(A) OVERVIEW

Entergy New Orleans, LLC, is a subsidiary of Entergy Corporation,[1] which serves some of the most impoverished communities in the nation, with approximately 30% of residents living at or below the federal poverty line. Over 50% of the residents of counties and parishes served by Entergy operating companies live in a disadvantaged community (DAC) as identified by either the Disadvantaged Communities Reporter (DCR) developed by the Department of Energy or by the Climate and Economic Justice Screening Tool (CEJST)[2] developed by the White House Council on Environmental Quality. ENO is committed to making investments that improve service to its ~200,000 customers in Orleans Parish while ensuring grid reliability and resiliency during extreme events.

We believe that "community benefit" includes consideration of poverty levels, local-scale energy burden (i.e., the cost of energy, both on a gross basis and relative to household income), and the presence of historically disadvantaged and underrepresented communities when selecting our project sites. Through existing partnerships and relationships with thousands of community partners and stakeholders, Entergy has and will continue to engage with local leaders to maximize the impact of infrastructure funding to benefit DACs and address long-standing inequities. After evaluating potential projects, ENO intentionally selected the proposed New Orleans East (NOE) project site because of the capacity of the project to build resilience and reduce the energy burden in a community where residents are disadvantaged on multiple levels.

NOE is home to more than 72,000 people and large businesses, including Folgers Coffee Co., Faubourg Brewery, and the NASA Michoud Assembly Facility. Almost 90% of the residents of NOE live in a DAC as defined by the DCR and CEJST. The 2019 US Census Bureau reported that 85% of NOE's residents were Black or African American, with Asian residents comprising the second-largest race/ethnic demographic group. The 2020 Asset Limited, Income Constrained, Employed (ALICE) report indicates 65% of NOE residents are below the ALICE threshold, meaning they cannot afford a basic household survival budget that includes food, housing, electricity, and healthcare. This number includes 31% who fall below the federal poverty level. The effects of weather-related disasters exacerbate existing inequalities in communities with demographic profiles that match that of NOE. Hurricane Katrina, which hit New Orleans in August 2005, catastrophically damaged 200,000 homes and displaced more than 800,000 residents of the region. This was especially challenging for residents of NOE. Extreme weather events in the Gulf South will continue to disproportionately impact our most vulnerable customers, many of whom still feel the economic and psychological ripples left by Katrina.

In addition to increasing the resiliency of NOE's energy infrastructure to climate impacts, DOE GRIP funding would offset system restoration costs, which will otherwise be paid for by rate increases on energy-burdened households that cannot afford basic household survival expenses. We will work directly with established community partners and cultivate new partnerships to grow existing initiatives to reduce generational poverty and increase training opportunities for the next generation of skilled energy professionals in the New Orleans East area. DOE GRIP funding presents an opportunity to address equity issues that will help residents of NOE and

[1] Without waiving any rights, the term "Entergy" is used at times herein to individually or collectively reference Entergy Corporation; Entergy Services, LLC; and Entergy New Orleans, LLC, all are separate and distinct entities.
[2] https://screeningtool.geoplatform.gov/

Orleans Parish be better positioned to withstand the impacts of extreme weather events by increasing family wealth and economic stability.

A.1 Scope. The scope of this document describes ENO's approach to engaging and learning from stakeholders and delivering community benefits in conjunction with the proposed DOE GRIP project in NOE. In March 2023, ENO met with ~25 stakeholders from organizations in Orleans Parish, including neighborhood associations, residents, small businesses, labor organizations, nonprofits, and educational institutions that represent DACs in the area. Developing this CBP with community partners helps our community make decisions that will benefit our disadvantaged customers and helps ENO implement those benefits. Here we provide an overview of Entergy's broad approach and prior work engaging with local and regional community partners, delivering benefits to DACs, supporting workforce training, advancing Diversity, Equity, Inclusion, and Accessibility (DEIA) across its organization and how this project contributes to the DOE's Justice40 Goals. A revised CBP incorporating community and stakeholder feedback along with new or updated information, including SMART goals created with community partners, will be developed during Phase 1 of the project period. This process will result in a final CBP outlining Entergy's full plans to deliver community benefits in conjunction with the detailed design and implementation of hardening activities at our NOE GRIP site.

(B) Community and Labor Engagement

B.1 Community Engagement. ENO has always been intentional about outreach to communities near project sites. In August 2022, ENO hosted its first Energy Fair, attended by 150 customers. This was ENO's initial engagement with NOE customers on its resilience plan and provided a forum where community members could provide input on the kinds of resilience projects they want to see in their neighborhoods. We visually presented examples of various resilience projects, including a solar farm, and line hardening projects, with an ENO employee describing each type of project and how it increased resiliency. As another example of our intentional community engagement, ENO representatives participated in the Eastern New Orleans Neighborhood Advisory Committee's (ENONAC) March 2023 meeting to discuss the proposed GRIP project, provide updates on the DOE grant process, and solicit the committee's feedback. These initial conversations laid the groundwork for what is described in this CBP.

