TNO / AAE Proposal to Enhance Distributed Energy Resource Programs for New Orleans Docket No. UD-24-02

Dec 20, 2024

# Via Electronic Mail

Aisha Collier, Assistant Clerk of Council Room 1E09, City Hall 1300 Perdido St New Orleans, LA 70112

Re: Resolution and Order R-24-624 (Docket No. UD-24-02)

Together New Orleans and the Alliance for Affordable Energy respectfully submit the attached filing in docket **UD-24-02** proposing a **Distributed Energy Resource Program** in response to Resolution No. R-24-624 seeking to enhance distributed energy resource programs.

Please do not hesitate to reach out with any questions related to this filing.

Nathalie Jordi

Together New Orleans

Logan Atkinson Burke

Alliance for Affordable Energy

#### Distributed Energy Resource Program Proposal and Policy Design Comments

In **Resolution R-24-624**, the City Council directed stakeholders to submit proposals for changes to existing policies or programs, alongside comments on the utilization of certain credits to advance the public interest by increasing the availability of distributed energy resources. The October 2024 Resolution specifically establishes Docket UD-24-02 to evaluate opportunities to expand "battery storage, and related facilities, including any changes to ENO-related policies, funding mechanisms, and establishing a vendor-neutral program to facilitate these goals."

The Alliance for Affordable Energy (AAE) and Together New Orleans (TNO) (collectively, the "Community Organizations" or "Parties") are pleased to respond with a proposal for implementing an upfront incentive program to accelerate the installation of behind-the-meter residential and small commercial battery energy storage systems (BESS). The proposed Distributed Energy Resource Program (DERP) would allocate SERI settlement credits over a three-year timeline to applicants, significantly increasing the availability of battery systems to support the Entergy New Orleans (ENO) distribution system.

This program aims to create a network of dispatchable, distributed battery storage systems to enhance grid reliability and foster resilience partnerships with local businesses, community organizations, and residents. These investments will strengthen resilience projects across the city while establishing a scalable framework for the growth of distributed energy storage. Once the upfront incentive funds are fully utilized, the DERP will transition to a sustainable pay-for-performance (PFP) model, building on the current Entergy New Orleans Demand Response BESS Pilot. This approach will ensure solar-paired battery storage systems receive compensation reflecting their full value, while promoting technology-neutral solutions for capacity supply from a robust fleet of distributed solar-battery systems.

The Community Organizations propose using \$32 million in SERI credits to provide site-specific upfront incentives for solar-paired battery energy storage systems (BESS). Participation will require enrollment in Entergy New Orleans' Demand Response BESS program or its successor programs or tariffs that offer pay-for-performance compensation for distributed BESS.

The DERP proposal is specifically designed to address the unique energy consumption patterns and market conditions of New Orleans while incorporating proven strategies from successful virtual power plant (VPP) programs across the country. This approach aligns with the principles demonstrated by over 500 operational VPP programs in the United States. A recent report on VPPs emphasizes that "utilities and regulators do not need to engage in lengthy design, regulatory, or pilot processes to deploy VPPs to meet summer reliability needs. Instead, decision makers should reference leading approaches from other jurisdictions."

Dedicated settlement funds provide New Orleans with an unprecedented opportunity to showcase the advantages of a robust solar-storage fleet within a vertically integrated Southern

<sup>&</sup>lt;sup>1</sup> Meeting Summer Peaks: The Need for Virtual Power Plants, Rocky Mountain Institute (July 2024), available at <a href="https://rmi.org/wp-content/uploads/dlm\_uploads/2024/06/VPP\_reliability\_brief.pdf">https://rmi.org/wp-content/uploads/dlm\_uploads/2024/06/VPP\_reliability\_brief.pdf</a>.

utility. This initiative can demonstrate how such a fleet reduces energy costs while boosting resilience investments, all without dismantling existing programs or implementing new rate increases. To shape this proposal, the Community Organizations collaborated with representatives from successful programs in Connecticut, Texas, New England, and Puerto Rico; leading industry players such as Sunnova, Enphase, Fortress, Posigen, and Tesla; the Department of Energy; Entergy New Orleans; its current DERMS provider, EnergyHub; and a wide range of local stakeholders in New Orleans.

In addition to presenting the DERP proposal, the Community Organizations provide comments on key policy considerations that warrant further deliberation with Council Advisors, Entergy New Orleans, City Council and the public. This proceeding will benefit from technical conferences or additional briefings on the topics presented here, including:

- The rationale for utilizing SERI funds.
- Selecting an Incentive Administrator.
- Expectations for and potential modifications to the current BESS Pilot Program.
- Eligibility criteria for commercial and institutional program participants.

The Community Organizations are particularly eager to demonstrate how this proposal will:

- Enhance the value proposition of the Entergy New Orleans BESS Pilot.
- Enable rapid learning and process improvements for ENO and the City to understand how capacity from a virtual power plant (VPP) supports reliability, resilience, and community health objectives.
- Establish a clear pathway for transitioning the BESS Pilot into a permanent program or tariff.

The success of this program hinges on thoughtful design that reduces hardware and installation costs.<sup>2</sup> The more effectively these costs are addressed, the more equitably battery systems can be distributed across New Orleans, ensuring all ratepayers benefit from the system-wide savings virtual power plants (VPPs) provide. This proposal includes data, calculations and best practices, to help identify an optimal cost-benefit balance. Future technical conferences and stakeholder feedback will be instrumental in refining and improving this approach.

We appreciate the opportunity to submit this proposal and contribute to this critical discussion. Please do not hesitate to contact us for further information.

<sup>&</sup>lt;sup>2</sup> The proposed incentive calculation assumes that participants can access federal tax credits via the Inflation Reduction Act, such as a 30% Investment Tax Credit + 10% energy community adder. If these were to change in the future, the DERP incentive calculation should adapt accordingly.

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# I. Distributed Energy Resilience Program (DERP) Proposal Overview

TNO and AEE propose the Distributed Energy Resilience Program (DERP) for the City of New Orleans to accelerate the adoption of behind-the-meter (BTM) solar-plus-storage systems. The program aims to expand current and future virtual power plant (VPP) and demand response pilot initiatives, establish successor tariff offerings for Entergy New Orleans (ENO), and support ENO in achieving its 2025 Demand Response target. Additionally, DERP will create a regulatory pathway for a permanent pay-for-performance framework. The Community Organizations propose using SERI credits to launch an upfront incentive program that facilitates the enrollment of BTM batteries into ENO's existing Battery Energy Storage System (BESS) pilot. The program is designed to rapidly increase participation, serving as a springboard for hundreds of residential, small commercial, and community sites to lease, purchase, or integrate existing batteries. These efforts will bolster grid reliability in New Orleans while delivering system-wide benefits for all ratepayers.

The proposed Distributed Energy Resilience Program (DERP) aims to accelerate the adoption of battery energy storage systems (BESS) in New Orleans by providing upfront incentives based on deliverable kilowatts (kW). The incentive is designed to lower the financial barriers to battery adoption, particularly for residential and small commercial/institutional site customers. The DERP proposal also introduces innovative mechanisms to enhance program accessibility and scalability. Residential customers from low-income communities are eligible for a 20% incentive adder, ensuring that equity remains a cornerstone of the program. For commercial and institutional customers requiring enhanced resilience capabilities, a City Council-administered special application process allows for tailored incentive levels exceeding \$300,000, addressing unique needs for long-duration outages.

The incentive structure offers a standardized rate of \$1,000 per kilowatt (kW) of deliverable capacity. This approach accounts for inverter limitations and other hardware constraints while ensuring system deliverability based on a two-hour dispatch event with 80% of system capacity available for use ("Deliverable Capacity"). This methodology ensures fairness across different system sizes and participant types and is detailed further below. Phase 1A of the program prioritizes rapid enrollment in the existing Entergy New Orleans Battery Energy Storage System (ENO BESS) Pilot, requiring a minimum three-year participation period. The program encourages behaviors such as adding additional batteries to homes with existing systems and motivating institutional sites to partner with Energy Service Partners for battery and solar installations.

The proposal includes the following key elements:

# 1. Residential System Incentives (50% of Program Funds):

- o \$1,000 per kW of deliverable capacity, capped at \$10,000 per site.
- o A 20% additional incentive for customers in low-income communities.
- 2. Institutional or Commercial System Incentives (50% of Program Funds):

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- \$1,000 per kW of deliverable capacity, capped at \$300,000 per site.
- Per-site incentive cap can be waived by Council for projects that demonstrate significant public welfare benefits, such as resilience during emergencies or critical support for community infrastructure, could

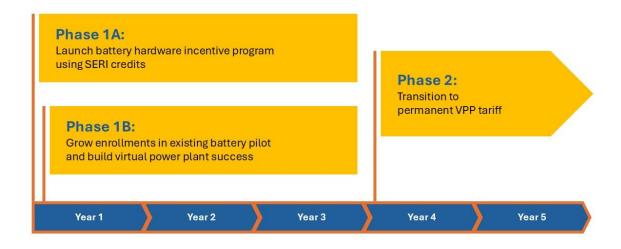
This section outlines a three-part plan to transition the Entergy New Orleans BESS Pilot into a permanent programmatic design or tariff. The new framework will reward solar-paired distributed batteries for the full range of services and benefits they deliver as part of a large, reliable fleet of dispatchable distributed energy resources (DERs).

# A. Program Framework

The proposed DERP framework consists of three phases:

- **Phase 1A:** Use SERI funds to provide upfront customer incentives, driving rapid enrollment in the existing BESS Pilot program.
- **Phase 1B:** Assess program outcomes and evaluate virtual power plant (VPP) capabilities to refine future approaches.
- **Phase 2:** Establish a permanent pay-for-performance retail demand response tariff that fully compensates the diverse benefits provided by distributed energy resources (DERs

# **DERP Proposal Summary Diagram**



# 1) Phase 1A: Upfront Incentive Rollout and Rapid Enrollment in the ENO BESS Pilot

Phase 1A serves as the launch phase of the program, designed to accelerate battery installations through a straightforward incentive structure. Customers will receive upfront payments based on their batteries' deliverable capacity (measured in kW), encouraging installations aligned with grid needs.

### **Key Elements:**

- Standardized Incentive Rate: \$1,000 per kW of deliverable capacity (calculated with a formula described further below), capped at \$10,000 per site for residential systems and \$300,000 per site for small commercial or institutional systems.
- **Reserved Funding Allocation:** 50% of incentive funds will be reserved for residential projects, and 50% for commercial and institutional projects.
- **Enrollment Commitment:** Participants must commit to a minimum three-year enrollment in the BESS Pilot or its successor programs.
- **Streamlined Enrollment:** A designated Incentive Administrator—either the utility or an independent entity approved by City Council—will oversee a simple and efficient enrollment process.
- **Fleet Integration:** Following installation, all systems will be enrolled in a unified program through the utility's DERMS provider, enabling aggregated dispatch as a fleet asset for virtual power plant (VPP) events.

#### • Special Provisions:

- Residents in low-income communities qualify for a 20% additional incentive to ensure equitable participation.
- The per site cap may be waived by Council for projects that demonstrate significant public welfare benefits, such as enhancing resilience during emergencies or providing critical support for community infrastructure.

#### Program flow for DERP Phase 1A – upfront incentive

**Marketing Nexus to Site Owners Program Applicant** EnergyHub **Entergy New Orleans** (Incentive Administrator) Energy Service Partner (Or Site Owner) (DERMS) \*Utility or Third Party The Applicant initially if **Entergy New Orleans** The Utility and DERMS Provide simple guidance to approved in the program, participates in some customers. Provider model enables a would have funds capacity in the reservation list of authorized Energy "reserved" by the Incentive of funds process before a Service Partners to work Ensure customers access a Administrator. site's equipment is installed. with customers, contract list of qualified Energy with the DERMs provider to Service Partners (managed The Incentive Administrator After installation, Entergy by DERMs and Utility) deliver them the customer manages a process that is New Orleans receives capacity. decoupled from DERMS confirmation of enrollment Give customers multiple platform interactions: into the applicable demand choices to enter the Separately, Partners may be focused on qualifying response program via installation process, allow on a utility-approved candidate sites for the Energy Hub and utilizes the partners list/certified them to assign incentive to incentive and calculating increasing capacity of the installer list. their Energy Service Partner. the future virtual power plant.

