NARUC Summer Policy Summit

Committee on Energy Resources and the Environment

This session will begin at 3:15 p.m.

Demand Flexibility: Let's Figure it Out Now

Panel II: The Customer Experience (Panel II of II)
July 17, 2023 | 3:15-4:15pm (CT)

Moderator

Hon. Carolee Williams, South Carolina Public Service Commission

Panelists

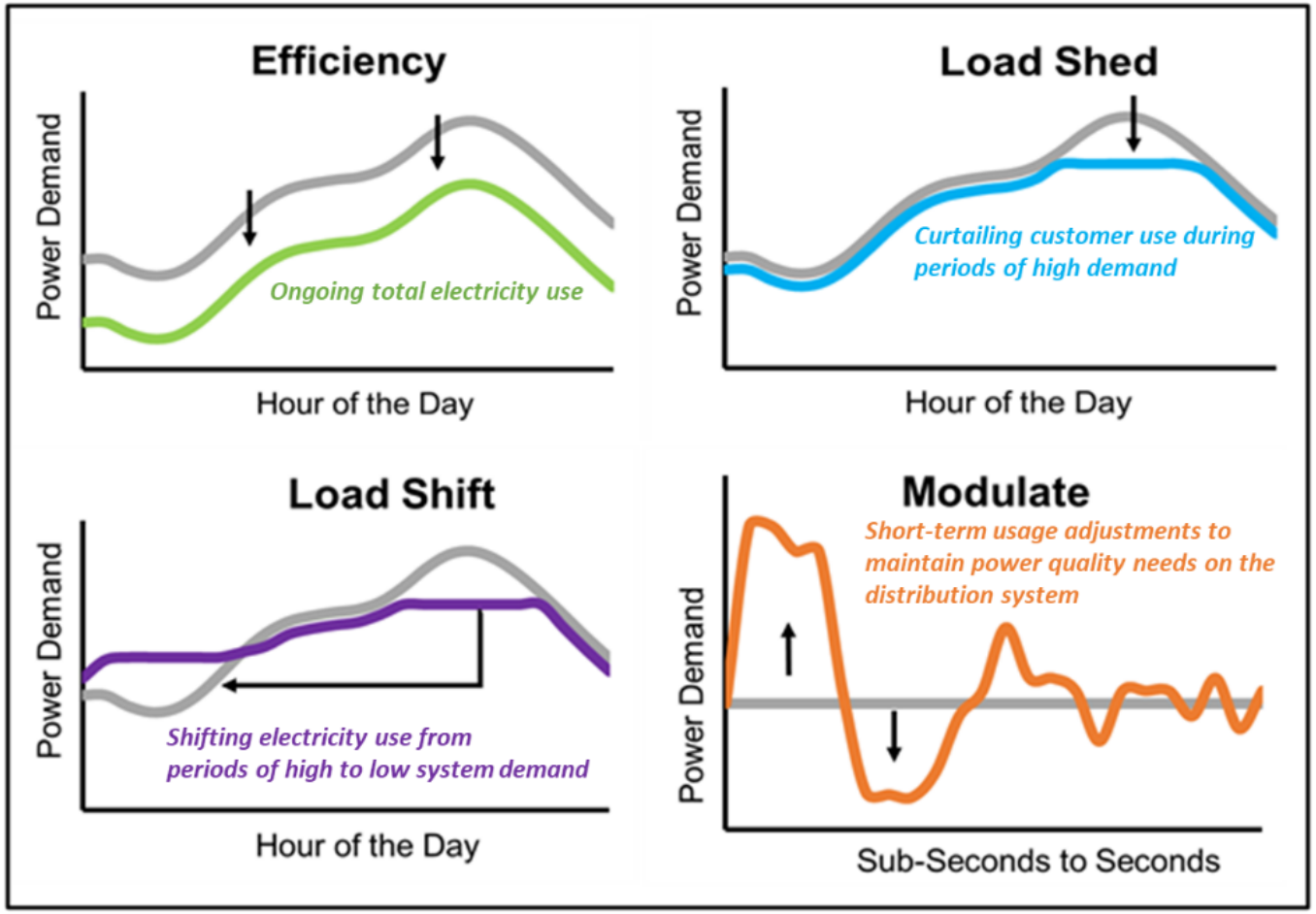
Kahryn Riley, Senior Manager Policy & Regulatory Affairs, Generac Power Systems

