



**Submitted by Alliance to Save Energy**  
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Dylan Reed  
Grid Deployment Office  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585  
Via Electronic Submission: [GDORFI@hq.doe.gov](mailto:GDORFI@hq.doe.gov)

**Re: Request for Information (RFI) (DE-FOA-0002827)**

Dear Mr. Reed,

The Alliance to Save Energy (Alliance) and the undersigned coalition of companies and energy efficiency advocates appreciate the opportunity to respond to the Request for Information (RFI) for the Grid Resilience and Innovation Partnerships (GRIP) Program (DE-FOA-0002827). We urge you to revisit the emphasis placed on demand-side management and its contribution to meeting the critically important strategic goals of the GRIP Program.

The Alliance, and many of our stakeholders participated in the development of the U.S. Department of Energy's (DOE) publication *A National Roadmap for Grid-Interactive Efficient Buildings* (<https://gebroadmap.lbl.gov/>) (the "Roadmap"). The Roadmap details the untapped opportunities demand flexibility offers and how it is seldom accounted for in utility planning and customer programs in meaningful ways -- despite its tremendous value to the grid and to end-use customers. The report also details the ways in which demand flexibility "is a significant opportunity to meet renewable and decarbonization goals," (P. 52), and the Alliance's contributions to the Roadmap highlighted the underutilization of demand flexibility in underserved communities, indicating that putting more focus on it is clearly in line with President Biden's Justice40 goals. A good example of the significant opportunity presented in this space is the residential energy efficiency retrofit program funded by the South Coast Air Quality Management District for older homes in disadvantaged communities of the Coachella

Valley in eastern Riverside County, CA. That program has retrofitted thousands of homes and the engineering analysis confirms grid benefits in terms of demand reduction (in kW), grid emissions reductions of GHG and other pollutants (in tons/year) as well as energy use reductions (in kWh), the latter of which provides direct benefits to community members. The project has made the homes ready for both demand flexibility (especially shifting both energy savings and emissions reductions to the evening hours) and thermal energy storage to enable additional solar energy on the grid.

The Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment Jobs Act (IIJA) explicitly calls out demand response and demand flexibility and recognizes these related clean energy and grid optimization tools as central to the implementation of BIL and U.S policy driving the energy transition. Section 40104 of BIL is dedicated to Utility Demand Response and states: “Each electric utility shall promote the use of demand-response and demand flexibility practices by commercial, residential, and industrial consumers to reduce electricity consumption during periods of unusually high demand.” Section 40104 requires state utility regulators and nonregulated electric utilities to undergo a process to consider and act on the identified provision.

Most importantly, BIL Section 40107 (and one of the three main programmatic components of GRIP) amends 42 U.S.C 17386 to define the Smart Grid Investment Grant Program (SGIG) and its purpose more clearly around demand flexibility adding 5 paragraphs, the second of which states: “In the case of buildings, the documented expenses for devices and software, including for installation, that allow buildings to engage in demand flexibility or Smart Grid functions.” Furthermore, BIL updates the definition of smart grid functions to include the ability “to use data analytics and software-as-a-service to provide flexibility,” “to facilitate the aggregation or integration of distributed energy resources to serve as assets for the grid,” and “to facilitate the integration of renewable energy resources, electric vehicle charging infrastructure, and vehicle-to-grid technologies.” The intent to emphasize demand-side solutions in SGIG has been made unmistakable, and we believe the draft FOA can be made far clearer in accentuating the need for these solutions as part of the SGIG program.

Moreover, we want to make it clear that the demand flexibility goals of BIL will require SGIG investments in four areas: (1) hardware, (2) data access, (3) software and (4) customer engagement. Past SGIG projects have been critical to building out Advanced Metering Infrastructure (AMI) across the nation, and we applaud and fully support the RFI language at the bottom of page 12 emphasizing that projects should “support data standards, interoperability, and non-discriminatory data access on a real-time basis.” The costs of these data provisions should of course be eligible for funding under the SGIG.

Going a step further, SGIG projects that fund software tools that facilitate data analytics, mass-market customer involvement in demand management programs, and grid-interactive efficient

buildings are all critical to enabling a flexible, reliable, and decarbonized grid. And the GRIP FOA should call for projects that bring software tools and consumer engagement to disadvantaged communities as part of meeting GRIP's Justice40 objectives.

