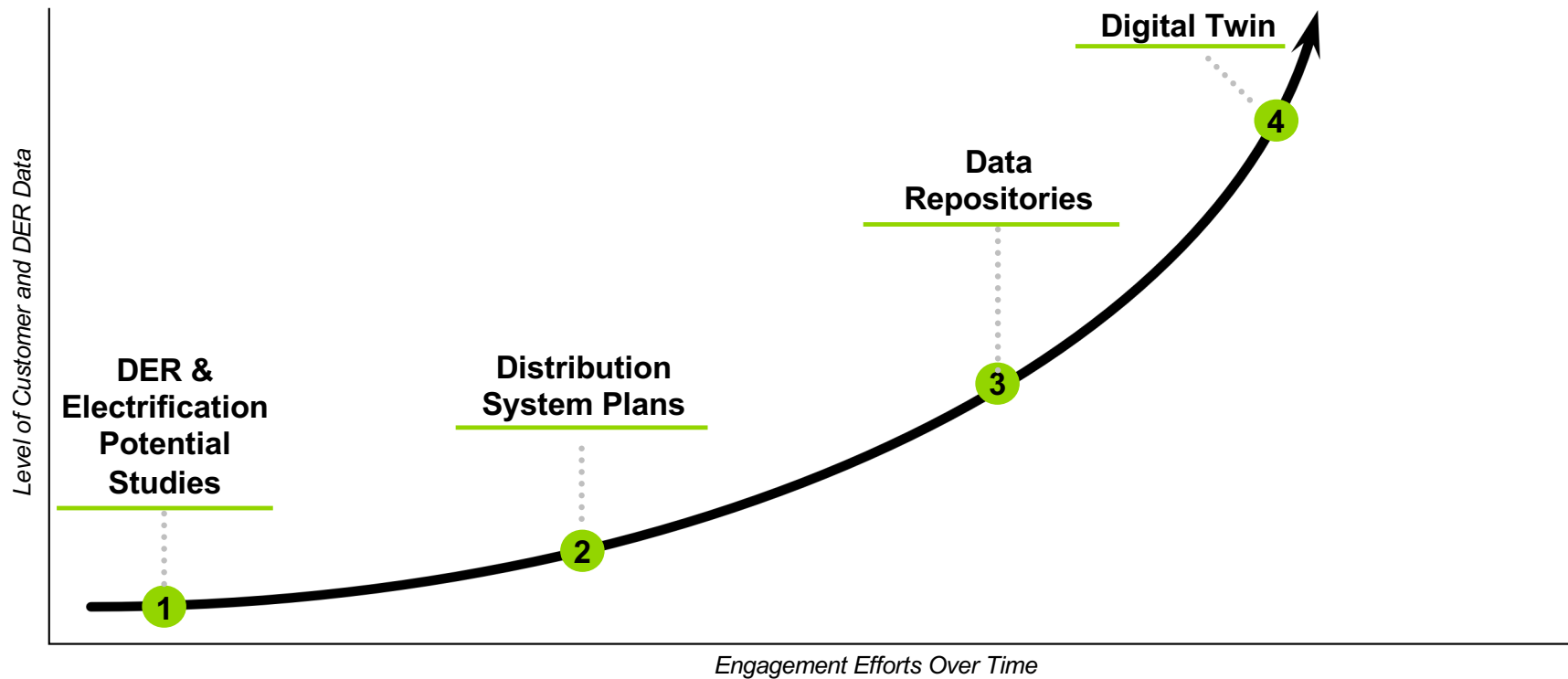
- ©2024 Energy Technologies Area, Berkeley Lab

Examples of areas SEOs can support or lead the advancement of IDSP:

1. Data management and availability
2. Collaboration/Convening, training and education
3. Art of the possible with grant investments