# 2) Phase 1B: Transition and Learning with Virtual Power Plant Test Cases and Incentive Program Success Metrics

Running concurrently with Phase 1A, Phase 1B emphasizes program refinement through monitoring, reporting, and stakeholder collaboration. Key activities include:

#### Quarterly Reports:

- Track enrollment progress, system performance, and customer satisfaction to identify barriers and implement adjustments.
- Certain metrics will be managed by the DERMS provider and utility based on data feeds and reports already established under the BESS Pilot Program.
- Quarterly updates from key participants—including the utility, the Incentive Administrator (whether the utility or an independent entity), and customers' Energy Service Partners—will ensure timely evaluation and necessary program adjustments to maintain and grow engagement.

#### • VPP Testbed Development:

• Expand the program's scope beyond peak demand events to assess additional use cases, such as seasonal grid support and ancillary services.

#### • Rationale and Data for Graduation from Pilot to Tariff:

 Lay the groundwork for a permanent tariff by testing the operational and financial feasibility of advanced battery applications.

#### 3) Phase 2: Pay-for-Performance Tariff and Long-Term Framework

Phase 2 lays the foundation for the program's long-term success by introducing a sophisticated pay-for-performance retail demand response tariff. This tariff will reward customers for participating in grid support events and fully compensate for the diverse benefits their distributed battery systems provide.

#### Goals of Phase 2:

- Value-Based Compensation: Ensure batteries are compensated for the wide range of services they offer, including:
  - Reducing local and system peak demand.
  - o Providing ancillary services such as voltage support and frequency regulation.
  - Deferring or avoiding grid upgrades at constrained or high-demand areas.
  - Reducing marginal emissions during dispatch events.
  - Delivering resilience services during long-duration outages.
- **Incentive Continuity:** Transition customers from the upfront incentive model to ongoing pay-for-performance compensation. This shift will occur when the upfront funds are fully utilized or earlier if directed by Council policy, ensuring sustained engagement.
- Implementation Features:
  - Leverage data and performance insights from Phase 1B to design a retail demand response tariff that reflects community priorities and effectively balances costs.
  - Incorporate stakeholder engagement into the utility tariff design process to align the program with local needs.
  - Establish a clear regulatory framework to solidify the program's permanence, provide market stability for hardware providers and customers, and encourage sustained participation in virtual power plant (VPP) structures.

By building on lessons from earlier phases, Phase 2 will deliver a resilient, equitable, and innovative energy storage program that benefits all stakeholders while supporting long-term grid modernization and reliability.

# **B.** DERP Policy Objectives

This proposal outlines a multi-phase approach to incentivizing and integrating battery energy storage systems (BESS) within Entergy New Orleans' (ENO) grid infrastructure. It is designed to deliver immediate customer benefits while building a robust foundation for long-term grid modernization and energy resilience.

# **Key Objectives:**

1. Support BESS Customer Adoption

 Provide upfront incentives to encourage residential and small commercial customers to adopt battery systems, reducing financial barriers and driving participation.

#### 2. Enhance Grid Reliability

 Deploy distributed battery systems to lower peak demand, support voltage regulation, and improve grid flexibility, strengthening system reliability.

# 3. Promote Equitable Opportunity for Program Enrollment

- Ensure equal access to ENO programs rewarding battery installation and dispatch.
- Allow upfront incentive applicants to include site hardware owners/operators,
   ENO customers, or third-party battery owners, supporting diverse ownership models and enabling customers multiple pathways to participate.

# 4. Promote Citywide Battery Access and Benefit All Ratepayers

- Encourage diverse ownership models, such as leased systems, third-party ownership, or nonprofit-provided systems, to expand participation.
- Ensure low-to-moderate-income neighborhoods and community-centric sites
   (e.g., congregations or senior living facilities) can access the program,
   overcoming barriers like application complexity and compliance requirements.
- Adopt vendor-neutral and applicant-neutral frameworks to accelerate incentive disbursement and operationalize assets for system-wide benefit.

## 5. Prepare for Behind-the-Meter Retail Storage Tariffs

- Use early program phases to collect data and assess performance, leading to the design of a permanent tariff that compensates batteries for their full value.
- Demonstrate the performance, reliability, and resilience contributions of solarpaired batteries to support a transition from the ENO BESS Pilot to a robust payfor-performance tariff.

# 6. Expand Capacity to Meet the 2025 Demand Response Goal

- Structure the program to engage diverse customer types by:
  - Assisting with incentive applications.
  - Supporting financing and hardware installation, including third-party ownership.
  - Ensuring ongoing compliance and performance through service contracts.
- Foster competitive partnerships between energy service providers and EnergyHub to deliver additional capacity for ENO, helping meet the 2025 Demand Response Goal.

#### 7. Leverage SERI Funds for Incentives and Existing Mechanisms for Administration

- Dedicate SERI funds to asset incentives, while relying on EnergyHub's existing contract with ENO to manage administrative tasks.
- Enable Energy Service Partners to provide essential scoping and operational services without adding costs or requiring additional program fees.

# C. Program Design Principles

Our proposal leverages three key policy principles to create, sustain, and grow battery deployment in New Orleans. These policy principles are decision drivers which have enabled 13 states in the past year alone to start proceedings and programs for distributed resource contribution to their local electric grids.

# **Principle 1: Expand Distributed Energy Resource Adoption**

Advance policies to increase DER adoption among diverse end users and establish a sufficient asset base for virtual power plant (VPP) enrollment.

- TNO/AAE's October Memo to the City Council highlighted the importance of policies that broaden DER access for a wide range of Entergy New Orleans (ENO) customers while inviting diversity in installers, solar, and battery technology. Resolution R-24-624 adopts these recommendations by encouraging vendor-neutral principles, expanding equipment options, and offering diverse financing models.
- The proposed Distributed Energy Resources Program (DERP) upfront incentive is designed to create a substantial fleet of solar-charged batteries, enabling ENO to deploy a reliable, dispatchable resource.
- This focus addresses the critical shortage of solar-paired batteries available for utility DER programs in New Orleans, as acknowledged in ENO filings. In an immature market, programmatic incentives are essential to motivate both the enrollment of existing equipment into demand response programs and the installation of new assets.

# **Principle 2: Enable Value Stacking**

Maximize the benefits of distributed batteries by allowing them to provide multiple grid services while maintaining customer support.

- Upfront incentives will mobilize a robust fleet of solar-paired batteries, which can then be enrolled in ENO's existing battery programs.
- These batteries support "value stacking," offering diverse grid services such as peak demand reduction, ancillary services, and resilience during outages.
- The proposal recommends a DER Transition Tariff Period during which SERI funds will be deployed over three years. As enrollment grows, ENO can adapt tariffs to align with changing grid needs and evaluate additional services from this growing fleet.

#### Principle 3: Full compensation for services delivered by distributed energy programs

Ensure distributed energy programs are fairly compensated for their contributions to grid reliability, customer participation, and resilience.

- DER programs offer cost-effective, flexible, and quickly deployable solutions to address peak demand compared to centralized generation investments.
- Traditional capacity valuation metrics undervalue DERs:
  - Total Energy Consumption Reduction: Overlooks the flexibility and localized benefits of distributed resources, such as shifting usage, exporting stored energy, or islanding to support specific areas.
  - Total Resource Cost/Avoided Cost: Focuses on deferring central generation costs but neglects the resilience and locational benefits DERs provide during outages.<sup>3</sup>
- Proper compensation must account for the Value of Lost Load (VOLL)—the economic and societal costs of outages—by reflecting the localized and time-sensitive benefits DERs offer during emergencies.
- Dynamic tariffs should compensate DER owners for preventing power loss during critical events, such as hurricanes, by addressing both resilience contributions and economic damage avoided by DER deployment.

**Action:** Develop compensation models that reflect the full range of benefits DERs provide, ensuring fair valuation that supports customer participation and long-term grid resilience.

<sup>&</sup>lt;sup>3</sup> Note: In the 2021 Integrated Resource Plan DSM Potential Study, Entergy New Orleans' analysis emphasized the avoided cost of generation capacity as the sole benefit of residential BESS, neglecting other significant value streams. This approach leads to underestimation of the true value that residential and institutional solar and storage systems offer to both the utility and its customers. In its 2024 DSM Study Workshop, Entergy New Orleans presented a fourth strategy base case that included 200 MW of solar behind-the-meter. It did not include a value for BESS-paired BTM Solar or standalone BTM BESS. Entergy New Orleans' (ENO) 2024 Integrated Resource Plan (IRP) DSM Potential Study projects that, even under the most aggressive scenarios, behind-the-meter (BTM) battery energy storage systems (BESS) will contribute only 7% to demand response potential. This figure is notably lower than projections in comparable markets, suggesting that ENO's assumptions may underestimate the adoption rates and market diffusion of residential BESS.

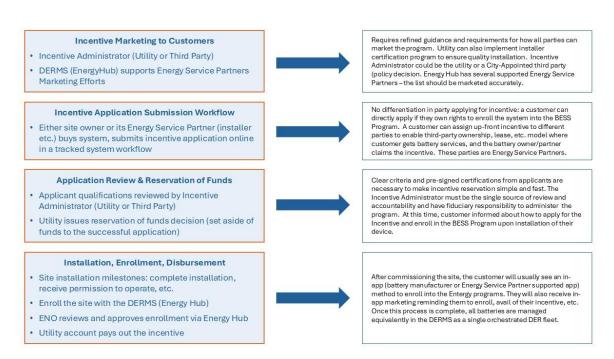


These principles guide the DERP proposal, fostering equitable access, robust participation, and sustainable growth of distributed energy resources in New Orleans.

# **D.** How Customers Access **DERP** Battery Incentives

This section provides an overview of how customers can access SERI funds during the first phase of the program, which focuses on accelerating distributed battery deployments. Detailed elements of the DERP Proposal are discussed in subsequent sections.

# **How Customers Access DERP Battery Funds**



# i. Incentive Marketing to Customers

The program begins with targeted marketing efforts overseen by the Incentive Administrator, which may be either the utility or a third party.<sup>4</sup>

- EnergyHub's Role: As the Program Implementer<sup>5</sup> connected to the utility's grid management systems, EnergyHub's Distributed Energy Resource Management System (DERMS) supports Energy Service Partners in customer outreach.<sup>6</sup>
- Energy Service Partners' Responsibilities: These partners handle asset installation, incentive facilitation, compliance, asset management, and performance monitoring.<sup>7</sup>
- Marketing Quality Assurance: Certification programs for installers and additional guidance ensure accurate, high-quality marketing and customer engagement.

#### ii. Incentive Application Submission Workflow

- A site owner<sup>8</sup> or their Energy Service Partner (e.g. installer) purchases the system and submits the incentive application online.
- The process starts with a tracked workflow system managed by the Incentive Administrator. This workflow may leverage whatever frameworks ENO has

<sup>&</sup>lt;sup>4</sup> **Incentive Administrator:** The entity designated by the City Council to engage in the life cycle process of soliciting, vetting, and verifying the qualification of Program Applicants to receive the DERP Phase 1A Up Front Incentive, and managing/directing/administering the direct payment to the Program Applicant upon confirmation by the Program Implementer (EnergyHub) that the site assets are duly enrolled.

<sup>&</sup>lt;sup>5</sup> **Program Implementer:** The entity or organization responsible for managing the operational aspects of the DERP or BESS Pilot, such as incentive disbursements, compliance monitoring, and reporting outcomes. The current ENO BESS Pilot program implementer is EnergyHub.