(b) (4) [redacted]

Table 1. List of initial CBWG participants	
Name	**Community Involvement**
(b) (4) [redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

In collaboration with the CBWG, **ENO will coordinate three community listening sessions each year** at an ADA-accessible location in NOE to solicit feedback for better understanding the needs of the community, identify unintended impacts of the proposed GRIP project, uncover any gaps in the CBP implementation plan, and identify opportunities for improvement or mitigation. ENO's Supplier Diversity department will work to engage a third-party facilitator to lead these sessions. **ENO will also establish an unrestricted community grant fund** that will be administered by the CBWG. This fund will address self-identified barriers to community resilience that DACs in New Orleans East are facing. Funds are also available to enhance community participation in listening sessions, and may facilitate, e.g., transportation, interpreters, free onsite childcare, or other efforts during the GRIP award period. The CBWG will review community feedback and recommend adjustments to CBP activities as appropriate. The CBWG and community listening sessions, coupled with unrestricted funds, will allow ENO to flexibly respond to needs as they emerge through all stages of the project. **B.2**

Table 2. Initial SMART Milesones and Resources Committed—Community and Labor Engagement Note: One year = one budget period (dates will be finalized when grant is awarded)				
Budget Period	**Action**	**SMART Milestone**	**Metric**	
Yrs 1-5	Create Community Benefit Working Group (CBWG)	CBWG will establish annual grant recommendations, and engage with the community	Membership finalized; quarterly CBWG meetings; provide annual grant recommendations	
Yrs 1-5	A Community Benefit Plan (CBP) grant be established and (b) (4) awarded each year	The CBP grant will award funds annually to address needs identified within the DAC	Grant criteria, review process and award timeline developed; grant funding awarded each year	
Organization/Activity			**Cost/Year**	**Total**
(b) (4) [redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]

(b) (4) [redacted]

[redacted]

B.3 Labor Relationships. ENO has submitted a letter of agreement with the New Orleans Career Center (NOCC) to develop a Workforce Agreement establishing a workforce training program,

which is further discussed in Section C.2. ENO is also working with IBEW to jointly develop and implement a worker training program to support their efforts to build a strong workforce and will support their existing worker training programs in the area to assist them in building a strong workforce. (b) (4) [redacted]

(b) (4) [redacted]

(C) Investing in the American Workforce

The proposed GRIP project will create temporary jobs responsible for fulfilling the infrastructure hardening projects. While we do not expect this project to produce any new long-term jobs, the construction jobs for this contract will provide above-average wages and the project will impact economic development opportunities in DACs where it is located. ENO will use union labor when possible. During project construction, ENO will focus on ensuring all contracted positions will open opportunities for local and diverse contractors to bid on project work.

C.1 ENO's Workforce Culture of Supporting Retention, Job Security, Advancement, and Diversity. ENO has a goal to attract, develop, and retain a high-performing workforce that reflects the rich diversity of the communities we have the privilege to serve. By creating a culture of diversity, inclusion, and belonging, we empower our employees to reach their full potential. We have infused diversity, inclusion, and belonging (DIB) into our hiring policies, practices, and procedures through communication, training, education, and content. (b) (4) [redacted]

[redacted]

While we focus on hiring diverse talent, we recognize the need to retain talent by fostering an engaging culture. Thus, a critical part of our DIB strategy is focused on inclusion and belonging in our culture. One way we measure inclusion and belonging is through our organizational health survey and inclusive climate report addressing DIB performance. (b) (4) [redacted] Entergy will continue to build and expand talent pipelines to connect women and minority candidates with job opportunities for the proposed project.

[redacted]

Table 3. Entergy's Women and Minority Workforce Representation	2018	2021	Increase
(b) (4) [redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

(b) (4) [redacted]

(b) (4) [redacted]

(b) (4) [redacted]

C.2 Workforce Development Opportunities. ENO will support training and career transitions for community members to attract, develop, and retain a high-performing workforce that reflects the rich diversity of New Orleans. ENO is committed to using local hiring resources and partners and is currently working with local non-profits to train workers of all income and skill levels. This commitment is demonstrated through Entergy's partnerships with local technical colleges and non-profits serving disadvantaged communities. (b) (4) [redacted] goals for the proposed GRIP project.

[redacted]

Supporting a diverse talent pipeline. ENO has partnered with organizations such as the New Orleans Job Corps, LA Workforce Commission, Posse Foundation, College Track, and Urban League that support the success of first generation and disadvantaged students from high school through to college. ENO has also created a high school industry exposure internship program called *Know Your Power*. This program empowers students in understanding their strengths and interests while familiarizing them the various functional areas of their local utility company. ENO has also partnered with the **Youth Empowerment Project (YEP)**, which provides mentoring and youth advocacy, adult education and high school equivalency preparation, employment readiness and career exploration, and out-of-school time enrichment programming. In 2022, ENO committed $500,000 to YEP to establish the New Orleans East Opportunity Center, which provides a health clinic, job training, childcare, middle-school, high-school, and high-school equivalency education programs, and after-school programming for kids ages 7 to 17.

(b) (4) [redacted]

[redacted] 2.