1. Data management and availability

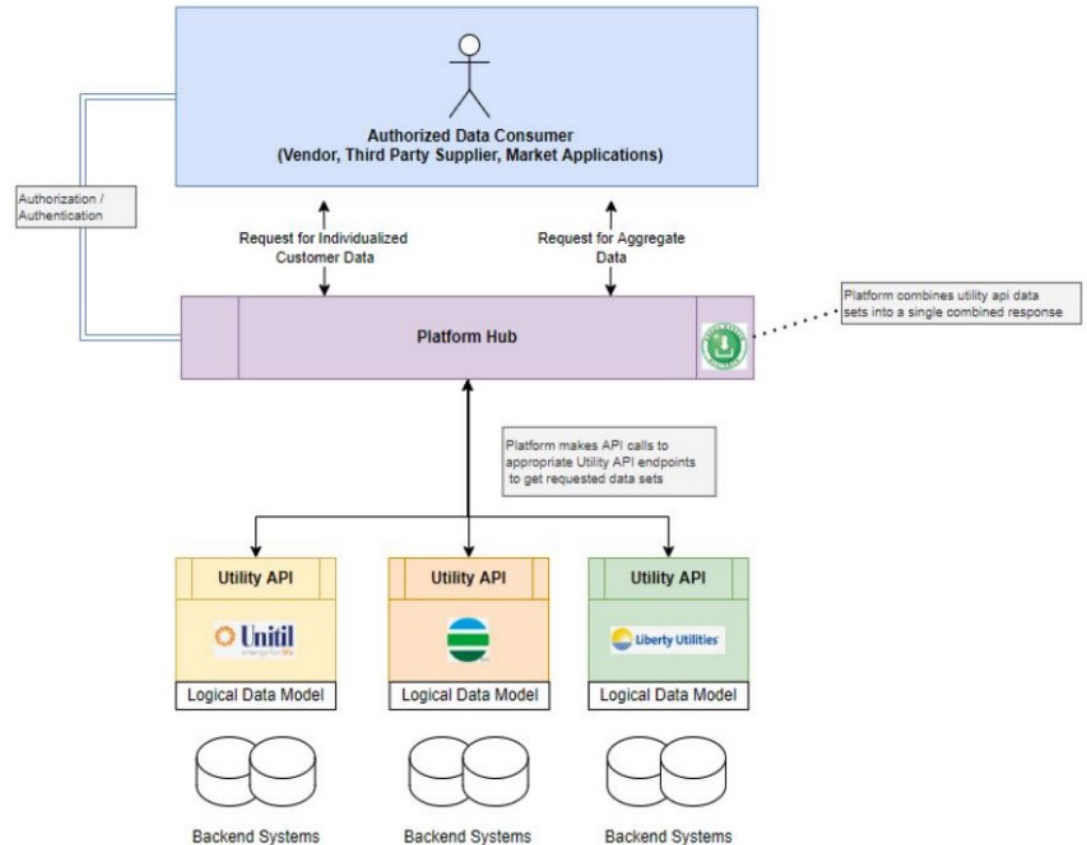
Pathways to increased use of data for planning, value pool and use case identification and simulation being with basics and can build up the maturity curve from there.



1. Data management and availability

New Hampshire Case Study: DER Register and Data Hub can solve lack of centralized data problem

- 2019 Act of the New Hampshire legislature, with the NH Public Utilities
- 2024, NH utilities, with support from utilities in CT, ME, and MA representing over 5.5 million electric meters and millions of gas customers, propose a regional *Energy Data Hub GRIP Concept Paper to DOE Grid Deployment Office*
- The Hub will provide automated data access to significantly improve customer billing and meter data portability using industry standard formats for electric and gas utilities, their customers, and third-party service providers to more readily advance the clean energy transition.

