Grid Resilience and Innovation Partnerships Program (GRIP)
FOA 3195
Concept Paper Form

Project Overview

Applicant Name: Unitil Service Corp.

Project Partner(s): Unitil Energy Systems, Inc., Fitchburg Gas and Electric Light Company, Northern Utilities, Inc.,

Project Name: The Regional Joint Utility Energy Data Hub: Advancing Community DER Enablement and Customer

Project Location(s):
If selecting multiple items, hold down "Ctrl" button when clicking.

CT
DE
DC
FL
GA
GU
HI
ID

Applicable GRIP Topic Area:	Topic Area 2: Smart Grid
Transmission/Distribution/Combined:	Distribution
Applicant Cost Share:	14500000
Federal Funds Requested:	14500000
Anticipated Total Project Budget:	29000000

Project Details

Brief description of the project, including outcomes that would result from the successful completion of the project that align with the strategic goals and objectives of the GRIP program and the applicable GRIP Topic Area. *2,000 character limit.*

The 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. 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. Outcomes are aligned to the strategic goals of Topic Area 2:

Brief description of the impact of DOE funding on the project. *2,000 character limit.*

Federal funding will be impactful on two fronts - helping accelerate the deployment and promoting project expansion across multiple regions and an expanded set of utilities. Both would not reasonably happen without the support of these funds.

1. Expansion of Reach. This effort started with a 2019 act of the New Hampshire legislature, with the NH Public Utilities

Select the type(s) of technology(ies): Software

List the primary technologies and/or tools that will be deployed in the project. *2,000 character limit.*

Platform Hub. Central web portal for third party registration, data access and implementation of the "API of APIs" allowing authorized third parties to programmatically request customer-authorized data from a single access point. It combines individual utility data sets into a single data set for delivery to the authorized third party. The APIs will be certified by the Green Button Alliance. The Hub also provides a centralized customer access point to provide authorization and data aggregation.

If the project will be deploying hardware, describe the role and impact of hardware deployment as part of the proposed project scope and identify any elements of this deployment that represent a significant innovation for the industry and/or project. Enter "N/A" if no hardware will be deployed. *2,000 character limit.*

N/A

If the project will be deploying software, describe the role and impact of software deployment as part of the proposed project scope and identify any elements of this deployment that represent a significant innovation for the industry and/or the project. Enter "N/A" if no software will be deployed. *2,000 character limit.*

While current efforts in the industry at standardization – such as Green Button Connect (GBC) and other similar data platforms in California, Illinois, Texas, New York and Ontario, Canada - have made important strides, most implementations to date are:

• Done by a single electric utility in isolation, leading to inconsistent implementation of the standard and artificially

If the project will include development of a new business/regulatory/financing approach, describe the approach and the potential for and path to replicability or broader adoption. *2,000 character limit.*

The project will be uniquely executed through a multi-territory and multi-stakeholder approach, organized through a 12-member Governance Council which was created pursuant to NH RSA 378:50-54 (2019) and NH PUC Order No. 26,589 (3/2/22).

The Governance Council currently represents membership from New Hampshire utilities; the Office of the Consumer

Describe the readiness, viability, and expected timing of the project (include the impact of DOE funding in the response). *2,000 character limit.*

The project is ready to begin execution upon Federal award. Several activities have already taken place to date that set the project up for success to meet its objectives.

1. A year+ design process was completed, establishing the scope and architecture for a common data model across utilities

Identify risks and challenges (e.g. technical, labor, financial, market, environmental, regulatory, security) to project success, and outline mitigation strategies for each risk. *2,000 character limit.*

Risk A:Utility Regulatory Support. Primary risk is the possible reluctance of the participating utilities' regulatory commissions to commit ratepayer funding to support the project. The utilities must receive all necessary regulatory approvals from authorities in each participating state including that for the non-grant funded costs of the platform to be collected from ratepayers for the utilities to proceed with the project
Remediation A: The award of grant dollars as well as the extension to other utilities and territories, expands prospective

Briefly describe the Project Management Team and any key personnel and project partners, including vendors and suppliers (if identified; if not yet identified, address how the project will secure vendors/suppliers). Indicate whether the Team has the required skills, any prior applicable experience, prior projects with partners, and access to equipment /facilities to successfully execute the proposed project. If those are not met, explain how the Team will obtain knowledge/access for successful execution. *2,000 character limit.*

• Overall Program Governance. The Hub will be overseen by a combination of the entities described in Remediation B above.