(b) (4) [redacted]

Curriculum development. Entergy has demonstrated its commitment to building a robust talent pathway by supporting students at various stages of their lives through membership in the Center for Energy Workforce Development (CEWD), a non-profit consortium of over 120 energy companies, associations, unions, educational institutions, and government entities working in partnership to ensure a skilled, diverse workforce pipeline for the energy industry. (b) (4) [redacted]

(b) (4) [redacted]

that is needed throughout the Greater New Orleans area.

Support for minority-owned businesses and entrepreneurs. (b) (4) [redacted]

[redacted]

[redacted]

C.3 Violations. ENO has not had any violations under the National Labor Relations Act, Fair Labor Standards Act, Occupational Safety and Health Act, Service Contract Act, Davis-Bacon Act, or Title VII of the Civil Rights Act within the last two years.

C.4

Table 4. Initial SMART Milesones and Resources Committed—Investing in the American Workforce
Note: One year = one budget period

Budget Period	Action	SMART Milestone	Metric
(b) (4)	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

	(b) (4) [redacted]	[redacted]	[redacted]	
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]
[redacted]			[redacted]	[redacted]

(D) Diversity, Equity, Inclusion, and Accessibility (DEIA)

Entergy has long been committed to supporting minority, women, and other diverse businesses. In 1987, Entergy became the first electric utility to commit to signing the NAACP's Fair Share Principles. Since then, we have steadily made progress in our work toward helping advance equity for minority business owners. In 2022, Entergy was named to the billion-dollar diversity roundtable in recognition of its achievement in reaching a record $1.3B in spending with diverse firms. We recently received the Innovation Award by Edison Electric Institute for the implementation and execution of a successful program to incentivize prime suppliers to improve their diversity efforts. Entergy's CSR team works closely with our supplier diversity organization to support minority small businesses by partnering with community organizations to train minority business owners on procurement processes and providing volunteers to help minority business owners navigate the process and qualify for local, state, and federal assistance. In 2022, ENO awarded $500,000 in grants to aid minority small business owners who were impacted by Hurricane Ida. It is foundational to ENO's vision to ensure that public and private investments will benefit all communities and provide economic opportunities for environmental justice communities, largely low-income households, and people of color. These efforts will continue for this GRIP project and are described in Table 5.

For this project, ENO will collaborate with community partners to develop a DEIA plan that builds a shared vision of opportunity for workforce pathways for DACs, particularly in good paying jobs and for inclusive and meaningful engagement and collaborative decision-making for shared long-term benefits. DEIA will be integrated across all aspects and stages of project development. The CBWG will participate in developing these goals with input from community members, which will be incorporated into the final CBP.

In 2022, Entergy formed a partnership with the U.S. Business Council for Sustainable Development (USBCSD) to engage HBCU students and professors in discussions, internships, and hands-on learning opportunities focused on decarbonization strategies, including hydrogen, carbon sequestration, energy transition, and nature-based solutions. This partnership is a natural platform for incorporating HBCU involvement in ENO's GRIP applications. **For this project, ENO and USBCSD will strengthen their existing partnership by offering quarterly Grid Resilience Webinars for HBCU students and faculty.** The webinars will be co-hosted by ENO subject matter experts (SMEs) who are designing and implementing DOE GRIP projects. The ENO SMEs will provide presentations for the students on various aspects of the project, from design to

completion stages. Students will learn about the grid resilience project in real-time from the professionals who are implementing it. Insights gleaned from faculty participation can inform curriculum development that prepares students for careers in the energy sector. The workshops will provide an opportunity for students to interact with and make contacts with energy industry professionals that may be beneficial as they begin their careers. The engagement will also provide opportunities for students to learn about internships and employment opportunities with Entergy.

Table 5. Initial SMART Milesones and Resources Committed-DEIA (One year = one budget period)

Budget Period	Action	SMART Milestone	Metric
(b) (4)	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]			[redacted]
[redacted]			[redacted]
[redacted]			[redacted]

(b) (4) [redacted]

(E) Justice40 Initiative

This project contributes to Justice40 Initiative goals by implementing DOE's priorities of, for example, decreasing the energy burden, increasing energy resiliency, and increasing energy-sector job training in disadvantaged communities in New Orleans East (Table 4). Eighty-nine percent of the proposed project's benefits will flow to customers living in an energy-burdened community considered disadvantaged owing to, for example, socioeconomic conditions and direct exposure to climate change impacts. Additionally, these communities experience hardships that are compounded by inequities related to health and housing (Table 5). Hardening power system infrastructure against extreme events will be transformative for these communities on numerous levels.