<sup>&</sup>lt;sup>6</sup> **Distributed Energy Resource Management System (DERMS):** A technology platform used to optimize the operation of distributed energy resources (DERs), such as solar and battery systems, within the electric grid. Entergy New Orleans (ENO) utilizes EnergyHub's Distributed Energy Resource Management System (DERMS) to manage and orchestrate customer-owned distributed energy resources (DERs) within their service area.

<sup>&</sup>lt;sup>7</sup> Energy Service Partners assist in the distribution of financial incentives to customers, ensuring that compensation structures are transparent and effectively administered. They ensure that the DERs are properly maintained and operate efficiently throughout the program's duration. They monitor customer adherence to program guidelines, ensuring that performance standards are met and sustained. By aggregating multiple customer-owned DERs, Energy Service Partners facilitate coordinated participation in demand response events and communicate with utilities or DERMS on behalf of customers. In this case, they are paid partners of EnergyHub to bring capacity into the program.

<sup>&</sup>lt;sup>8</sup> **Site Owner**: the party of record with registered electric utility services provided by Entergy New Orleans, LLC. The site owner may directly apply for the incentive or work with its partnering installer (Energy Service Partner) to apply, or assign the incentive.

- already invested in for energy efficiency and demand response programs to stand up the BESS Pilot Program. This includes initial validations which the DERMS provider supports for the BESS pilot.
- Importantly, customers or third-party owners they are working with can apply for the incentive. In cases where third-party ownership is used, the customer receives battery services and has a bilateral contract with the third party (which occurs outside of the DERP proposal and is a standard commercial practice), while the third-party (Energy Service Partner) claims the incentive.

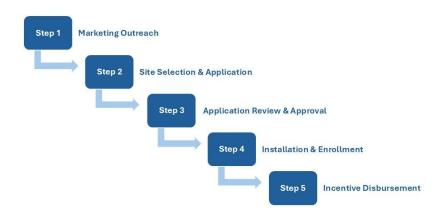
### iii. Application Review & Reservation of Funds

- Applications are reviewed to confirm eligibility and qualifications by the Incentive Administrator.
- Once approved, the Incentive Administrator reserves the necessary funds.
   This ensures the utility has a process to guarantee accountability and timely distribution.
- At this stage, customers are also informed about the next steps for installation and enrollment into the program.

#### iv. Installation, Enrollment, & Disbursement

- The installation process occurs, including key milestones such as site completion and receiving permission to operate.
- Once the installation is complete, the site is enrolled into the DERMs system (managed by EnergyHub).
- The site enrollment is approved via EnergyHub.
- The incentive payment is then disbursed to the applicant.
- Finally, customers typically see reminders and progress through in-app tracking (provided by the battery manufacturer or Energy Service Partner) for the incentive. Once enrolled, all batteries are treated equivalently within the DERMS as part of a single, orchestrated DER fleet.

# **How Customers Access DERP Battery Funds**



# E. Merits of an upfront Incentive Design

Battery Energy Storage Systems (BESS) are essential for improving grid reliability, supporting resilience, and achieving New Orleans' clean energy goals. However, financial barriers continue to hinder widespread adoption, especially among residential and small commercial customers. An upfront incentive tied to deliverable capacity in kilowatts (kW) addresses these challenges by reducing entry costs, fostering rapid enrollment, and driving market growth.

#### 1. Policy Rationale for upfront Incentives

#### **Reducing Financial Barriers:**

- By covering a significant portion of hardware and installation costs upfront, this approach enables participation by customers with limited liquidity.
- In a city like New Orleans, where energy equity and resilience are top priorities, such financial support ensures broader accessibility.

#### **Immediate Market Impact:**

- Upfront incentives create a predictable framework, allowing for faster adoption compared to pay-for-performance (PFP) models, which require ongoing engagement.
- This accelerates the deployment of distributed energy resources (DERs) and helps meet immediate policy objectives.

# **Encouraging Resilience:**

• Significant upfront incentives motivate customers to invest in larger or more capable systems, enhancing resilience during outages and increasing grid dispatch capacity.

# **Administrative Simplicity:**

- A one-time incentive reduces program complexity, streamlining implementation and minimizing administrative overhead.
- This ensures efficient fund use and faster delivery of benefits to participants.

# 2. Policy Rationale for a kW-Deliverable Basis

The kW-deliverable incentive structure is uniquely suited to address the uncertainties and diverse needs of New Orleans' energy storage market. It offers a clear and equitable framework to accommodate variations in system sizes, usage patterns, and participation rates.

#### **Key Benefits of the kW-Deliverable Approach**

#### • Flexibility to Address Market Variability:

By tying the incentive to deliverable kW, the program ensures fair compensation across a spectrum of system sizes and customer contributions. This approach benefits residential customers with smaller systems and institutional users focusing on long-duration resilience by adapting to their specific needs.

#### • Alignment with Dual-Use Systems:

Many battery systems provide dual benefits—supporting utility programs and offering onsite resilience. A kW-based incentive balances these roles by rewarding installations that deliver both grid capacity and onsite resilience, without prioritizing one over the other.

#### • Mitigating Uncertainties in Participation:

Emerging markets often face unpredictable participation patterns. Upfront incentives create a standardized framework that encourages inclusivity and scalability, attracting both early adopters and larger institutional participants. Sophisticated pay-for-performance tariffs, as proposed, complement the upfront design to sustain engagement in the long term.

#### • Strategic Alignment with Policy Goals:

The kW-deliverable model directly supports New Orleans' policy priorities by:

- Expanding grid reliability.
- Enhancing energy equity.
- Addressing resilience needs.
   By incentivizing widespread battery adoption, this model advances the city's broader objectives of building a cleaner and more resilient energy infrastructure.

#### **Design Considerations for Success**

Upfront incentives offer immediate financial support, lowering barriers to entry and accelerating adoption. To ensure program effectiveness:

# • Clarity and Simplicity:

- Design the program to be intuitive for customers, with a straightforward enrollment process (e.g., in-app) that allows for quick application reviews and efficient incentive payments.
- o Centralize compliance tracking under the Incentive Administrator, reducing administrative burdens for Energy Service Partners and the DERMS entity.

### • Single Points of Accountability:

- o Assign technical and process reviews to a single accountable entity.
- Set transparent and strict timelines for key milestones, such as application reviews and enrollment completions.

### • Customer Engagement:

 Provide reminders (e.g., in-app notifications) to ensure customers complete program enrollment, aligning requirements with those already established for the BESS Pilot.

By combining flexibility, fairness, and administrative efficiency, the kW-deliverable incentive structure empowers New Orleans to overcome market challenges, accelerate DER adoption, and meet its energy policy goals.

#### **Examples of Successful Upfront Incentive Programs in Other Markets**

To support the case for an upfront incentive program, the Community Organizations present the following examples, demonstrating the effectiveness of such programs in promoting battery energy storage system (BESS) adoption and meeting grid reliability goals.

#### 1. Duke Energy PowerPair Program

- Provides one-time incentives to residential customers for installing solar-paired BESS and standalone BESS.
- Customers receive \$400 per kilowatt-hour (kWh), up to 13.5 kWh, for a maximum of \$5,400 per home. Solar panel installations earn \$0.36 per watt, up to 10 kW, capped at \$3,600 per home.
- Successfully enrolled over 1,300 customers in North Carolina, proving the effectiveness of upfront financial support in scaling BESS adoption.

#### 2. Xcel Energy Renewable Battery Connect Program

- Offers \$500 per kW of charge rate, capped at 50% of the battery cost. For income-qualified customers, the incentive increases to \$800 per kW, up to 75% of the cost.
- With a \$6.5 million budget over four years, the program's initial 4 MW capacity release in 2022-2023 was quickly reserved, demonstrating high consumer demand.

# 3. Connecticut Energy Storage Solutions Program

- Expanded upfront incentives to \$16,000 for residential customers, up from the previous cap of \$7,500.
- Focuses on enhancing accessibility and adoption, particularly for critical peak demand reduction benefits.

#### 4. San Diego Community Power (SDCP) Solar Battery Savings Program

- o Offers up to \$4,725 per Tesla Powerwall installed.
- With an \$11.47 million budget, over 89.5% of funds have been reserved, showcasing significant homeowner interest in battery storage solutions.

# 5. PSEG Long Island Battery Storage Rewards Program

- o Provides \$250 per kWh of usable battery capacity, capped at \$6,250 per household.
- Requires a commitment to discharging during approximately 10 peak periods per year, aligning participation with grid needs.

#### 6. Eversource New Hampshire Clean Energy Fund

- Offers \$230 per kWh for residential customers (capped at \$3,000) and \$250 per kWh for commercial customers (capped at \$10,000).
- Participants must commit to demand response programs for at least three summer seasons, ensuring their contributions to peak demand reduction.

### 7. Hawaiian Electric Battery Bonus Program

- o Provides a one-time incentive of \$850 per kW of committed capacity for residential customers adding battery storage to rooftop solar systems.
- o Participants also earn a \$5 per kW monthly capacity credit for 10 years.

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 Incentives are tied to a daily two-hour power discharge commitment, aligning financial support with grid reliability needs and successfully accelerating BESS adoption.

These programs highlight how well-designed upfront incentives can reduce financial barriers, drive market adoption, and align customer participation with grid and policy goals.

# II. Phase 1A: Proposed Baseline Upfront Incentive Structure

In Phase 1A, the Parties propose a baseline upfront incentive of \$1,000 per kW for eligible battery sites, contingent on a required minimum three-year enrollment in the Entergy BESS program. The incentive structure includes the following caps per site:

- **Residential:** \$10,000 per site, with a 20% low-income adder incentive to enhance accessibility for underserved communities.
- **Institutional/Small Commercial:** \$300,000 per site, with a special application process to City Council for projects seeking additional support for extended outage backup battery sizes

Both new solar + storage installations and retrofitted storage systems for existing solar arrays would be eligible for the program. Under the recommended incentive parameters, participants would typically receive 30–50% of the cost of purchasing and installing a first-time battery energy storage system.

The remaining cost gap could be covered through various sources, including:

- Customer investment
- **Federal funds** (e.g., tax credits from the standalone storage ITC)
- Tax-equity financing
- Other programs such as Solar for Y'all

This structure is designed to reduce financial barriers, promote widespread adoption, and align with policy goals to improve grid resilience and expand energy equity.

# A. Base Incentive Methodology and Rationale

Battery systems like the Tesla Powerwall and Enphase IQ Battery vary in price, making a standardized per-kW or per-kWh incentive essential to ensure equitable distribution of funds.

To establish a fair and effective base value, the Parties developed a methodology that:

- 1. Aggregates the value of the current pay-for-performance design over a three-year period to calculate an equivalent upfront incentive.
- 2. Compares this incentive to the cost of typical battery systems (e.g., Powerwall and Enphase systems) to estimate what portion of the total cost it would cover.
- 3. Adjusts the incentive to cover approximately 40% of the battery cost in an upfront model, requiring customers to commit to three years of program enrollment.

#### **Key Rules Supporting this Methodology**

#### 1. Three-Year Minimum Enrollment Commitment:

 Customers must commit to a minimum three-year enrollment in the program to qualify for the upfront incentive.

- This approach aligns with the City Council's intention to disburse incentive funds over a three-year period and ensures a smooth transition to a permanent pay-forperformance framework.
- After the three-year enrollment period, participants would transition into Phase 2 of the DERP, which includes a permanent pay-for-performance retail demand response tariff.

This methodology not only simplifies participation but also aligns the incentive structure with the program's long-term objectives of harmonizing upfront incentives with future tariff designs, ensuring sustainability and scalability.

# 2. "Deliverable Capacity" and "Lesser Of" Function Rules to Determine kW Qualifying for the \$/kW Incentive:

"Deliverable Capacity" refers to the continuous power that a battery inverter can discharge to support the grid during a typical grid event. To fairly determine the incentive size while accounting for system hardware constraints, the proposed calculation uses a "Lesser Of" function. This ensures incentives are based on the system's actual deliverable capacity, aligning with standards in other programs designed to mitigate peak demand during two-hour events.