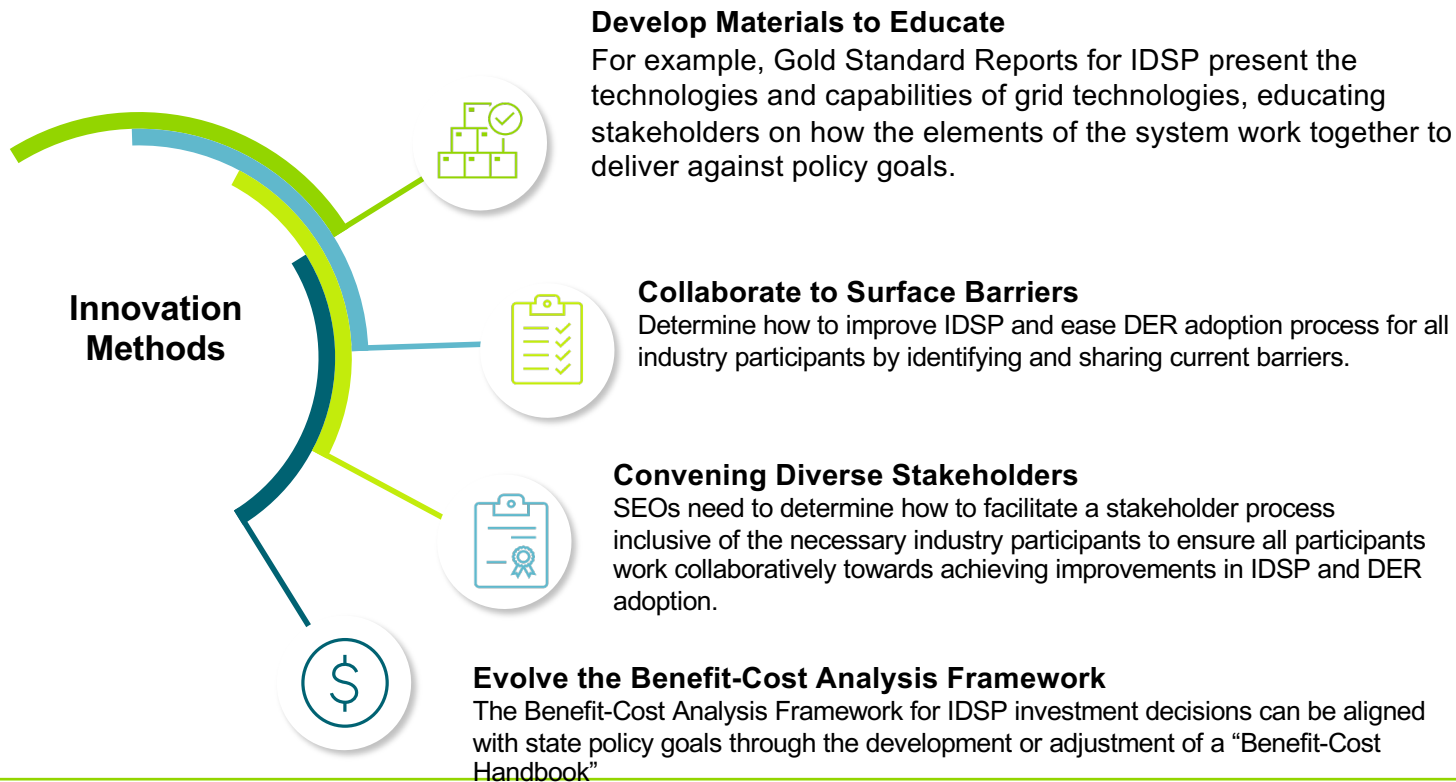


[19-197 2024-02-02 GOVERNANCE COUNCIL CONCEPT PAPER \(energynews.us\)](https://energynews.us)

DOE GRIP Grant Proposal: Regional Joint Utility Energy Data Hub: Advancing Community DER Enablement and Customer Analytics in New England

2. Collaboration/Convening, training and education

Collaboration/Convening, training and education



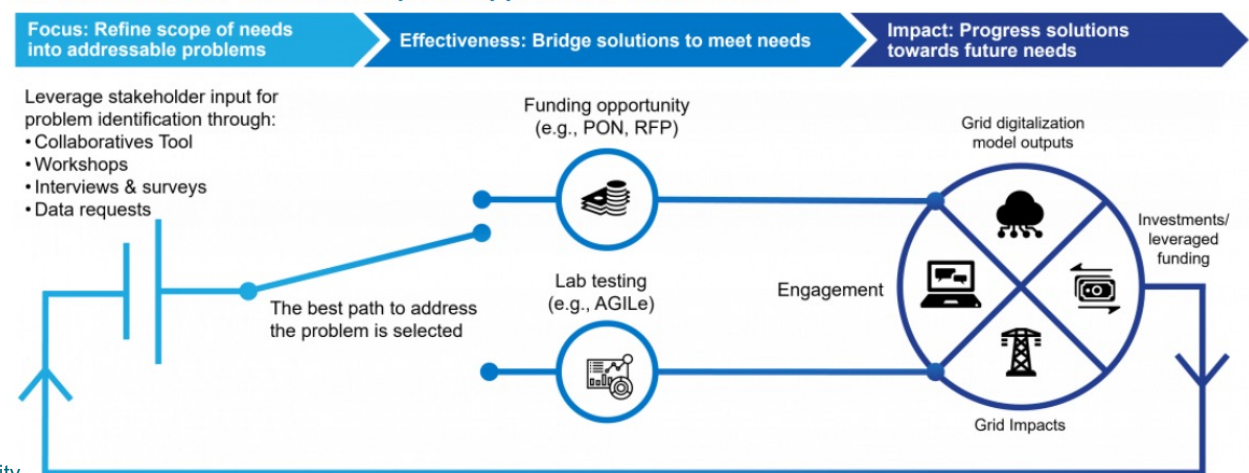
2. Collaboration/Convening, training and education

New York Grid Connect Case Study: Accelerates Solutions to Build the Power Grid that Supports State Climate Goals

NY Grid CONNECT advances innovation across New York State to build a low-carbon, reliable, and resilient grid using a collaborative platform to unite a **diverse group of stakeholders to define challenges and develop comprehensive solutions** targeted to meet the State's electric grid priorities emerging from the Climate Act Scoping Plan.