ENO is committed to working with community organizations to meet its Justice40 goals. Specifically, ENO will partner with the Southern Region Minority Supplier Development Council (SRMSDB) to i) engage labor unions, local governments, tribal entities and other BIPOC stakeholders from DACs; ii) assist ENO with incorporating and measuring supply chain equity business practices into ENO's supply chain; and iii) identify tools to achieve Justice40 goals. (b) (4) [redacted]

[redacted]

[redacted]

Table 6. Justice40 benefits, corresponding project activities, and when benefits are expected to flow to DACs

Justice40 Benefit	GRIP Project Activities	Anticipated Benefit Arrival
(1) Decreased energy burden	• Reduce share of household income spent on energy costs by hardening power lines and installing battery to reduce outage times • Create and distribute energy-saving kits to elementary and middle school students	During and sustained following project completion
(2) Decrease environmental exposure and burden	• Reduce outage times for disadvantaged households during extreme weather events • Decrease the need for emergency generator use, reducing risk of carbon monoxide poisoning • Weatherization to DAC households in New Orleans in partnership with Rebuilding Together New Orleans (see letter)	During and sustained following project completion
(3) Increase in access to low-cost capital	• [redacted]	During and sustained following project completion
(4) Increase in high-quality job creation, clean-energy job pathway, and training	• [redacted]	During and sustained following project completion
(5) Increases in clean-energy enterprise creation and contracting	• [redacted]	Before and during project
(6) Increased energy democracy	• [redacted]	Before and during project
(7) Increased parity in clean energy technology access and adoption	• Battery installation and charging at New Orleans Solar Station creates access and adoption of clean energy technologies • Distributed power generation reduces electricity losses along transmission and distribution system	During and sustained following project completion
(8) Increased energy resilience	• Installation of community microgrid provides full-load bridging power during upstream outages • Hardening of system infrastructure against hurricane winds • [redacted]	Sustained following project completion

E.1 Identification of Disadvantaged Communities. To assess the presence and location of DACs

within the GRIP project site in Port Arthur, two tools were utilized: the DCR developed by the DOE and version 1.0 of the CEJST developed by the CEQ. Any census block identified as disadvantaged by either tool was identified and considered a DAC for the purpose of this CBP. For the GRIP project areas, the CEJST identified the greatest number of DACs, and all census blocks identified as DACs by the DOE's DCR were also identified as DACs by the CEJST. As shown in Figure 1, DACs are located in the census tracts where proposed GRIP project activities will take place. The DCR tool confirms that no tribal communities are located within the GRIP project area.

Table 7. CEJST burden indicators for New Orleans East in the area served by the proposed GRIP project.

CEJST Threshold for Burden	% of NOE residents that reside in a census tract meeting the threshold
> 90th percentile for expected Building Loss Rate (Climate Change)	88.5%
> 90th percentile for share of properties at risk of flooding in 30 years (Climate Change)	100%
> 90th percentile for housing burden (Housing)	64.2%
> 90th percentile for diabetes prevalence (Health)	59.5%

E.2 Anticipated Environmental Impacts. The EJSCREEN tool, an environmental justice (EJ) screening tool developed by the EPA,[3] was utilized to evaluate areas within one-, three-, and 10-mile radius of the proposed GRIP project site. EJSCREEN results indicate that for the communities in closest (<1 mile) proximity to the proposed GRIP project site, the most significant EJ Index values are proximity to Superfund sites, which could pose a risk of hazardous waste exposure and exposure to ozone, which poses a risk of respiratory and other health complications. Both EJ and demographic indices decrease with distance from the GRIP project site, indicating communities nearest to the GRIP project site experience the highest levels of combined environmental and socioeconomic stressors compared to the median community in Louisiana. **While we do not expect GRIP project activities to compound these existing matters, additional evaluation of potential community burdens and stressors, informed by meaningful community engagement**

[3] https://ejscreen.epa.gov/mapper/

through the CBWG, will occur during the development of the final CBP.

Table 8. EJSCREEN results for the GRIP project site (state percentile values)

Radius	Demographic Index	Highest EJ Index Values
1 mile	75%	Ozone (89%), Lead Paint (91%), Superfund Site proximity (80%), Wastewater Discharge (92%)
3 miles	70%	Ozone (90%), Diesel Particulate Matter (82%), Traffic Proximity (76%), Superfund Proximity (77%), Wastewater Discharge (83%)
10 miles	62%	Ozone (87%), Diesel Particulate Matter (86%), Traffic Proximity (89%), Lead Paint (79%), Superfund Proximity (93%)

(b) (4)

(b) (4)			
Budget Period	**Action**	**SMART Milestone**	**Metric**
Yrs 1-5	(b) (4)		
Yrs 1-5			
Yrs 1-5			
Yrs 1-5			
Yrs 1-5			

Organization/Activity	**Cost/Year**	**Total**
(b) (4)		

(b) (4) [redacted]	[redacted]	[redacted]

Line Hardening and Battery Microgrid in New Orleans, LA

Grid Resilience Grant (40101(c))

Technical POC: **Catherine Ranken Ward, Director, Project Management**
(b) (6)
[redacted]

Business POC: **Nyka Scott, Director, Public Affairs**
(b) (6)
[redacted]

Names of all team member organizations: **Entergy New Orleans, LLC**

Names of the senior/key personnel and their organizations:
Catherine Ranken Ward, Director, Project Management
Nyka Scott, Director, Public Affairs

Project Location(s): **New Orleans, Louisiana**

Project Overview

Fig. 1. Entergy New Orleans serves >200k customers (gray area in inset), >48k customers in green project area.

Project Background. Entergy New Orleans, LLC (ENO or the Company) is an electric utility providing electric service to more than 188,000 residential and 20,000 commercial/industrial/governmental customers and gas service to 110,000 customers in Orleans Parish.