To accommodate operational constraints, the calculation assumes 20% of the battery's capacity is held in reserve, capping deliverable energy at 80%. The incentive is determined using the following formulas:

**Formula A:** Energy capacity in  $[kWh \times 0.8] \div 2$  hours.

**Formula B**: Continuous power output in kW (if it is lower than the result of Formula A).

# **Enphase 5P Example:**

Energy capacity: 5 kWh.

Deliverable Capacity:  $5 \text{ kWh} \times 0.8 \div 2 = 2 \text{ kW}$ 

Inverter limit: 3.84 kW. **Incentive Basis**: 2 kW.

Model Battery Competitor X Example:

Energy capacity: 10.08 kWh

Deliverable Capacity:  $10.08 \times 0.8 \div 2 = 4.32$ 

Inverter limit: 3.84 kW

Incentive Basis implements Lesser Of Rule: 3.84 kW

# **Evaluating How the BESS Pilot Rate Would Compensate Customers as a Three-Year Enrollment Upfront Incentive**

Today, the Entergy New Orleans' Battery Energy Storage System (BESS) Pilot Program offers annual pay-for-performance kW-delivered incentives to encourage customer participation in demand response events with an annually administered dollar cap for each eligible customer class. Incentive payments are calculated based on participation in demand response events during the season for Residential customers at the rate of \$125/average kW - delivered across all events, with a \$600 cap per annum. Small commercial participants receive the incentive at a rate of \$250/average kW-delivered across all events capped at \$1,800 per annum. In the case where no events are called during the program year, each customer type will receive the full participation incentive amount that they qualify for based on their system's kW registered size. Therefore, the customer earns the incentive either by enrolling and engaging in dispatches to receive the benefit at the end of the program year or simply by enrolling and being available even if no dispatches occur. Therefore from a parity perspective, our methodology intends to obligate customers to enroll in the BESS Pilot for three years in exchange for an upfront incentive that covers at least ~40% of the hardware cost of the battery in exchange for 3 years of participation in ENO's programs.

If the pay-for-performance value today were simply applied over a 3-year period as an upfront incentive, it would undermine cost recovery of residential battery systems compared to small commercial /institutional on a per KW basis. For a residential customer, an upfront incentive on a per KW basis for 3 years would cover only 24% of the hardware cost of one Powerwall 3, or 17.14% of equivalent comparable Enphase IQ Battery 5P - 3 units. For a commercial customer utilizing a Powerwall, the incentive could cover up to 72% of the system cost and for Enphase IQ, 51.42% of the system hardware cost. A differentiated cap in the current ENO BESS Pilot, which produces particularly regressive effects for residential battery investments. This is demonstrated in Example 1 below.

<sup>&</sup>lt;sup>9</sup> Note: these numbers do not account for the bespoke installation costs of these systems in challenging construction environments, particularly the main panel rewire costs of installing the first battery unit. City Council should simultaneously be evaluating during the rollout of this program whether Energy Service Partners can help customers save thousands of dollars with improvements to interconnection service rules, like enabling meter collar disconnects (meter socket adaptors) to be installed in lieu of performing full rip-outs on older construction to accommodate solar and batteries. Tesla Backup Switch is an example of a technology solution that helps reduce installation costs at premises with combined meter mains and other complicated installation needs. *See also*, Comments of ConnectDER to ADER Task Force, Public Utility Commission of Texas (8/29/2024) ("ConnectDER finds that outdated electrical service panels are a major barrier to adoption of resources like solar, electric vehicle charging, and energy storage, all of which are vital components of VPPs. ConnectDER has an interest in improving the accessibility of cost-saving technologies like MSAs [Meter Socket Adaptors] that lead to expanded residential DER adoption"), at <a href="https://interchange.puc.texas.gov/Documents/53911">https://interchange.puc.texas.gov/Documents/53911</a> 89 1423722.PDF.

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Disclaimer: All battery costs stated in this proceeding are indicative prices derived from publicly available information; these costs are assumed for illustrative purposes and do not reflect any confidential pricing or commitments, and unless otherwise specified, costs are in relation to hardware only and do not include labor or installer margins.

Example 1: Comparison of the hardware cost coverage in ENO BESS Pilot and Duke PowerPair program (Implemented as upfront Incentive)

| Customer Rates | Entergy New Orleans   | Duke PowerPair   |
|----------------|---|--|
|                | Incentive Rate for Batteries: \$125 per average kilowatt (kW) delivered during events.  Residential Annual Incentive Cap: \$600 per customer  Commercial Annual Incentive Cap: \$1800 per customer  Comparable 3-Year upfront Incentive:  Residential: \$1,800 max. [A]  Commercial \$5,400 max.[B] | Incentive Rate for Batteries (one-time): \$400 per kilowatthour (kWh) of storage capacity, up to 13.5 kWh, with a maximum incentive of \$5,400 for residential and small commercial. |

| Percent of BESS                                       | Tesla Powerwall 3:   | Tesla Powerwall 3:   |
|---|--|--|
| System Cost<br>Covered by Current<br>Incentive Amount | Assumed Battery Hardware Cost: \$7,500 <sup>10</sup>   | Assumed Battery Hardware Cost: \$7,500   |
|   | Percentage of Cost Covered [A] – Residential Cap: $(\$1,800 \div \$7,500) \times 100 = 24\%$ | Battery Capacity: 13.5 kWh Incentive: 13.5 kWh × \$400/kWh = \$5,400   |
|   | Commercial Customer:   |  |
|   | Percentage of Cost Covered [B] – Commercial Cap: $(\$5,400 \div \$7,500) \times 100 = 72\%$  | Percentage of Cost<br>Covered: (\$5,400 ÷<br>\$7,500) × 100 ≈ 72%  |
|   | Enphase IQ Battery 5P (3 Units for a residential site):                                      | Enphase IQ Battery 10:   |
|   | Assumed Battery Hardware Cost: \$10,500 <sup>11</sup>  | Assumed Battery Hardware<br>Cost: \$10,500   |
|   | Percentage of Cost Covered [A] – Residential Cap: (\$1,800 ÷ \$10,500) × 100 = 17.14%        | Battery Capacity (3 Units): 15 kWh   |
|   | Percentage of Cost Covered [B] – Commercial Cap: (\$5,400 ÷ \$10,500) × 100 = 51.42%         | Incentive: $15 \text{ kWh} \times \$400/\text{kWh} = \$6,000 \text{ (Maxed out at $5,400)}$ Percent of Cost Covered: (\$5,400 ÷ 10,500) × 100 $\approx$ 51.42% |
|   |  | 10,500) × 100 ≈ 51.42%<br>   |

<sup>&</sup>lt;sup>10</sup> Disclaimer: All battery costs stated in this proceeding are indicative prices derived from publicly available information; these costs are assumed for illustrative purposes and do not reflect any confidential pricing or commitments, and unless otherwise specified, costs are in relation to hardware only and do not include labor or installer margins.

<sup>&</sup>lt;sup>11</sup> *Id*.

#### Addressing the Incentive Gap with Higher Compensation

The Parties propose adopting one standardized \$/kW upfront incentive that balances battery cost variability and brings up the middle in terms of what percentage of a battery's cost the incentive could cover. Caps would be higher for commercial sites than for residential to balance funds availability and policy objectives, which should serve a higher cap value to commercial/institutional sites which demonstrate their resilience as a service to their regular user base (like a nursing home) or to community members (like a support shelter for heating, cooling, electric service to the community).

For reference calculations, the Parties utilized the Duke Energy PowerPair program design for simplicity, alignment with similar goals (a one-time disbursement to customers with no repetitive payouts), and rapid uptake of the incentive by customers.

Duke Energy provides **\$400 per kWh incentive**, which corresponds to energy capacity. For a kW-based upfront incentive we utilize Deliverable Capacity and Lesser Of Function rules described above.

#### Calculation

Goals: To align with Duke's program while improving upon Entergy New Orleans' (ENO) existing structure, the Parties propose an upfront **per-kW incentive** that:

- 1. Adapts the Duke PowerPair program's \$400/kWh model by roughly covering 40% of an eligible residential or small commercial BESS cost.
- 2. Substantially increases the ENO residential and commercial incentive value proposition to motivate more battery Program Assets to enroll in the BESS Pilot and maintain participation in successor tariffs.

#### Step 1: Translate \$400/kWh to a kW-based incentive.

- Battery-to-kWh-to-kW Relationship (**key assumptions for incentive calculation**):
  - o Formula A − Tesla PW3

[13.5 kWh x 80%] / 2 = 5.4 kW

Lesser Of Function: The continuous power of the PW 3 inverter is 11.5 kW.

Outcome: 5.4kW is the Basis for the \$/kW incentive. 5.4kW x Total Proposed Incentive/kW = Total Cash Incentive (\$).

o Formula B − Enphase IQ Battery 10

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$$[15 \text{ kWh x } 80\%] / 2 = 6 \text{ kW}$$

The continuous power of the 3 units' inverters is 11.52 kW.

Outcome: 6 kW is the Basis for the \$/kW incentive. 6 kW x Total Proposed Incentive/kW = Total Cash Incentive (\$).

- The Duke upfront incentive of \$400/kWh applied to full capacity and thus provides:
  - o **Powerwall:**  $$400 \times 13.5 \text{ kWh} = $5,400 \text{ (hitting the cap in the Duke Program for residential incentive size)}$
  - Enphase:  $$400 \times 15 \text{ kWh} = $6,000 > \text{Max}$  incentive \$5,400 (maxes out the incentive)
- To match Duke's structure in kW terms (noting a preference for Entergy New Orleans to remunerate based on deliverability of committed capacity to a program in which events may or not be called, but enrollment of committed capacity justifies the incentive, whether upfront or ongoing):
  - o **Powerwall per kW:**  $$5,400 \div 5.4 \text{ kW} = $1,000/\text{kW}$
  - o Enphase per kW:  $$5,400 \div 6 \text{ kW} = $900/\text{kW}$

# <u>Step 2: Adjustments to Entergy upfront Base Incentive to Match Dollar Levels of Duke</u> Incentive

- ENO's current 3-Year Total Incentives if using the ENO BESS Pilot values rolled into a 3-Year program, creates a variable and unstructured maximum upfront value for batteries and is regressive for residential customers because of the far smaller annual caps placed on residential customers' total cash incentive size per year.
  - o Residential:  $$600 \times 3 = $1,800$
  - o Commercial:  $$1,800 \times 3 = $5,400$
  - Current incentives cover:
    - Residential Powerwall Hardware Only Cost:  $$1,800 \div $7,500 = 24\%$
    - Commercial Powerwall Hardware Only Cost:  $\$5,400 \div \$7,500 = 72\%$
    - Residential Enphase Hardware Only Cost (3 Units): \$1,800 ÷ \$10,500 = 17.14%
    - Commercial Enphase Hardware Only:  $$5,400 \div $10,500 = 51.42\%$
- To align with Duke's program and ensure ~40% system cost coverage, the following calculations show a <u>range</u> of how to ensure more equitable cost coverage with an upfront incentive design across residential and commercial battery customers.

• Target 3-Year Incentive: ~ 40% of 1 BESS.

o Powerwall:  $$7,500 \times 40\% = $3,000$ o Enphase:  $$10,500 \times 40\% = $4,200$ 

o Incentive per kW to match 40% target for hardware only (not counting installation costs, which can be up to several thousand dollars on new installs):

**Powerwall:**  $\$3,000 \div 5.4 \text{ kW} = \$555.55/\text{kW}$ 

• Enphase:  $$4,200 \div 6kW = $700/kW$ 

## Step 3: Arrive at Base Standardized Incentive Value

The Parties propose a simplified, single upfront incentive of \$1,000/kW (calculated based on Deliverable Capacity) that does not discriminate between the base value of a battery enrolled at a residential or a small commercial or institutional premise (the Duke program is similarly equitable and agnostic). With a standardized incentive of \$1,000/kW for all participants as a baseline for enrolling in the program, a 5.4 KW battery will earn a \$5,400 upfront incentive (about half the cost of a Tesla Powerwall 3).