• Project Execution. The individual utilities will collaboratively lead the Hub's development along with the Program and Change Management Working Group, governance council and joint utility committee. Collectively, the utilities have

Project Impacts

How will this project reduce innovative technology risk, achieve further deployment at-scale, and lead to additional private sector investments? *2,000 character limit.*

Reducing Innovative Technology Risk. The project's governance and project delivery structure is unique and one that spreads technology risk among multiple parties with appropriate checks, balances and risk mitigation practices. Additionally, the joint-utility, multi-territory nature of the effort results in deepened perspectives, experience, and skillsets to further mitigate innovative technology risk.

Describe how the project supports State, local, Tribal, community and regional resilience, in reducing the likelihood and consequences of disruptive events, decarbonization, or other energy strategies and plans. *2,000 character limit.*

Local: At the local level, the shared data platform will enable communities to assess options for lowering environmental impacts of all the residential, municipal, and business energy use in their jurisdiction. Communities will be able to analyze cost-effective options for each individual load shape in the population and aggregate those options to explore policies at the community level. Local communities can also measure retail costs, emissions, and other impacts of both gas and electricity usage regardless of distribution utility. Across New England, many communities have 2 or more

What will be the grid-benefitting outcomes to be delivered by the project (e.g. number of customers impacted, unlocked clean energy generation, improvement in reliability metrics). List 1-3 outcomes maximum. *2,000 character limit.*

1 .Unlocks Increased DER Adoption by Reducing DER provider Costs.

Today, DER providers pay as much as $300,000 annually for screen-scraping programs to extract customer electric data from bill PDFs, while others install monitoring packages with their solar+storage applications that are functionally duplicative of the utility's advanced meters, driving up costs by $15,000 or more per installation. The Hub eliminates

Community Benefits Plan

Demonstrate how this Community Benefits Plan will address community and labor engagement, and how feedback from specific and relevant community stakeholders will be incorporated into the Community Benefits Plan. *4,000 character limit.*

Unitil and its collective project partners for this application understand that thoughtful and meaningful community benefit is a critical outcome required for this funding, spanning not just grid-benefitting operational improvements, but also in advancing energy democracy, workforce development, and community partnerships.

The nature of this project, in breaking down the walls of historically utility-housed and owned data, removes a significant barrier for a variety of stakeholders that would be able to leverage the data in a meaningful way and towards advancing an equitable clean energy transition. As such, the Hub is a foundational enabler of a plethora of use cases, but requires concerted and focused outreach, education, and supplemental investment for the use cases to be utilized to benefit communities and ensure that:

a. Communities, Local Government, and Customers are aware of the availability of the Hub for their use;
b. Analytics / Visualization Providers understand how to engage with the Hub API's to enable/enhance their services;
c. Local human services groups recognize how to advise individuals on how to leverage the Hub to support enrollment in energy programs, tax credits, or energy saving programs;
d. Contractors recognize how to leverage the Hub to evaluate project efficiency costs and savings, helping maximize tax credits and home and building efficiency;
e. Solar Project Developers and Third-Party Service Providers understand how to pull the relevant data necessary to support timely siting of projects or verification / validation of performance of energy savings programs; and
f. State Agencies are able to leverage the Hub to support facilitation of funding opportunities available in the Inflation Reduction Act (IRA).

Provide expected number of jobs or workforce development opportunities that the project will create. Describe how these positions are the result of community engagement or agreement. Explain how your project will generate quality jobs and that workforce development opportunities provided are relevant to impacted communities. *4,000 character limit.*

The Hub, being a software platform and not a large construction project or program will not in itself be the direct creator of significant net new jobs, though there are expected to be new jobs created during Community outreach efforts as part of the Community Benefits Plan, such as for outreach coordinators and in-community Hub trainers.