ENO intends to make significant investment in line hardening in Disadvantaged Communities (DACs) as quickly as is safely possible and add battery backup, which is expected to reduce the cost and impact of major weather events by reducing the number and duration of outages and the cost of restoration. Over the past four years, ENO has invested more than (b) (4) in critical infrastructure to modernize and improve its electrical grid, which has resiliency benefits as shown in the following table.

[

(b) (4)

]

For 2023, the Company's estimated spending is planned to increase to over (b) (4) not including the work proposed in this grant application, in an effort to improve its transmission and distribution systems with resulting reliability and resiliency benefits for customers.

This proposal is to replace ~97 transmission structures and ~381 distribution structures. (b) (4)

This project reflects our desire to accelerate our resiliency initiatives to enhance our local grid's resiliency against severe weather events. In addition to grid hardening and increasing resilience of energy infrastructure, DOE GRIP funding would allow us to address equity issues that will better position our neighbors in DACs to withstand impacts of weather events by increasing economic stability and mitigating climate change impacts to those in New Orleans East (NOE).

The project, when approved, will quickly move into the scope refinement and project definition phases, when a more detailed scope of work and a detailed project execution plan will be created. Detailed project engineering/design will ensure project readiness prior to construction.

The project will be executed through the Project Delivery group in Capital Projects (aka the Project Management Office, PMO) using a Stage Gate process to develop an effective project execution plan, establish contracting and procurement plans, and safely install facilities. The

group has executed projects since 2014 with excellent performance on cost, schedule, and quality and an average portfolio $500M per year. Multiple members of the team have over 20 years of experience in the utility business and have been with the group since establishment.

This project addresses Topic Area 1, "Grid Resilience Grants," under the Bipartisan Infrastructure Law (BIL) Grid Resilience and Innovation Partnerships (GRIP) Funding Opportunity Announcement (FOA), which seeks to "*support activities that reduce the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfire, and natural disaster.*"

ENO is a subsidiary of Entergy Corporation (NYSE: ETR), a Fortune 500 integrated energy company engaged in electric power production, transmission, and retail distribution operations. Entergy Corporation (Entergy) delivers electricity to three million utility customers through its operating companies in Arkansas, Louisiana, Mississippi, and Texas. Through those companies, Entergy owns and operates one of the cleanest large-scale US power generating fleets, with approximately 26,000 MW of electric generating capacity, including 6,000 MW of zero carbon emission nuclear power. Entergy has approximately 12,000 employees.

The Infrastructure Investment and Jobs Act, also known as the BIL, seeks to support the deployment and expansion of technologies as new load and generation come online and markets move in alignment with a clean and equitable energy economy that achieves zero carbon electricity by 2035. Further, it is noted that deploying projects that "will support a more resilient and reliable grid will be critical."

Project Goal. The goal of this accelerated infrastructure hardening and microgrid project is to provide an innovative, cost-effective, and resilient local grid supporting over 49,000 residential, commercial, and industrial customers, 89% of which live in DACs in NOE. This project will modernize and improve the grid by completing three key tasks. Each task benefits NOE, which has a high proportion of DACs:

- Hardening Transmission (HT): hardening ~97 structures (b) (4) [redacted]
- Hardening Distribution (HD): hardening ~381 structures (b) (4) [redacted]
- Installation of Battery (IB): installation of (b) (4) [redacted]

These combined tasks reduce the likelihood and the consequences of major disruptive events, increasing community and regional resilience. The hardened infrastructure will reduce the likelihood of and the battery backup will reduce the consequences of outages resulting from major weather events. Direct benefits to residents of affected areas of NOE from project investment will include at minimum (1) significantly improved resilience during extreme weather events, with lower expected outage frequency and duration due to electric infrastructure hardening and battery installation, and (2) power during many outages from the battery.

Through this project, ENO intends to make significant investment in these DACs as quickly as is safely possible, which is expected to result in less damage, lower restoration costs, fewer interruptions, and quicker recovery times after major storms.

DOE Funding Impact. DOE funding for this project has four benefits: (1) faster implementation, (2) increased resilience benefits, (3) minimal disruption to beneficiaries, and (4) decreased cost burden to beneficiaries in DACs. ENO's long-term goal is to harden transmission and distribution systems throughout the New Orleans area. (b) (4) [redacted] Without DOE funding, the Gulf Coast will be less equipped to address future risks posed by extreme weather events, which are becoming more frequent, severe, unpredictable, and costly and are disproportionately impacting the Gulf Coast region. Ongoing coastal erosion and land loss is exacerbating the Louisiana coast's exposure to climate risk through the destruction of natural coastal defenses (such as coastal marshes, wetlands, and barrier islands). Louisiana's risk exposure has national and international implications.

Recognizing the devastating impact that large storms can have on the electric grid in New Orleans, ENO's service area is an ideal and necessary location for accelerated infrastructure hardening to bolster electric grid resilience, in particular to further harden the electric grid in New Orleans East and increase resiliency in DACs and other communities during storms.