### Step 4: Consideration of Program Applicant Caps (on a per-meter basis)

- The Parties propose vendor/OEM/customer-agnostic caps on the program to ensure equitable distribution of the upfront incentive over the three-year Phase 1A/1B period. The proposed caps support equitable fund distribution across residential and small commercial/institutional categories.
- A residential program cap will impact a much larger number of participants, promoting widespread adoption.
- The institutional/small commercial program will target fewer, larger installations, likely maximizing the number of facilities which are capable of providing site-specific resilience benefits and opening their doors to community members during prolonged outages.
- The Parties propose a residential and commercial cap based on the methodologies articulated below.

# **Example 2. Calculation Methodology of Total Enrollment Potential with Proposed Caps**

#### Program Context:

• Total funds allocated for incentives: \$30 million (rounded for convenience)<sup>12</sup>

• Split equally:

Spin equally.

<sup>&</sup>lt;sup>12</sup> Note: The SERI credits allocation of \$32 million is intended to be disbursed in increments of \$10 million per year unless stipulated otherwise by further agreement between the settlement parties. Regardless of this limitation, it would be an important policy consideration for the City to consider reservation of a small portion of funds to manage and administer the program, including marketing, site surveying, low-income applicant support, resilience center applicant support, full-time employee administration functions for the Incentive Administrator processes, etc.

Residential/Homeowners: \$15 millionInstitutional/Commercial: \$15 million

• Disbursed over three years:  $$15M \div 3 \text{ years} = $5M/\text{year}$  for each category.

|                                    | Residential  | Small Commercial / Institutional  |
|------------------------------------|--|---|
| Base<br>Incentive<br>Rate          | <ul> <li>Incentive rate: \$1,000/kW</li> <li>3 Year Enrollment in BESS<br/>Pilot</li> </ul>  | <ul> <li>Incentive rate: \$1,000/kW</li> <li>3 Year Enrollment in BESS<br/>Pilot</li> </ul>   |
| Cap<br>Proposal:                   | <ul> <li>Residential customers:<br/>\$10,000 per site</li> <li>Consider low-income adder<br/>of 20%</li> </ul>   | Commercial/Institutional customers: \$300,000 per site, with special process for larger incentive size applications.  |
| Average<br>System Size<br>Per Site | Examples:  Powerwall 3 + DC Expansion  11.5kW Inverter  27 kWH Energy  27 × .8 / 2 = 10.8kW deliverable × \$1000 = \$10800 (but capped at 10,000 per site)  2 PW 3 Units:  23 kW Inverter  27 kWH Energy | Large commercial and industrial application behind-the-meter batteries typically provide 100–200 kW continuous power.  Smaller sites, however, like Together New Orleans' Community Lighthouse installations, have an average kWH of 81 kWh, and a deliverable capacity (using our formula definition) of 30 kWh (rounded).  At \$1,000/kW, the incentive for a 30 kW facility is \$300,000/site. The Parties propose a \$300,000 nominal cap for small institutional / commercial sites.  Sites seeking a larger allocation should be required to make a demonstrative |

 $27 \times .8 \div 2 = 10.8$ kW deliverable x \$1000 = \$10800 (but capped at \$10,000 per site)

Enphase 5P, 3 units on one residential site

11.52 kW inverter

15 kWh Energy

 $15 \times 8 \div 2 = 12$  kW deliverable  $\times$  \$1000 = \$12,800 (but capped at \$10,000 per site)

the basis for incentive allocation over \$300,000.

Note: Base ITC Rate: 30% of the total installed cost applied:

Example: if a small institutional / commercial site installs a 30 kW battery system costing \$165,000, the base ITC benefit would be \$165,000 x 0.30 = \$49,500 (tax credit)

This benefit is in addition to the \$300,000 incentive available through the DERP proposed program cap. It enables cash-poor sites to participate in resilience solutions.

# Annual Customer Participation

Annual residential budget: \$5M/year

Average incentive: ~\$10,000/customer

Maximum number of customers per year:  $$5,000,000 \div $10,000 =$ **500 customers/year.** 

Residential program will reach 500  $\times$  3 = 1,500 customers over three years.

This covers approximately 5-12 residential outage hours for essential functions at a home that has 2KW of load for lighting, refrigeration, and HVAC and scales back its electricity usage during constraint conditions. Since State of Charge considerations must be factored in, ideally customers are prepared to support home utilization with nearly full batteries

- Annual institutional budget: \$5M/year
- Average incentive: \$300,000 / institutional customer
- Maximum number of institutional customers per year: \$5,000,000 ÷ \$300,000 ≈ 166 customers/year.

Fewer installations of large capacities will result if larger commercial facilities installing BESS sizes closer to 100 kW are motivated to participate. Motivating larger installations prompts sites to install systems capable of multi-day outage support to critical functions determined by City Council to merit larger incentive grants.

| due to solar pairing and program<br>behavior that moves their systems<br>into charging behavior. <sup>13</sup> |  |
|--|--|
|--|--|

# Step 5: Final Recommendation on Cap Sizes and Outage Support Value

- A higher dollar cap for commercial sites ensures that participating institutions can install
  battery systems large enough to maintain critical operations, such as powering HVAC
  systems, refrigeration, lighting, and essential medical equipment, for extended periods
  during grid outages. By targeting a higher cap for these sites, the program aligns with its
  goal of maximizing the resilience and reliability of the energy grid while also supporting
  broader community-focused objectives.
- The cap is set to encourage cost-effective investments in institutional-scale systems. Larger installations benefit from economies of scale, achieving a lower cost per kilowatthour installed compared to smaller systems, noting that smaller systems pay more as a percentage of their investment for installation.
- Larger systems have the capacity to deliver greater benefits to the grid, the Parties believe City Council should consider a special application process to review high-capacity installations which may receive an incentive greater than \$300,000 per site.
- Outage Support Hours Calculation Example: A typical resilience building such as a school or church consumes 50 kW of power during critical operations, such as lighting, HVAC, refrigeration, and essential services. Outage support is calculated by dividing the total Battery Capacity in kWh (600 kWh) by the Average Power Requirement (Power Consumption in kW) (50 kW).

$$Outage\ Support\ Hours = \frac{Battery\ Capacity\ (kWh)}{Power\ Consumption\ (kW)}$$

$$\mbox{Outage Support Hours} = \frac{600 \; \mbox{kWh}}{50 \; \mbox{kW}} = 12 \; \mbox{hours}$$

Assumptions for Outage Support Hours: The building operates essential services only during the outage, such as lighting, HVAC, and critical equipment. Energy consumption is managed to align with the estimated average power demand. This calculation provides a general estimate; actual backup duration may vary based on specific building energy usage patterns and load management during outages.

A City Council special application process for sites seeking incentive reservations over \$300,000 could be required to demonstrate a minimum number of outage support hours, and meet other criteria set by Council, valued as resilience as a service. (See the Parties'

<sup>&</sup>lt;sup>13</sup> See PowerHouse Texas Energy Academy: Battery Backup Duration Exercise, Academic Expert Lecture Syllabus, Arushi Sharma Frank (September 9, 2024), available at <a href="https://arushisharmafrank.substack.com/p/battery-backup-duration-exercise">https://arushisharmafrank.substack.com/p/battery-backup-duration-exercise</a>.

October 2024 Memo to City Council for more information on resilience as a service, which would be a distinct basis for larger incentives over and above the performance incentives capped for participation of dispatchable assets in a virtual power plant/demand response program).

# **B.** Eligibility Criteria for Program Applicants

# Who is a Program Applicant?

A Program Applicant is a party who has ownership rights over the enrollment of the qualifying battery and receives the upfront incentives directly as a result of successful enrollment in the ENO BESS Pilot or its successor programs.

The Program Applicant is responsible for enrolling one or more batteries ("Program Assets<sup>14</sup>") into EnergyHub's platform for the ENO BESS Pilot or its successor programs for a minimum three-year commitment. The tasks of the Program Applicant include certifying Site Eligibility and Program Asset Eligibility criteria, executing bilateral contractual obligations, if any (between the installer-Account Holder, third party-owner-installer, and third party owner-Account Holder) and ensuring compliance over the enrollment period.

# A Program Applicant can include:

#### a. Entergy New Orleans Account Holder:

• An ENO account holder that directly owns and manages the qualifying batteries (Program Assets) at their premises and meets the necessary eligibility criteria for participation in the program.

#### b. Energy Service Partner (ESP):

• A third-party system owner or operator that installs and manages battery systems on behalf of ENO account holders under private agreements. These entities must be pre-qualified by the Incentive Administrator to ensure eligibility and good standing as reputable program participants.

#### **Responsibilities of the Program Applicant**

#### a. Entergy New Orleans Account Holder:

- Must certify that their site and battery assets meet eligibility criteria for the incentive class (Residential or Small Commercial / Institutional).
- Enter into a contractual agreement with ENO or its Program Implementer, EnergyHub, to commit battery assets to a three-year program period.

<sup>&</sup>lt;sup>14</sup> A Program Asset is a battery energy storage system under 300 kW in size that is paired or is intended to be paired as of the date of future Enrollment Confirmation Date with installed solar capacity on a site registered as an Energy New Orleans Account Holder.

#### b. Energy Service Partner (ESP):

- Administer and manage contracted/leased equipment with ENO account holders participating in the program, for example right-of-forfeiture<sup>15</sup> (ROF) terms.
- Ensure proper installation, enrollment, and compliance of battery assets with the BESS Pilot or successor programs.
- Facilitate program compliance on behalf of contracted sites.
- ESPs must report quarterly to the Incentive Administrator on program metrics, including enrollment performance and dispatch reliability. They may have reporting obligations baked into the quarterly reports discussed above for Phase 1B.
- Third-party ownership agreements may span anywhere from 10–25 years, aligning with battery and/or solar-battery hardware installation lifespans. During this time, ESPs manage maintenance, compliance, and program participation on behalf of customers while customers benefit from a no-cost system for resilience. Customers benefit from lower upfront costs, enhanced resilience, and participation in demand response programs without needing direct expertise or management capabilities.
- Note: If an ESP contracts with third-party installer or hardware vendor to provide and install systems, these agreements include various provisions to which the ESP has to eventually certify in the Eligibility Criteria for Program Assets (discussed below):

#### c. Equipment Standards

• Specifies the type and configuration of batteries, inverters, and other hardware that meet program eligibility requirements.

### d. Installation Scope

• Covers system design, permitting, and interconnection with the utility grid.

# e. Warranty & Maintenance

• Ensures that installed systems meet performance and reliability standards over the program period.

<sup>&</sup>lt;sup>15</sup> As ESPs assume responsibility for any ROF penalties due to non-compliance, they shield individual account holders from direct consequences and mitigate "amber flag" issues so that New Orleans participants are not unfairly or unwittingly disenrolled or penalized for inadvertent or erroneous scenarios that are flagged as non-compliance.