Finally, for the reasons described above, the Alliance restates its earlier request from the letter dated August 26, 2022, that DOE dedicate at least 1/3 of section 40107 appropriations specifically for furthering deployment of GEBs technologies.

As requested, the remainder of this transmittal responds to several of the questions posed on pages 22 through 27 of the RFI. Below you will find select questions posted and our feedback aimed at better underscoring demand side management in the FOA in various ways.

### Category 1: DOE's Proposed Implementation Strategy for GRIP program

**Question 5.** Any comment on the overall solicitation process, structure, prioritization, requirements, and assessment criteria presented in the draft FOA?

a. In reference to the "Strategic Goals" detailed on pages 12-14 of the FOA, goal no. 1 on page 13 details three ways in which "Grid investments can enhance resilience..." After this paragraph and items i-iii, we suggest that a new paragraph stating:

"Demand flexibility should be considered for its value to community resilience. Projects including grid-enabled devices and high efficiency equipment in homes and buildings benefit and protect the system and its end users – particularly vulnerable communities – will be considered for GRIP funding."

b. On page 14 of the FOA, under "Strategic Goal" no. 3 we propose that the first paragraph be revised to say:

"Increasing grid reliability, **demand flexibility**, and resilience provide notable benefits such as reducing outages resulting from extreme events and/or other causes, by reducing restoration times from such outages, by reducing risks to health and safety for the affected community."

We also propose adding a subsequent sentence stating:

"Emphasizing investments in demand-side solutions benefits the grid, reduces carbon impact, lowers consumer utility bills, and has the potential to benefit those with the highest energy burdens in particular."

c. On page 20, under "Topic Area 2" four objectives are listed. We offer a fifth, inserting: "...accelerate the adoption of demand-side solutions in homes and businesses while lowering utility bills, particularly for those with high energy burdens."

d. We recommend that under “Priority Investments in Topic Area 2” on pages 21-22, an additional bulleted statement be placed there, stating:

- “Lowering the cost of home and building technologies and programs that promote demand flexibility and enable a larger scale for aggregating and integrating the demand side potential of the grid with an emphasis on serving disadvantaged communities.”

### Category 3: DOE Proposed Implementation for Smart Grid Grants (40107)

**Question 1.** Appropriateness of highlighted grid flexibility functions and technologies of interest identified by DOE above. Are there additional smart grid functionalities or technologies that would support grid reliability and resilience that should be considered?

We propose that DOE call out the utility demand response and load management programs and their expansion under Topic 2 of the FOA. Many jurisdictions that would benefit from matching funding to bolster and expand such programs. Furthermore, some key technologies with the potential to contribute to grid flexibility at scale are cost-prohibitive to customers, even with utility energy efficiency and load management rebates. Additional funding for such programs would increase participation and increase the adoption of smart building technologies, such as heat-pump water heaters, smart lighting solutions and other home appliances.

In addition, we encourage DOE to recognize the central importance of customer engagement in the administration of demand-side smart grid programs. The latent potential of demand-side resources, including grid-interactive buildings that utilize energy efficiency, demand response, EV integration, and more, can only be realized if appliances and device controls are combined with effective customer education and engagement strategies. This includes up-front consumer marketing, financial incentives for device adoption, and other strategies to boost enrollment and participation. The BIL included data analytics and software among qualifying smart grid investments, as well as “the ability to develop, store, send and receive digital information” among smart grid functions. These technologies can be applied to customer engagement features of demand-side programs, and DOE should update the FOA to recognize the importance of innovative customer engagement tactics as an important component of smart grid projects.

**Question 3.** In the collective portfolio of awarded projects, any suggestions regarding project types that have special strategic importance?

As previously stated, we advise that demand-side management programs and technologies such as high efficiency equipment and building energy management systems be deemed as strategically important for the Smart Grid Investment Grant Program. As indicated above,

investments in hardware, data access, and software-enabled consumer engagement– with attention on high energy burden and underserved communities, will improve the prospects of reaching fundamental outcomes pursued by the BIL and the Biden Administration.

Within GRIP and among all the grid-related provisions of the BIL, the SGIG is really the only opportunity for DOE to fully recognize and invest in demand flexibility. It is therefore our hope that the feedback herein is included in the final GRIP FOA.

Thank you for the opportunity to comment and we welcome further conversation on this and related issues.

Sincerely,