The project is expected to contribute to more reliable and resilient electrical power to NOE, and DOE funding will have a major impact. It enables a portion of the cost of the proposed hardening to be recovered without increasing rates that residents of NOE in the affected DACs may be challenged to afford. DOE funding prevents any additional future cost burden from this project from being imposed on members of NOE DACs for resilience gains.

With DOE funding:

- This project will be initiated upon receipt of funds, subject to any necessary regulatory approval, and will be accomplished as quickly and safely as possible.
- The benefits of more reliable and resilient electrical power, including a battery backup, will be brought to the New Orleans East community, 89% of whom live in DACs.
- Interrupted outage minutes and storm restoration costs will be reduced.

Without DOE funding:

- Parts of this project may be executed in the future, assuming other projects and unforeseen events such as storms do not change capital-project priorities in light of constraints on ENO's ability to access the capital markets on reasonable terms.
- The battery component of the proposed project may not be implemented, depriving the NOE community of the additive benefit of a reduction in interrupted outage minutes.
- The transmission and distribution structure hardening component of the proposed project will be significantly delayed.

Community Benefits Plan Summary. ENO developed a Community Benefit Plan (CBP) focused on addressing needs and priorities of DACs in NOE. Approximately 89% of NOE residents live in DACs, as defined by the DAC Reporter and Climate and Economic Justice Screening Tool (CEJST); 85% identify as Black or African American. The plan includes significant investments in training disadvantaged high school students and formerly incarcerated people so they are trained and

qualified to fill future jobs, including energy-related jobs and line worker positions. Diversity, Equity, and Inclusion efforts include deepening ENO's partnership with Historically Black Colleges and Universities and implementing a quarterly webinar series that engages students and faculty to hear from ENO experts on green energy topics. This includes a commitment to the Justice40 initiative to ensure that 40% of benefits flow to DACs, including increasing access to low-cost capital for minority-owned businesses and programs to reduce the energy burden. Our plan also includes many partnerships with community organizations and engagement with the International Brotherhood of Electrical Workers to partner on workforce-related efforts.

To support meaningful community engagement, ENO will create a Community Benefit Working Group (CBWG) comprising community leaders and partners to identify and prioritize community needs, host community listening sessions, and ensure that feedback received from the community informs the CBP implementation throughout the project. Additionally, a CBP grant program will provide funds to support gaps identified or emerging needs identified during listening sessions. In its outreach efforts, ENO will ensure the participation and inclusion of community members whose input may not always be sought, with an emphasis on engaging low-income and Black residents living in New Orleans East. ENO will hire dedicated staff to oversee the efforts and financial resources needed to make a measurable impact.

ENO Climate Resiliency Strategy – Extreme Weather. ENO's climate resilience strategy accounts for climate impact and extreme weather patterns. Although ENO has successfully invested in resilience for years, the increasing threat of extreme weather events and transition to a more electrified economy have necessitated a review of the timeline on which ENO must continue to make those investments to position our communities to be ready for future weather events. Because major storm events are occurring more frequently and with more intensity, it is very likely that ENO will incur costs, one way or another, to improve the resilience of the electric system; that is, either it will incur these costs as part of a comprehensive, accelerated plan to improve resilience, or it will incur these and additional costs in the aftermath of major weather events (1) without achieving the same level of resilience and (2) in the face of obstacles and challenges that make it difficult to perform work as efficiently and with the level of management oversight and coordination that is possible if the work is performed during blue-sky conditions. Therefore, in line with input received from stakeholders and as the next step in ENO's ongoing efforts to provide customers with safe, reliable, affordable, and sustainable service, ENO has developed a proposed course of action specifically designed to improve overall electric system resilience through accelerated infrastructure hardening.

Recent experience with severe storm activity requires continued action to address the increasing intensity, frequency, and cost of extreme weather events. From 2005−2017, no hurricanes higher than a Category 2 struck the US. Since 2017, however, eight major hurricanes have made landfall in the contiguous US or Puerto Rico: Harvey (2017), Irma (2017), Maria (2017), Michael (2018), Laura (2020), Zeta (2020), Ida (2021), and Ian (2022). In the past 20 years alone, the US experienced a record-setting number of billion-dollar weather and climate disasters: 22 events

in 2020 and another 20 separate billion-dollar events impacting the nation in 2021.[1] In broader context, the total cost of US billion-dollar disasters over the last five years (2017−2021) is $742.1B, with a five-year annual cost average of $148.4B.[2]

The projects and associated investment ENO has and intends to continue to dedicate to its resiliency efforts represent investment beyond what ENO had already planned in its capital budgets prior to Hurricane Ida. Furthermore, these investments do not fall into the same category as ENO's day-to-day reliability programs. These projects represent a careful, studied approach to enable ENO to accelerate infrastructure hardening, where appropriate, to address the frequency and intensity of storms that pose an increasing threat to the electric system.

ENO has a history of delivering on such efforts with oversight of the New Orleans City Council. In May 2020, for example, ENO brought into service the New Orleans Power Station, adding 128 MW of local generation, facilitated deployment of renewable resources, and played a vital role in recovery from Hurricane Ida. The 20 MW NOSS followed later in 2020, and the Company also has deployed distributed commercial and residential rooftop solar facilities throughout New Orleans. ENO also has made significant investments in transmission lines and substations in New Orleans that have improved ENO's resiliency and ability to reliably serve customers.