Table 4. Examples of ESP and Account Holder Program Applicants<sup>16</sup>

|  | Residential  | Small Commercial/Institutional  |
|--|--|---|
| Entergy<br>New<br>Orleans<br>Account<br>Holder | A homeowner installs a Tesla<br>Powerwall and directly enrolls it<br>in the BESS Pilot to participate<br>in demand response events.<br>They receive the upfront<br>incentive and commit to a three-<br>year program enrollment.  | A small business installs an Enphase IQ battery system to support grid demand response and uses the incentive to offset installation costs. The business owner manages enrollment and ensures compliance  |
| ESP  | Tesla / Sunnova / Posigen:   | Together New Orleans / Get Lit, Stay Lit:   |
|  | Companies partner with homeowners and commercial customers by offering financing or battery installations. They act as ESPs by enrolling customer systems into programs like the BESS Pilot, ensuring customers benefit from demand response payments while the companies administer compliance. | A nonprofit entity partners with multiple small institutional sites (e.g., churches, restaurants) to finance and install battery systems under tax equity arrangements, including elective pay options under the IRA. TNO/GLSL handles all enrollment responsibilities, compliance monitoring, and program benefits. Sites receive no-cost systems and enter long-term contracts with TNO/GLSL to support program participation and resilience goals. |
| ESP  | Enphase Energy:  | Fortress Power, PosiGen, or Sunnova:  |
|  | Enphase facilitates turnkey solutions for solar + storage installations, often with direct integration into VPPs like the BESS Pilot. Enphase ensures seamless enrollment of battery assets into demand response programs through its installers   | These entities partner with or are themselves the local contractors to offer battery solutions to small businesses. As ESPs, these entities oversee installation and ensure systems are compliant, using incentives to provide cost-effective battery installations for energy independence and resilience.   |

<sup>&</sup>lt;sup>16</sup> Company Names/Brand Names used are indicative examples only based on publicly available information; not intended to indicate any commercial representations from any entity nor indicate reliance or commitments of any entity.

| and acts as an ESP for customers unable to manage program compliance directly. |
|--|
|--|

Note: There are several other consecutive terms agreements or provisions that an ESP may execute with various counterparties to enable one or more free batteries for a high number of hard-to-reach customers. For example, in evaluating new institutional/commercial sites (nursing homes as an example) for solar + battery, several companion efforts must be made in conjunction with applying for the upfront incentive to quickly deliver the nursing home site the battery, and ensure the nursing home is protected from burdensome paperwork, liability, or noncompliance consequences over the three-year program commitment term.

# C. Eligibility Criteria for Program Assets

A Program Asset is a battery energy storage system under 300 kW in size that is paired or is intended to be paired as of the date of future Enrollment Confirmation Date with installed solar capacity on a site registered as an Energy New Orleans Account Holder. These criteria ensure that the batteries enrolled in the program meet technical, operational, and performance requirements for integration into Entergy New Orleans' grid and virtual power plant (VPP).

#### a. Technical Standards Compliance

- Batteries must meet grid interconnection standards, such as IEEE 1547, to ensure safe and efficient integration.
- Hardware and software must comply with the aggregator's technical specifications (e.g., EnergyHub API integration).

# b. Battery Size

• Minimum storage capacity of 9 kWh.

### c. Performance Capabilities

- Must support a minimum continuous discharge rate of two hours for peak demand events.
- At larger sites (seeking incentives over \$300,000) backup power capabilities of a substantial minimum duration (*e.g.*, 12 hours at full load; 24 hours at partial load serving critical needs).

#### d. Interconnection and Communication

- Equipment must be capable of bidirectional communication with the EnergyHub platform for real-time monitoring and dispatch.
- Devices must include monitoring hardware compatible with the program administrator's data collection protocols.

#### e. Certification and Warranty

• All program assets must have a minimum 10-year warranty and certification for safety and reliability from a recognized testing authority (e.g. UL 9540).

#### f. Ownership and Control

- Assets must be owned or leased by a Program Applicant who can commit to a three-year enrollment period.
- Batteries owned by an Energy Service Partner (ESP) or directly by a Site
  Owner must be under the respective parties' demonstrable control; control
  must be vested in the Program Applicant party that is seeking the incentive
  (single point of accountability for regulatory compliance rests with the
  Program Applicant).

## g. Resilience Capability

- Institutional batteries should demonstrate the ability to power critical systems during outages, such as HVAC and lighting, for designated resilience sites (e.g., schools, shelters).
- Incentive eligibility over a certain size (we propose a \$300,000 cap, generally providing for a system size of 30 kW) may be tied to a minimum outage hours performance certification in an islanded system mode.

# D. Site Eligibility Criteria

These criteria ensure that customers and locations participating in the program are capable of supporting the installed assets and provide equitable program access.

#### a. Account Holder Status

• The installation site must be an Entergy New Orleans customer with an active utility account in good standing.

#### b. Location Requirements

- Residential sites: Single-family or multifamily residence with a dedicated utility meter serving the premise interconnected to the solar-battery capacity..
- Institutional/small commercial sites: sites on non-residential tariff premises located within ENO's service territory. Eligible tariffs (rate schedules) would

likely include: Small Electric Service (SE-25) rate schedule; Master Metered Non-Residential Service (MMNR-21).

# c. Energy Demand

• Sites must demonstrate a baseline energy demand profile suitable for participation in demand response events (*e.g.*, peak shaving).

# d. Financial Standing

• Participants must be eligible for financing or provide evidence of financial capability for upfront costs not covered by incentives.

#### e. Interconnection Readiness

• Sites must complete necessary interconnection studies to confirm compatibility with ENO's distribution system.

#### f. Resilience Value

- Institutional sites must define public benefits, such as serving as a community resilience hub during emergencies.
- Require mandatory testing of islanding capabilities for institutional sites during commissioning and on an annual basis.
- Incorporate metrics from ConnectedSolutions and similar programs to score applications based on site readiness and anticipated grid benefits.

#### g. Program Awareness

- Applicants must commit to ongoing participation in the program, including annual reporting on performance and adherence to program terms.
- Energy Service Partners are likely to be delegated responsibility from individual customers to facilitate their enrollment compliance in ENO programs.

#### h. Aggregator and Vendor Partnerships

- ESPs must submit documentation proving vendor eligibility and compliance.
- For ESPs managing multiple sites, require submission of a portfolio performance plan.

#### i. Low-to-Moderate Income (LMI) Designation

• Incentive prioritization for sites located in LMI neighborhoods or areas identified with high social vulnerability indexes.

 Provide guidance on covering feasibility study costs through program funds for eligible low-income sites.

Note: For institutional/commercial sites which avail of a larger incentive, there is an opportunity for the City Council to collect a certification statement to reserve funds for the applicant that asks detailed questions about the technical capacities of the site to perform the public service functions it states it can perform with an incentive of the requested size. However, the ultimate validation of preparedness to bring capacity to the program is the same for all participants. Enrollment with EnergyHub and the execution of an agreement to make a certain portion of the site's capacity available for the program is a key metric that will be validated before funds are disbursed.

# **III.** Phase 1B Details – Monitoring and Evaluation

Phase 1B runs concurrent with the Program Phase 1A. Phase 1B serves as the critical bridge to a permanent, evidence-based program that incorporates regulatory certainty and robust evaluation frameworks to support long-term goals. The concurrent operation of Phases 1A and 1B provides a dual focus: immediate implementation and continuous improvement. The objective of this phase of the proposal is to establish a monitoring, reporting, and testbed framework that enables stakeholders to evaluate successes, identify barriers, and ensure the program evolves effectively. This will guide the City Council and stakeholders in crafting a successor tariff or program by Program Year 3.

It is also a critical step to creating the evidence-based framework for a permanent program and for sending a clear regulatory certainty signal to the market to invite more competition from vendors, technology providers to give customers the best opportunities to access the BESS Pilot Program and build quickly.

# A. Monitoring and Reporting Framework

In Phase 1B, Entergy New Orleans and program partners, including the City Council and its contracted Program Administrator, will deliver quarterly reports that increase **Incentive Administrator** and **Program Implementer** capacities to efficiently solicit, prepare, enroll, and pay new customers. The reports will also include Entergy New Orleans findings and trends that speak to work being done to facilitate technical compliance with the program terms and other policies for interconnection and compliance:

- 1. **Track Key Metrics:** Enrollment rates, customer satisfaction, incentive disbursement efficiency, and system performance.
- 2. **Identify Barriers:** Highlight and troubleshoot challenges faced by participants, such as interconnection delays, LMI participation, application issues, or hardware incompatibilities.

3. **Incorporate Feedback:** Provide opportunities for stakeholders to co-review program outcomes and propose mid-course corrections.

# B. VPP Test Criteria Development to Substantive Future Tariff Design

Phase 1B also serves as a testbed period for expanding the scope of VPP functionality (the evidence-based approach needed to substantiate and motivate a higher pay-for-performance tariff that incorporates all BESS Pilot customers to-date and new enrollments). The City Council should work with Entergy New Orleans to develop test criteria that:

- 1. Enable the use of battery resources beyond summer peak demand events, such as:
  - Seasonal peak load support.
  - Voltage and frequency regulation.
  - Emergency grid support.
- 2. Evaluate benchmarks for innovative VPP operations, such as:
  - Ancillary service capabilities.
  - Demand response flexibility.
  - Marginal emissions performance.
- 3. Facilitate a broader demonstration of the grid's ability to integrate distributed energy resources effectively.

# C. Successor Tariff Design Objectives Report

By the end of Phase 1B (Program Year 3), the City Council should commence deliberations on a **pay-for-performance retail demand response tariff.** The new tariff should:

- 1. Fully compensate the value stack of services provided by a distributed solar-battery fleet, including:
  - Local and system peak demand reduction.
  - Demand response and ancillary services (e.g., voltage support).
  - Deferred transmission and distribution upgrades.
  - Marginal emissions reductions.
- 2. Incorporate robust stakeholder engagement, ensuring community priorities are reflected.
- 3. Avoid minimalistic or overly conservative designs that fail to attract widespread participation.

Phase 1B will deliver data-driven insights to inform the design of a sustainable successor tariff; a clear roadmap for expanding VPP functionality to meet grid and community needs; and confidence in the City Council's ability to create programs that benefit ratepayers, advance resilience goals, and maintain fairness for all stakeholders.

# IV. Phase 2 Details – Pay-for-Performance Tariff

Phase 2 transitions the program from upfront incentives to a sustainable, evidence-based **Payfor-Performance (PFP) Retail Demand Response Tariff**. This phase compensates customers for the comprehensive value stack provided by distributed energy resources (DERs), including solar-paired battery energy storage systems (BESS). A proposed compensation model for a Phase 2 Pay-for-Performance Retail Demand Response Tariff envisions long-term engagement and maximizes the value of DERs for all stakeholders.

## **Benefits of the Proposed Model:**

- **Alignment with Energy Delivery:** Directly compensates participants for actual energy supplied during events, promoting active engagement.
- **Encourages Resilience:** Additional incentives for backup capabilities support grid reliability and community preparedness.
- **Flexibility:** Dynamic adjustments accommodate seasonal and emergency needs, enhancing grid stability.

# A. Key Design Principles for Phase 2 Tariff

1. Fully Compensate the Value Stack of the Solar-Paired BESS Fleet Enabled through the BESS Pilot and DERP Phase 1A Rollout.

# Include compensation for:

- Local and system peak demand reduction.
- Ancillary services (e.g., voltage and frequency regulation).
- Deferred transmission and distribution (T&D) upgrades.
- Marginal emissions reductions through tools like WattTime.
- Resilience benefits during outages, especially for institutional sites that certify public use during extended power disruptions.
- **2. Motivate Long-Term Participation:** Align incentives with sustained performance to avoid dropouts after upfront incentives end.
- **3. Promote Equity and Accessibility:** Ensure that all participants, especially those in underserved communities, have access to this tariff through clear eligibility requirements and customer support mechanisms.
- **4. Encourage Technological Innovation:** Allow for future integration of non-battery DERs such as EVs, load-shifting devices, and advanced demand response technologies.

# B. Framework for Tariff Implementation

# 1. Performance Metrics and Compensation Structure:

Participants are compensated based on actual performance during grid events. Example benchmarks could include:

- \$/kWh delivered during demand response events.
- \$/kW of capacity provided during critical peak hours.
- Bonuses for consistent availability and exceptional performance.

#### 2. Incorporating Stakeholder Feedback:

The City Council and Entergy New Orleans should host workshops during Phase 1B to collect stakeholder input on performance benchmarks, compensation models, and customer satisfaction metrics.