Christina Cress, Partner, Bailey & Dixon, LLP

Varun Mehra, Technical Program Manager, Grid Services, Google

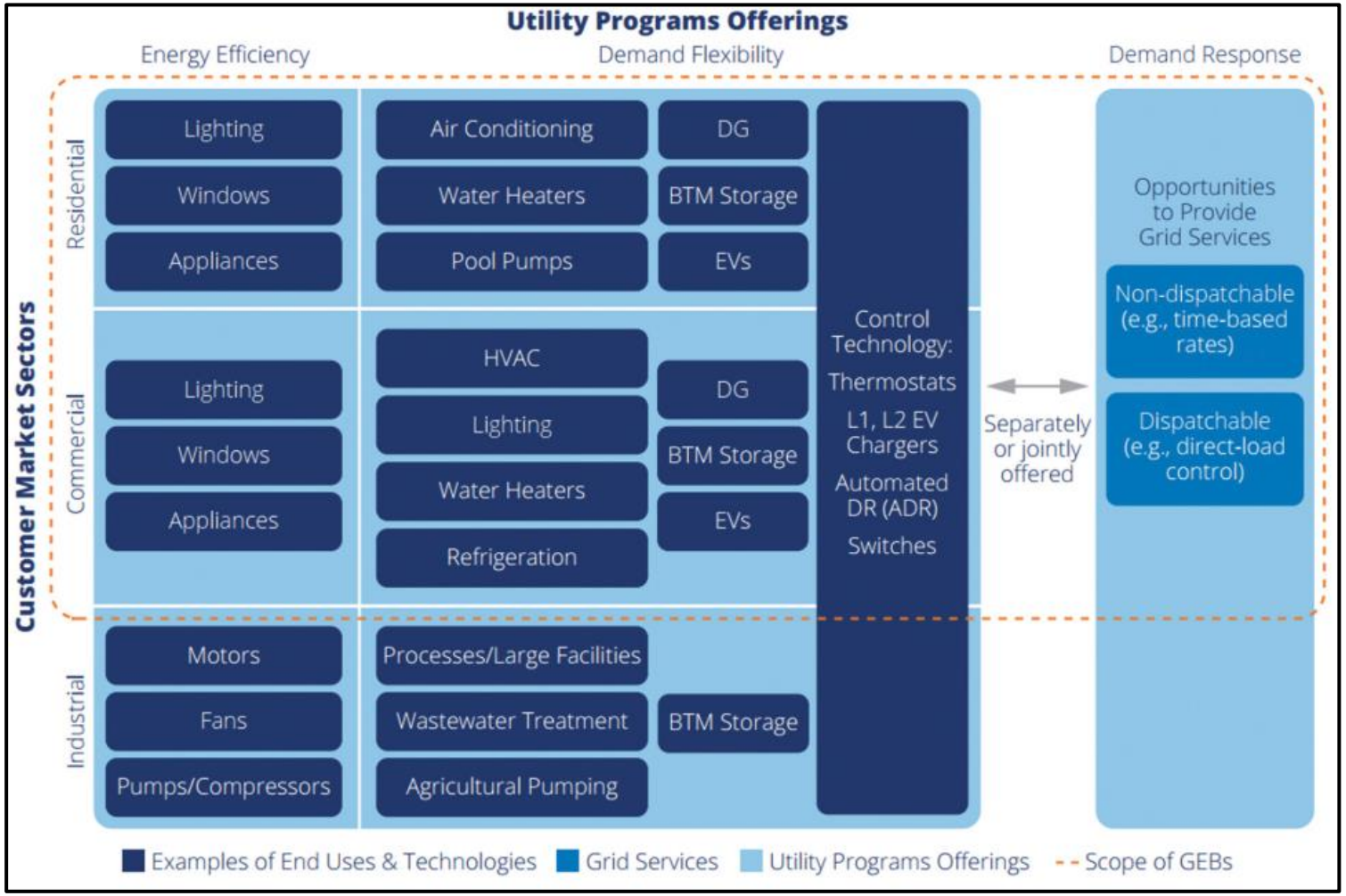
What is Demand Flexibility?

Demand Flexibility allows distribution operators to leverage communication and control technologies to shift, shed, or modulate electricity use across time of day, while maintaining the quality and value of end-use services.



Source: DOE/LBNL, modified by NARUC staff

Programs and Technologies Available to Customer



Source: Smart Electric Power Alliance

Related Demand Flexibility Concepts

- **Virtual Power Plants**: an aggregation of small-scale, distributed energy resources, including PVs, Non-utility storage, EV chargers, and smart/responsive devices (water heaters, thermostats, etc.)
- **Distributed Energy Resources Management System (DERMS)**: platforms to aid distribution system operators in the management of grids with high levels of distributed energy resources
- **Advanced Metering Infrastructure**: a two-way communication system to collect detailed metering information throughout a utility's service territory. AMI can be used to provide more advanced measurement and verification (M&V) of data

Customer Benefits and Regulatory Considerations

- Regulatory models and advanced rate design can create **savings for customers** and appropriate **financial incentives for utilities**, yielding increased customer participation and benefits of DF
- Increased participation in programs that facilitate the use of DF technologies will **put downward pressure on customer rates over time, with reduced peak loads and avoided utility capital investments**
- More advanced forms of DF can **improve distribution grid reliability**
- Regulatory approaches used in other states using DF in other states:
  - Performance-based regulation (PBR) with metrics focused customer adoption of DF-related technologies and program participation (HI)
  - Required consideration of non-wire alternatives (NWA)
  - Consistent treatment of demand-side and supply-side resources in planning process

Elliott Nethercutt

Principal Regulatory Policy Specialist

Center for Partnerships & Innovation

NARUC

National Association of Regulatory Utility Commissioners

Demand Flexibility within a Performance-Based Regulatory Framework

Elliott J. Nethercutt

January 2023

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Thanks for attending. Committee sessions reconvene at 9:30 am tomorrow