Moreover, ENO has invested significantly in its distribution system to modernize and improve the reliability and resiliency of the grid. ENO and stakeholders have worked together on storm hardening. After regulatory approval in 2017, ENO executed a ~$30M storm-hardening plan, which included activities such as pole treatment or replacement, targeted equipment replacement or upgrade, grid sectionalization and automation, and circuit reconfiguration.

ENO uses data-driven, decision-making methodology utilizing sophisticated algorithms to accelerate projects intended to strengthen the New Orleans electric grid. The Storm Resiliency Model ENO is using to identify a set of ENO assets for accelerated hardening considers, among other factors, an asset's likelihood of failure during a major storm and potential project costs and benefits in terms of reducing restoration costs and customer minutes interrupted (CMI).

Project modeling accounts for hurricanes, wind events, and floods. Modeled wind speeds and flood water depths were based on recent hurricanes and historical events with margin added to account for more extreme events due to climate change. Heat and freezing temperatures, drought, and wildfire have not caused major issues for ENO in the past and are not anticipated to be significant issues going forward. Without DOE funding, however, this project will not be able to deliver the benefits, specifically the battery storage system, in the near future.

Technical Description, Innovation, and Impact

Detailed Project Description/Relevance to FOA. The essence of this project [is the combination of hardening transmission towers, replacing distribution poles with higher-wind-rated poles and

[1] Smith, A., 2021 U.S. Billion-Dollar Weather and Climate Disasters in Historical Context, National Oceanic and Atmospheric Administration (1/24/22), at https://www.climate.gov/newsfeatures/blogs/beyonddata/2021-us-billion-dollar-weather-and-climate-disastershistorical?itid=lk_inline_enhanced-template. These costs exclude Hurricane Ian costs.
[2] Ibid.

pole tops (cross arms and insulators), installing a multi-MWh battery capable of high MW load discharge, and charging the battery through a solar station.

The proposed project constitutes an innovative solution to the specific challenges in engineering a cost-effective, reliable, and resilient electrical grid in the face of the severe weather impacting New Orleans and the industrialized Gulf Coast. This proof of concept would set a standard for other utilities and lead to repeatable solutions for other entities, promoting adoption throughout the very much at-risk electric power system in much of the Gulf Coast.

The proposed solution to modernize and improve the grid involves three key tasks, each of which benefits New Orleans East, 89% of whose residents live in DACs:

- Hardening Transmission (HT): hardening ~97 towers (b) (4) [redacted]
- Hardening Distribution (HD): hardening ~381 poles (b) (4) [redacted]
- Installation of Battery (IB): installation of a (b) (4) [redacted]

The proposed project specifically fits into the range of activities, technologies, equipment, and hardening measures eligible for funding (with letter identification from the FOA):

(E) Utility pole management

(H) Use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including (a) microgrids and (b) battery-storage subcomponents

(K) Hardening of power lines, facilities, substations, of other systems

The HT task replaces ~97 towers with a wind design rating <140 mph with towers rated for 150 mph to meet ENO's current wind rating standard for transmission assets in this location which exceeds National Electric Safety Code (NESC) standards. Similarly, the HD task replaces distribution poles with new poles and pole tops (cross arms and insulators) rated for 140 mph winds, which is ENO's current wind rating standard for distribution assets in this location, and meets or exceeds NESC standards. The IB task provides a battery installation capable of a (b) (4) [redacted]. Critical customers include a grocery, an ethnic food market, a fire station, and a sewerage and water board facility providing drainage, sewerage collection, and drinking water. Adding battery backup and upgrading towers and poles will improve resilience of the (b) (4) [redacted] increasing reliability of electric power delivery to the 89% of NOE residents living in DACs as defined by DAC Reporter[3] and the Climate and Economic Justice Screening tool (CEJST).[4]

Grid Outcomes. The proposed work increases grid resilience to the effects of climate change. As

[3] DAC Reporter https://energyjustice.egs.anl.gov/

[4] The Climate and Economic Justice Screening Tool https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

the Environmental Protection Agency (EPA) notes,[5] tropical storms and hurricanes have intensified over the past 20 years as warming oceans provide them with more energy. The EPA also states that hurricane wind speeds and rainfall rates are likely to increase in LA as the climate continues to warm. A National Center for Atmospheric Research study predicts that climate change will lead to fewer but more intense hurricanes in the Gulf of Mexico, with simulations predicting a ~10% increase in cyclone damage potential for the most intense hurricanes.[6] We therefore anticipate that unusual events impacting the project area during the 50-year planning period (which is studied under the model) will be more intense, on average, than those that have affected the area previously. The proposed hardening decreases the probability of service failure in these communities, both from historical and projected patterns.

The devastating impact that hurricanes and large storms can have on the electric grid in New Orleans makes it an ideal and necessary location for additional investment in grid resilience, which is key to improving the livelihood of ENO's customers and communities served, in particular DACs. To that end, ENO is increasing the pace of its resilience investment in its infra-structure to provide the highest level of customer benefits, given the extreme weather events impacting New Orleans and the surrounding region with increased frequency and intensity.

