

Grid-interactive Efficiency Building Data Collection

Summary

This data collection effort is focused on advancing the development of demand flexibility across utility programs. This data collection will clarify research questions that need to be addressed to realize the potential of a grid-interactive efficient building:

- Identify and characterize national and regional existing demand management programs today. This research will describe the source of flexibility offered through current programs (LED lighting, smart thermostats, etc), participation rates and challenges, and opportunities related to cybersecurity and interoperability.
- Information for this data set will provide the foundation for a national study that scopes the potential provided by GEBs, moving beyond the existing demand management programs offered today to the full capability of demand flexibility.

Data collection Questions

- Identify and characterize national and regional existing demand management programs today – breaking out residential, commercial, and industrial.
 - How large are these programs (number of customers, MW potential, MW realized)?
 - How important are these programs (share of peak, amount of funding relative to revenue)?
 - What financial agreements are used to incentivize participation?
 - How are these programs used?
 - To solve problems faced by the generation, transmission or distribution systems?
 - As NWAs?
- Describe the source of flexibility offered through current programs (lighting, thermostat, etc.) and participation rates
 - Do different end-uses offer different grid services? How does this vary by region or utility needs?
 - How stable is participation (e.g. do many people disenroll every year or do they remain in the program for many years after signing up)?
- Describe any trends or opportunities based on existing programs
 - Trends in participation, program structure, importance to the utility, etc.
 - Opportunities, consider new end-uses, program structures or customer classes that have significant potential to offer additional demand flexibility
- Where possible include future planning/potential analysis for demand side resources
 - What planning is being done at the distribution system level?
 - What planning is being done at the ISO/RTO level?

- What (if any) state policy/legislation has the potential to significantly impact demand management programs?
- What (if any) federal policy/legislation has the potential to significantly impact demand management programs?
- Interoperability
 - What are the range of program designs with respect to interoperability (e.g. proprietary solutions vs. “BYOT” programs)? And what are the trends around this?
 - What are the reasons that utilities choose one program design over another?
- Cyber
 - What are the utility cyber hygiene practices with respect to demand management programs?
 - What future cybersecurity challenges do utilities worry they will have to face?

Public reporting burden for this collection of information is estimated to average one hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of the Chief Information Officer, Records Management Division, IM-23, Paperwork Reduction Project (1910-5184), U.S. Department of Energy, 1000 Independence Ave SW, Washington, DC, 20585-1290; and to the Office of Management and Budget (OMB), OIRA, Paperwork Reduction Project (1910-5184), Washington, DC 20503.