NY Grid CONNECT takes a three-phase approach to collaborations

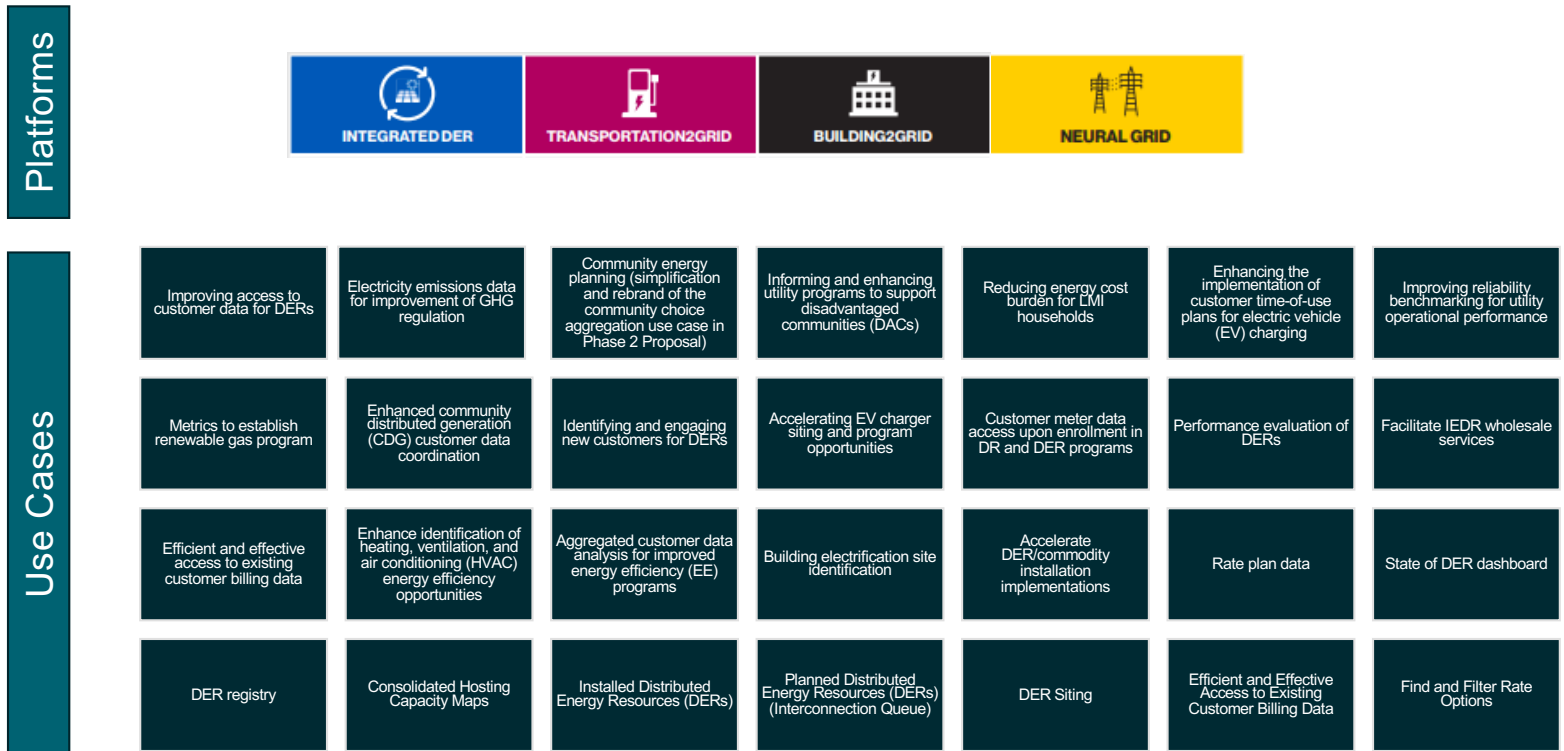


[NYSERDA – NYS Energy Research and Development Authority](#)

NY Grid CONNECT Collaboration Graph: Focus, Effectiveness and Impact.