#### 3. Standardized Reporting Requirements:

DERMs provider and participants report on availability, dispatch participation rates, and grid performance contributions.

# 4. Evidence-Based Policymaking: Outcomes of Phase 1B

Phase 1B is critical for testing the feasibility and scalability of a performance-based tariff. The objective of Phase 1B and Phase 2 should be to arrive at an ongoing incentive value that provides an equitable baseline for residential and institutional/small commercial customers, and includes adders developed to support additional value streams demonstrated by these sites during the test period.

Metrics collected during Phase 1B will inform the tariff design by highlighting:

- The actual availability and dispatch reliability of enrolled DERs.
- The grid benefits achieved through expanded use of the VPP.
- Customer and aggregator satisfaction with program administration.

# V. Policy Analysis

The Community Organizations' Distributed Energy Resilience Program (DERP) proposal is informed by extensive research in three key areas:

# 1. National Experience with Utility-Administered VPP Programs:

 Lessons learned from launching and operating over a dozen Virtual Power Plant (VPP) programs across the country provide critical insights into best practices and potential pitfalls.

#### 2. Local Experience with ENO and EnergyHub:

 The implementation of the current Battery Storage Demand Response Pilot ("ENO BESS Pilot") by Entergy New Orleans and its DERMS provider, EnergyHub, offers valuable perspectives on program operation and scalability.

#### 3. Feedback on New Orleans-Specific Needs and Challenges:

 Stakeholder input highlights the unique characteristics, needs, and challenges of designing a program that is both scalable and tailored to the city's requirements. TNO / AAE Proposal to Enhance Distributed Energy Resource Programs for New Orleans Docket No. UD-24-02

This research has identified several key policy decisions that merit special attention in this proceeding. These issues include:

- A. Expectations around and Modifications to the Current BESS Pilot Program
- B. Rationale for Utilization of SERI Funds
- C. Selecting an Incentive Administrator
- D. Program Eligibility Criteria for Commercial/Institutional Sites

# A. Expectations Around / Modifications to the Current BESS Pilot

This proposal enhances the long-term viability and meaningful ratepayer benefits of investments already made in ENO's BESS Pilot. The program should remain capable of enrolling customers and providing fair outcomes to ratepayers who choose to share their capacity with the local grid and Entergy New Orleans.

- 1. The Parties emphasize that the DERP proposal is to create more pathways to access one program, not to create multiple programs. The simplicity of the program must include a continuation of PFP design for all customers enrolled in the ENO BESS Pilot via the DERMS program with EnergyHub. Therefore, the existing PFP payment (\$125/kW for residential customers and \$250/kW for commercial customers) should continue to be paid out to existing and new customers. We caution that creating multiple participation compensation approaches, or attempting to bifurcate the customers who enroll through the upfront incentive or otherwise, creates risk and complexity that has proven to stifle participation and market growth in other states and even prevented more competition in hardware availability and installer participation. Additionally, keeping all participants together in one program solves for the reality that the proposed upfront incentive will help pay for hardware, but will not fully cover installation costs which are substantial in New Orleans. Therefore, the current PFP payment of ~\$50/month will help recoup costs for those customers who receive the upfront incentive today. (Today's PFP payment would need to approximately double to fully cover most residential battery hardware + install costs.)
- 2. The \$600 / \$1800 cap on pay-for-performance payments that exists in the current BESS Pilot should be removed so that pay-for-performance opportunity also motivates installation of more solar-paired battery capacity irrespective of how quickly the SERI funds can be disbursed in an upfront incentive program. Removing this cap will not substantially increase payments for customers with one battery, but could incentivize customers to add another. Instead of placing an arbitrary cap on performance motivation, this proposal to cap the per-site upfront equipment incentive serves the public policy goal of creating wide access for hardware subsidization while motivating participants and ENO to maximize utilization. Available energy should be paid for regardless of where it is coming from: there should not be a cap on the PFP incentive payment.

- 3. Installation costs may vary dramatically depending on factors like the quality of certain types of housing or building stock in New Orleans. The Council may consider an incentive structure to accommodate a higher upfront incentive that helps further mitigate installation costs for constructions that demonstrate a need for extra work.
- 4. A 20% low-income adder should be contemplated to help incentivize program participation among households or institutions without access to cash to spend on batteries. Even with the proposed incentives, a funding gap remains, so low-income participation will be negligible unless this problem is directly addressed. A minimum tranche of program spending could be allocated to low-income customers.
- 5. ENO manages a list and program that supports vulnerable populations in New Orleans who require medical devices for health or life support. The Parties to this docket should consider how these customers may be prioritized as participants in the residential BESS program that could provide life-saving energy services.
- Other possible considerations for prioritization should be discussed among the Parties, including residents located on distribution feeders with the lowest SAIDI and SAIFI scores.
- 7. Ultimately, the degree to which the Council can help shrink the final cost of hardware + installations is the degree to which batteries will be equitably distributed around New Orleans and allow all ratepayers to experience the system benefits afforded by solar and battery installations serving dual needs: onsite outage protection, outage resilience, environmental benefits, and peak demand reduction. This proposal provides data, calculations, best practices and justifications for finding a "sweet spot", which future technical conferences and feedback from other parties should help finesse the ultimate program design.
- 8. Any challenges or advantages around the administration and delivery of payments today in the BESS Pilot should be shared with Council and stakeholders to ensure that ratepayer dollars from the SERI credits are being spent to the greatest extent possible on customer hardware acquisition and not on repeating administrative functions or costs that could be rolled into existing marketing, enrollment, compliance verification, and reporting practices in place today as between the DERMs provider and utility. There should be some program fund transfer flexibility built into the business model for administering incentive payments. For example, if within a year, or at another milestone of Council's choosing, it is evident that more residential customers are buying second batteries (as opposed to nursing homes installing first-time solar and batteries), there should be a path to accommodate higher queued demand from residential customers, and, an exploration of how to help institutional sites like nursing homes with barriers to installation or other issues preventing uptake.

#### B. Rationale for Utilization of SERI Funds

System Energy Resources, Inc. ("SERI") is a wholly owned subsidiary of Entergy Corporation which sells power generation from the Grand Gulf Nuclear Station to various public utilities including Entergy New Orleans, LLC, an Entergy Corporation subsidiary delivering electric and

natural gas services in the City of New Orleans under City Council's regulatory authority. On April 18, 2024, Entergy New Orleans and the Advisors<sup>17</sup> entered into an Agreement in Principle ("AIP") to settle the parties' claims and positions in 20 FERC investigation cases. These cases related in whole or in part to rates and charges affecting New Orleans City ratepayers in relation to SERI's accounting, operations, and cost recovery practices, under a FERC formula rate governing SERI's Unit Power Sales Agreement (a cost-based, FERC-jurisdictional formula rate for sales of energy and capacity from SERI to Entergy New Orleans, LLC.) The AIP provides a refund of ratepayer dollars as between SERI and Entergy New Orleans, subject to certain refunds which result in a payment of \$98M, of which \$32 million is earmarked as a credit for customers. Per the AIP, the \$32 million in SERI credits "will be retained by ENO pending further collaboration and direction from the Council. In the event that the Council desires to use more than \$10M of these credits in any given twelve-month period, then CURO, the Council's Advisors and the Company shall collaborate on a mutually agreed to solution considering ENO's financial metrics." The AIP provides for Council to direct the utilization of the \$32 million in SERI credits under a widely discretionary retail ratemaking treatment. In general, the SERI settlement funds represent a restitution of unjustly collected costs borne by Entergy New Orleans customers. Pursuant to the Home Rule Charter, the Council is tasked with ensuring such funds are deployed in ways that maximize public interest and deliver meaningful, long-term benefits to ratepayers. 19

The Community Organizations respectfully submit that the following considerations support the Council's utilization of the SERI credits to fulfill the public policy and fairness objectives of returning the funds in question to ratepayers:

#### 1. Speed of Outcomes – Immediacy in Returning Ratepayer Value:

The SERI settlement funds represent **ratepayer dollars** that were previously overcharged or misallocated over several years. The DERP proposal utilizes in upfront incentive design which is consistently recognized as a fast roll-out program that receives quick uptake when well-administered. The Duke PowerPair program is an example of such an incentive design, and it will ensure direct, immediate benefits to customers by:

<sup>&</sup>lt;sup>17</sup> Resolution No. R-24-194, May 2, 2024, Resolution and Order Approving an Agreement in Principle Related to Litigation at the Federal Energy Regulatory Commission. (2024 AIP Resolution).

<sup>&</sup>lt;sup>18</sup> 2024 AIP Resolution, Exhibit A, Agreement in Principle Regarding Resolution of Certain FERC Matters Relating to SERI.

<sup>&</sup>lt;sup>19</sup> Home Rule Charter, Section 3-130: "The Council shall have the power of supervision, regulation and control over any public utility operating in the City, including the establishment of rates and charges for services rendered to the City and its inhabitants. Home Rule Charter, Section 3-125: "The City of New Orleans may institute or participate in any proceeding affecting the City Council's powers of supervision, regulation and control granted hereunder over public utilities or affecting in any way the interests of the ratepayers of the City of New Orleans, and any recovery or benefit derived from any such proceeding shall be passed on to the ratepayers."

- Enabling households and a variety of non-residential properties to adopt **solar** + **battery systems** at reduced costs.
- Ensuring committed **capacity** (**kW**) is available to reduce peak demand, aligning with Entergy New Orleans' current incentives, serving the City's demand response goals, and increasing distributed resilience and decreasing the likelihood of drastic human health outcomes in outages.

## 2. Incentivizing committed battery capacity – Peak Demand Reduction at Lower Cost:

Entergy New Orleans predicts a capacity shortfall in 2028. Quickly deploying ratepayer funds to leveraged solutions that access private capital and third party financing to bring investment into distributed infrastructure means suppressing rate increases: a large distributed asset fleet curbs the impetus to spend substantially more ratepayer funds on centrally planned build to address incremental peak demand need and costly infrastructure projects needed to deliver peak demand for low single-digit proportions of the grid's yearly operating hours (about than 2% of the time in most cases).

## 3. Equitable Distribution of Benefits:

The recipients of the hardware are not the only parties that stand to benefit. Virtual power plant models relying on dispatchable battery storage will provide peak demand and emergency system demand management services in a matter of seconds, suppressing grid stress issues that challenge system operators in real-time and mitigating costly distribution system outages. These resources power the whole community and create a basis for utilities to invest less in costly centralized infrastructure that all ratepayers fund.

# C. Selecting an Incentive Administrator

The Parties propose that in Phase 1A of the program, running for three Program Years from some time beginning in 2025-26 through 2027-28, an Incentive Administrator will tranche the available funds into three award cycles and disburse the funds to battery owners (Program Applicants) that have successfully enrolled their batteries in the Phase II (and subsequent phases required) of the Entergy New Orleans Battery Storage Demand Response Pilot Program ("BESS Pilot"). The Administrator's primary role is to ensure a seamless integration of enrolled batteries into the existing BESS Pilot via the existing utility-facing DERMS (Program Implementer, or EnergyHub) and to ensure that the Program Applicant is paid the incentive in a timely fashion upon program enrollment success. On the front end, the Incentive Administrator works with Program Applicants to verify eligibility of the site(s) in question, and on the back end, EnergyHub validates for the Incentive Administrator that the site has successfully enrolled — which qualifies the Program Applicant for its payment. The proposal requires that the Incentive Administrator is responsible for designing and carrying the weight of soliciting, educating, enrolling, and ensuring ongoing compliance of Program Applicants who benefit from the upfront

incentive and are obligated under contract to remain enrolled in the Entergy BESS Pilot for the requisite minimum 3-year period.