However, as previously described, the Hub removes significant barriers in data access experienced by solar developers, DR aggregators, contractors, communities, and other third-party service providers. By removing this friction, the platform will inherently drive up clean-energy investment across the territories. Findings in the Dunsky Energy + Climate market survey and customer interviews report that was commissioned by the Governance Council to evaluate the proposed Hub's cost-reasonableness, showed:

1. Lack of automated data access, lack of timely and granular energy use data, and limited standardization also hinders what companies can offer to customers. Implementing Green Button would attract companies considering coming to or expanding operations in the state.
2. Related, without an energy data platform like Green Button, the states could forfeit significant federal funding opportunities. For example, some of the incentives and tax breaks for clean energy in the Inflation Reduction Act have energy data access requirements. Green Button therefore acts as a "gating factor" in attracting (or not) Inflation Reduction Act investments and the related business and job growth.
3. Direct household and business savings – which were noted by market survey interviewees and a significant component of the total quantified benefits modeled by Dunsky for the cost-benefit analysis – will be unlocked by Green Button. A portion of those savings will be re-invested in the local state economy, generating economic output and jobs.

Identify Community Benefits Plan elements that will support Diversity, Equity Inclusion, and Accessibility, including methods to ensure accountability to specific goals throughout the project. *4,000 character limit.*

As part of this project, the Governance Council will focus its Community Benefits Plans on pilot and incremental initiatives that will support development or demonstration in disadvantaged communities including supporting minority business enterprises (MBEs), and in increasing access to programs and educational opportunities for those that may have faced systemic barriers in the past. These Community Benefit Plan elements are summarized as follows:

1. Localized training and engagement on how to leverage the Hub with local Community Action Agencies (CAAs) to advance administration of state and federal programs. CAAs administer a suite of programs for low-income residents, with coordination and oversight by the State Energy Office. In addition to being the primary partner with the utilities in reaching low-income families in 1-4 unit buildings for targeted weatherization services, the CAA agencies also administer the following state and federal programs
a. Weatherization Assistance Program
b. Low Income Heating Assistance Program
c. Electric Assistance Program

2. Formal engagement, training and support on the Hub for the MA EE Program Administrators who have developed a statewide Community First Partnerships initiative that is administered by All In Energy to targets municipal governments and CBOs to reach underserved and disenfranchised communities with energy efficiency efforts.

3. Expanding CENH's Energy Rider program to help disadvantaged communities in NH use the Hub for local energy and climate planning. Examples include helping low-income households benefit from solar by supporting state "Solar for All" grant applications and helping rural communities apply for USDA REAP technical assistance grants.

Identify how this project will contribute to the Justice40 Initiative goal that 40% of overall benefits flow to disadvantaged communities. *4,000 character limit.*

An independent analysis by Dunsky Energy Consulting in reviewing the cost-reasonableness of Hub implementation, additionally included formal interviews with 8 potential third-party users of the Hub and broader market research of other Green Button implementations. The resulting report found that the Regional Data Hub offers tremendous benefits, aligned to several of the key Justice40 policy priorities, including:

1. Increased parity in clean energy technology access and adoption:
• Increasing the effectiveness of dynamic rate designs, currently planned for the region, by allowing customers to easily link cloud-connected devices, such as EV chargers and water heaters, with their specific rate plan and hourly cost profile.

2. Increasing energy democracy:
• Leveraging stakeholder engagement frameworks, workforce development efforts, technical assistance, training, outreach, and other knowledge transfer efforts as described in prior sections of the Community Benefits Plan of this application.

3. Decreasing energy burden:
• Residential customers with smart thermostats could potentially receive upwards of $3 million per year for reducing heating or cooling needs at peak times, through aggregated participation in ISO-New England's Forward Capacity Market ("FCM") or realize comparable or greater value functioning as load reducers on the distribution grid. This is based on forecasted FCM values and expected growth in smart thermostat adoption.
• Commercial and institutional customers could reduce opportunity costs associated with delays in DR program

Ensure that the form has been fully and correctly completed.

*Once you have verified that all the information is accurate click the button below. You will **not** be able to make changes to this form afterwards.*

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