3. Art of the possible with grant investments

Data management and access and collaboration with industry participants are key roles to develop use cases that align to IDSP vision



[IEDR Stakeholder Use Case Development - NYSERDA](#)

[Guidehouse Insights: energy-cloud-4-capturing-business-value.pdf \(guidehouse.com\)](#)

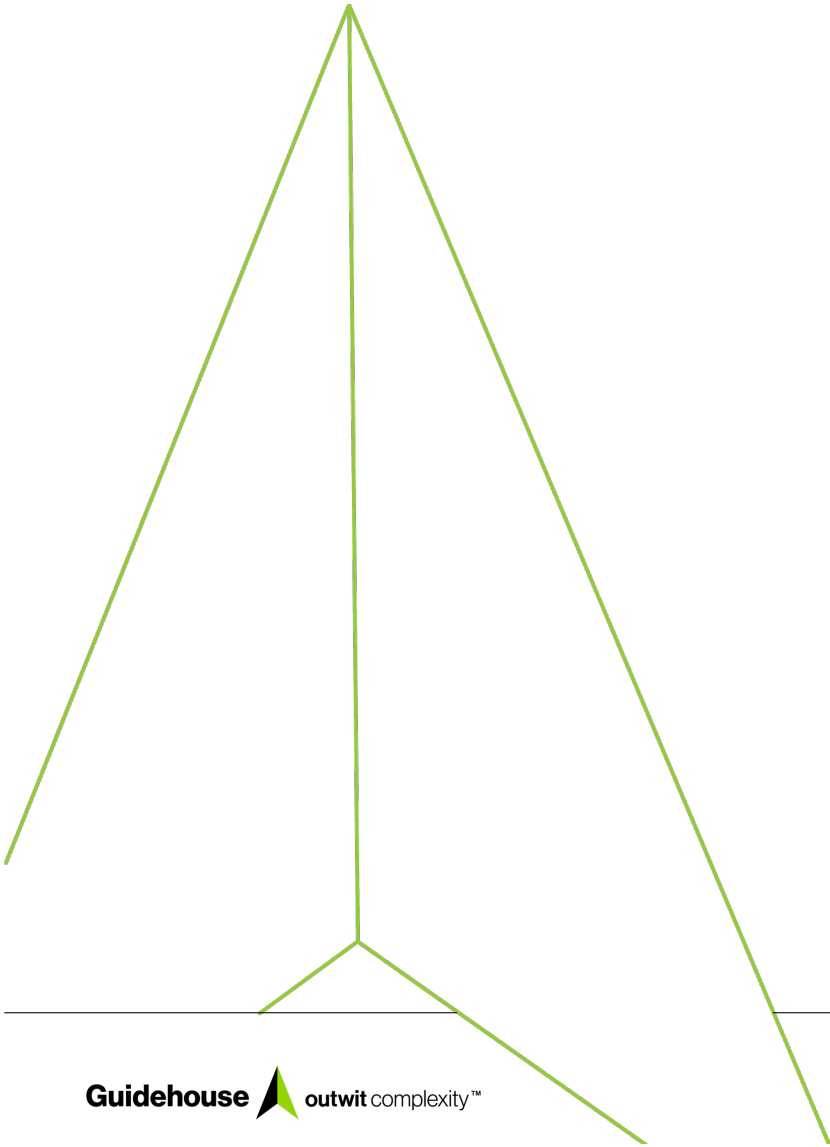
SEOs have an immediate opportunity and resources

Energy Rebate Programs

- HEAR (electrification) program: For example, if the HEAR program is used to electrify a 100-unit building, that would be significant winter peak load added to the local feeder. If that happens at a significant scale it would need more attention to understand system level impacts. Further there may be an opportunity for flexible load services or virtual power plant contribution from the building enabled by IDSP.
- HER measured approach shifts energy savings calculation to impacts at the meter and the art of the possible with access to billing and usage data to drive new business models.
- **Grid Resilience and Innovation Partnerships (GRIP)** Program Projects

Resources

- DOE Pathway to Commercial Liftoff Report: Innovative Grid
- DOE Pathway to Commercial Liftoff Report: Virtual Power Plants



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Thank You

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