**Table 5. Comparison of Options for Incentive Administrator** 

| Functional<br>Competence<br>Area   | Considerations  | Incentive<br>Administrator<br>Option A: Entergy<br>New Orleans   | Incentive Administrator Option B:<br>City-Contracted Third Party    |
|--|---|--|---|
| Coordination with Energy Service Partners and Customers (Application Solicitation) | EnergyHub works with partner Energy Service Partners (hardware sellers and operators like Enphase and Tesla) who are able to enroll customers into the program. The administrator of the incentive will need to be in communication with EnergyHub and Energy Service Partners to ensure the life cycle of application to enrollment is efficient and successful. | EnergyHub already has established staff- level relationships with its contracting party Entergy New Orleans. Entergy New Orleans is empowered through EnergyHub to easily add new manufacturers to its integrations to support VPP enrollment from diverse customer systems.  Existing processes for ensuring Energy Service Partners are eligible for the BESS Pilot Phase 2 as it exists today, could be leveraged without much additional implementation cost so that eligibility screening of devices and sites is simplified. | Potentially add complexity but can be mitigated with process rules. |

| Interconnection<br>and Other<br>Technical<br>Validations | Many incentive programs provide funding to cover the costs of feasibility studies, interconnection studies, and other potential barrier-to-entry items.  | Entergy may already have a simple process for ensuring that technical validations and barriers are easily mitigated (and known early in site reviews for eligibility). | A third party administrator may be able to quickly solve for process barrier issues with dedicated attention to each customer, and should be aligned with technical requirements from Entergy. A third party administrator may be able to recommend additional funding or attention quickly to barriers-to-entry issues, allowing the City to act quickly to resolve those issues. |
|--|--|--|--|
| Consultation<br>Capacity Pre-<br>Enrollment              | Initial consultations can provide applicants with understanding of the application process, terms, eligibility, etc. Consultations can also help applicants demonstrate resilience capabilities, navigate coordination with Entergy, etc. Energy Hub has several supported Energy Service Partners – the list should be marketed accurately. | Application information should include refined guidance and requirements for how all parties can market the program.   | Marketing efforts should be shared between relevant parties. Utility can also implement an installer certification program to ensure quality installation.   |
| Ongoing<br>Application<br>Support                        | Application Support includes ensuring customers' third-party partners (Energy Service Partners' contracting around hardware with the customer, applying for the incentive on the customer site's behalf as the system owner, etc.)   | Intake workflows must<br>be designed to vet<br>applications and<br>reserve the incentive;<br>FTE support required.   | May have existing FTE support mechanisms to support intake workflows.  |

| Cost of<br>Administering<br>the Incentive                      | The program will require FTE consideration in either case of operationalizing via a third party City contract or via Entergy. A minimum  | Unclear where and how Entergy would expense this work and resource commitment. Ratepayer (rates impact) likely unless additional SERI funds or another approach   | SERI Funds or an alternative City funding mechanism could support program contractor. No rate increase impact. Direct fiscal control by the City creates accountability around spending and outcomes and speed of incentive delivery and enrollment.  |
|--|--|---|---|
|  | of \$300,000 would be required to set aside to fund a 3-year contract administrator.   | can be designed to remove rates impact.   |   |
| Single Point of<br>Accountability<br>for Program<br>Compliance | Community trust metrics around ENO's administration may be low due to prior issues, potentially undermining program acceptance. The key is to ensure that customers and installers accept the compliance terms of the program to reach enrollment. | Rolling all incentive disbursement work into the BESS Pilot framework of customer support may be possible: however, there will still be a need for a new set of Entergy New Orleans employee resources to manage this program's funds disbursement process (it cannot rely on existing capacities for enrollment in the BESS Pilot. | Community trust metrics around ENO's administration may be low due to prior issues, potentially undermining program acceptance. Third party administration may show independence that is attractive to a large base of potential enrollees and/or their installer/energy service partners.  |
| Incentive<br>Disbursement<br>Accountability                    |  | Entergy benefits from having established billing and disbursement mechanisms, and can leverage its current payment mechanisms via EnergyHub to pay Program Enrollees. Entergy may be able to avoid a new structure. However, Entergy may not be able to pay third party system  | There should be no limitations to utilizing a third party to cut checks/deliver qualified payments, but this process (a seamless approach) should be explored with Entergy New Orleans in this proceeding. One potential solution is to utilize EnergyHub as the funds disbursement entity once the Program Incentive Administrator has checked the boxes on compliance and EnergyHub can validate its successful enrollment. |

| owners who are not    |  |
|-----------------------|--|
| the Customer of       |  |
| Record (Meter ID      |  |
| Addressee) at a site. |  |
| This could            |  |
| substantially         |  |
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|                       | the Customer of<br>Record (Meter ID<br>Addressee) at a site. |

# D. Program Eligibility Criteria for Commercial/Institutional Sites

The DERP Proposal envisions providing application access to a wide variety of small commercial and institutional sites to install behind-the-meter storage systems. The key to enabling a substantial investment in resilience centers of various kinds is to support Program Applicants with requests for advance information that can help the Incentive Administrator make objective decisions about funds reservations based on objective criteria. In the marketing phase of the program, site selection activities from the marketing parties (Energy Service Partners, the utility, the DERMS provider as a support to Partners) should include site education on minimum requirements and generally be agnostic to the primary purpose of the battery's utilization on the site. The \$1000/kW structure necessitates the Program Applicant plan for system purchases and an incentive dollar size that maximizes the value that extra capacity may have for backing up its own facility versus grid-sharing stored energy in a VPP construct.

Per our DERP Proposal, institutional/commercial sites applying for incentives exceeding \$300,000 must submit a resilience justification detailing their role during outages and their capacity to deliver public service benefits. Applications should be reviewed by the City Council or its designated entity.

For all projects, irrespective of whether they seek funding under the cap or over it, along with a description of the planned scope of the system size that the Program Applicant describes as qualifying for the incentive, the Program Applicants could complete a detailed survey and certification statement explaining the public purpose and function of the systems and the capacity to operate these systems in certain conditions. The considerations below suggest distinguishing Program Applicants seeking the commercial/institutional incentive, between those

 $<sup>^{20}</sup>$  Note: For residential applicants, eligibility for the low-income adder should require proof of residence in a designated low-to-moderate-income neighborhood, based on the CDC Social Vulnerability Index or equivalent metrics.

providing essential services for existing occupants and those functioning as resilience centers for the community.

Certification Statement & Survey: Public Purpose and Function Considerations

## 1. General Survey and Certification Statement

Program Applicants must provide:

- a. **System Size and Scope:** Detailed description of the battery system and its kW capacity, modeled outage backup duration hours.
- b. **Primary Purpose:** Explanation of the system's role: backup resilience, commitment to some participation in grid-sharing in normal conditions.
- c. **Public Function Justification**: Describe how the system supports public interest (e.g., community resilience, critical services).

#### 2. Essential Services Centers

For buildings serving existing occupants to maintain critical operations and support occupants during emergencies:

## a. Emergency Operations

- Critical Systems Identification: Identify essential systems that must remain operational (e.g., HVAC, medical, elevators).
- Load Prioritization Plan: Define power priorities for critical loads.
- **Minimum Backup Duration:** Specify required hours/days of system operation.
- **Emergency HVAC Operations:** Plan for climate control during outages.
- **Emergency Lighting Requirements:** Ensure minimum lighting standards are met.
- **Medical Equipment Support:** Outline power requirements for critical medical devices.
- **Elevator Operations Protocol:** Establish procedures for elevator use during emergencies.

# b. Occupant Support

- Emergency Communications Plan: Internal and external communication protocols for staff and occupants.
- Occupant Notification System: Procedures for alerting occupants during activation.
- **Restroom Facilities:** Access and power requirements for restrooms.
- Staff Communication Procedures: Roles and processes for staff updates.

## c. Technical & Maintenance Requirements

- System Monitoring: Continuous monitoring of battery performance.
- Load Shedding Protocols: Procedures for prioritizing and reducing power usage.
- System Testing & Maintenance:
  - Monthly testing schedule.
  - Performance verification and reporting.
  - o Maintenance protocols with documentation.

#### d. Communication & Coordination

- **Utility Coordination Procedures:** Plans for communication with the utility provider.
- **Vendor Support:** Contact list for system maintenance and troubleshooting.
- Emergency Services Liaison: Coordination with first responders.

# 3. Community Hub Requirements

For facilities serving as resilience centers during community-wide emergencies.

#### a. Emergency Access & Operations

- **Public Accessibility:** Ensure the facility is accessible within a 15-minute walking distance.
- **ADA Compliance:** The facility must meet ADA standards.
- Operating Hours:
  - o Minimum hours of operation during emergencies.

#### b. Essential Services Provision

- Climate-Controlled Space: Maintain heating/cooling for occupants.
- **Device Charging Stations:** Provide access to power for phones, medical devices, etc.
- **Potable Water Access:** Availability of drinking water.
- Basic First Aid Supplies: Stock basic medical kits.
- **Restroom Facilities:** Clean, accessible restrooms with sewage and water system functionality support during outages.

#### c. Space Requirements

- **Minimum Square Footage:** Allocate sufficient space per expected occupant.
- **Dedicated Medical Charging Areas:** Separate zones for critical device charging.
- **Rest/Sleeping Areas:** Designate areas for occupants, if applicable.

• Food Preparation/Distribution Capability: Capacity to distribute food or prepare meals.

## d. Emergency Protocols

- Activation Procedures:
  - o Triggers for activation (e.g., grid outage, declared emergency).
  - o Community notification plans.
- Staffing Roles: Clearly defined responsibilities for facility operations.
- Security Procedures: Protocols to ensure safety of occupants and staff.
- **Resource Distribution:** Guidelines for providing supplies, charging access, etc.

## e. Reporting & Accountability

- Emergency Event Documentation:
  - o Number of people served.
  - o Services provided and duration of operation.
  - o Resource utilization and challenges encountered.
- Annual Readiness Reporting:
  - o Staff training records.
  - o Equipment maintenance logs.
  - o Emergency supplies inventory.
  - o Community outreach activities.

# VI. Conclusion: Advancing Distributed Energy Resources for New Orleans' Future

The Community Organizations are pleased to submit this proposal to support and harmonize the objectives outlined in Resolution R-24-62, prioritizing Distributed Energy Resources (DERs) as tools to enhance grid resilience, reduce peak demand, and improve energy access across New Orleans. By adopting an upfront incentive structure, this proposal ensures that residential, small commercial, and institutional customers can meaningfully participate in the DER program, contributing to an equitable and more reliable energy grid.

The proposed \$1,000/kW incentive framework represents a strategic approach to encouraging behind-the-meter battery installations. These batteries serve dual purposes: meeting customers' own resilience needs while strengthening the grid's capacity and stability as part of a virtual power plant (VPP). The proposal aligns with the Council's goals of advancing cost-effective resilience solutions and promoting DER technologies that benefit all ratepayers.

To ensure equitable access, the DERP proposal incorporates a 20% low-income adder for residential customers and a special process to support "resilience as a service." This includes incentives for long-duration backup systems at larger commercial sites serving public purposes, such as critical community infrastructure. These measures aim to extend the benefits of distributed energy storage to all New Orleans communities, fostering a more resilient and inclusive energy system.

By allocating SERI settlement funds to this program, the Council can deliver tangible, meaningful benefits to New Orleans residents while establishing a strong foundation for long-term grid resilience. This represents a prudent and forward-looking investment in the city's energy future, positioning New Orleans as a leader in distributed energy innovation.

Respectfully Submitted,

Together New Orleans & the Alliance for Affordable Energy

# **Before The Council of the City of New Orleans**

Re: Resolution and Order R-24-624 Re: Distributed Energy Resource Program
(Docket No. UD-24-02)

## **CERTIFICATE OF SERVICE**

I do hereby certify that I have, this Dec 20, 2024, served the foregoing correspondence upon all other known parties of this proceeding by electronic mail.

Nathalie Jordi

Together New Orleans

Logan Atkinson Burke

Alliance for Affordable Energy