The proposed solution comprises three tasks (HT, HD, IB), described below in detail.

HT Task. The HT task involves hardening ~97 transmission towers to a wind design rating of 150 mph along the [Michoud-Front Street 230 kV] transmission line. A summary of the HT task, which is marked in blue and includes estimated costs and benefits, is shown in **Fig. 2.**

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Fig. 2. Entergy New Orleans: Harden (b) (4)

[5] Yi, Stewart, Bjarnadottir, Hurricaine Risk Asessment of Power Distribution Poles Considering Impacts of Changing Climate, Journal of Infrastructure system 19 (1): 12-24 March 2013,DOI:10.1061/(ASCE)IS.1943-555X.0000108

[6] EPA's Environmental Justice Screening and Mapping Tool. (version 2.1)

Of over 48,000 customers impacted, 42,902 are residential, 4,908 small commercial and industrial, and 376 large commercial and industrial. This project impacts more than 20% of ENO's total residential customer base and over 25% of its commercial and industrial customer base. HT will replace ~97 structures (b) (4)

HD Task. The HD task involves hardening ~381 distribution poles (b) (4) by replacing them with higher-wind-rated poles and pole tops (cross arms and insulators) with a wind design rating of 140 mph. A summary of the HD task, which is marked in blue and includes estimated costs and benefits, is shown in **Fig. 3.**

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Fig. 3. Entergy New Orleans: Harden (b) (4)

HD will involve 8.93 line-miles. Upgrading towers and poles is expected to improve resilience of the (b) (4), increasing reliability of electric power delivery to the high proportion of DACs in NOE, among other communities.

IB Task. The IB task involves installation of a (b) (4) The NOSS can directly charge the battery, potentially extending power availability during an outage. Combining the battery with a solar generating station to charge the battery, along with the hardened grid, would provide the opportunity for increased resiliency to over 1,300 customers during storms. The battery will increase parity in clean energy technology access and adoption in DACs; it will also reduce the load on other parts of the grid and better enable faster restoration of full power to the entire service area. A summary of the IB task, which is marked in blue along with the transmission and distribution lines and includes estimated costs and benefits, is shown in **Fig. 4**.

[

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Fig. 4. Entergy New Orleans: (b) (4)

Feasibility of Deployment. There is no new technology involved with the hardened transmission towers, distribution poles, or pole tops. Battery backup technology is maturing, and Entergy has successfully deployed battery backups in other locations, such as at a generating facility to eliminate the need for multiple diesel generators to start up the gas-turbine generator. Thus, all the types of the work proposed in this project have been done before by ENO or their parent company Entergy. The technology currently exists, and there are no impediments to deploying it on this project. This project will use skilled workers as ENO and Entergy have for similar work elsewhere. Entergy has agreements with multiple firms with the necessary skilled workforce to support distribution and transmission line work. ENO has installed/replaced over 3,000 distribution poles and 45 transmission structures in the last four years and has experience installing battery backups. There are no impediments to infrastructure access as all necessary transportation, water, and electricity are readily available for the project.

Innovation and Impacts vs. Standard Practice. Benefits of the proposed work were estimated using the Storm Resilience Model (SRM) developed by 1898 & Co. as part of a resilience analysis for the area. As part of the SRM, the Storm Impact Model (SIM) estimates impacts of potential electrical power interruptions measured by customer minutes interrupted (CMI) and restoration costs of with future storms. We used 49 unique storm scenarios, each modeled within the SIM to identify system parts most likely to fail given each storm type. The SIM calculates a storm Likelihood of Failure (LOF) score for each asset based on vegetation density around the infrastructure, current structure wind-loading rating versus the desired wind loading, and infrastructure age. The SIM includes a framework that normalizes the three ratings to develop one overall LOF score for all circuit assets. The SIM also calculates the restoration costs and customers impacted by system failures and identifies the damaged portions of the system by modeling the elements that cause failures in the ENO asset base.

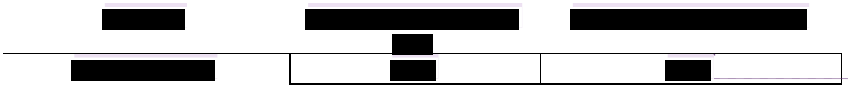
Using the time it would take to restore each protection device or project calculated based on the expected storm duration and the hierarchy of restoration activities, the restoration time is then multiplied by the known customer count to calculate the CMI. In severe hurricanes, a customer can experience outages that last multiple days or even weeks.

New Orleans East is an area with certain assets that the SRM identified and prioritized to further improve resiliency. This area has a high proportion of DACs, and ENO's customers in that location would greatly benefit from the proposed resiliency solution.

The technical components of the project comprise hardening transmission towers, replacing distribution poles with higher-wind-rated poles and pole tops (cross arms and insulators), installing a multi-MWh battery capable of high MW load discharge, and charging the battery via a solar generating station. The proposed project is a solution to the specific challenges in engineering a cost-effective, reliable, and resilient electrical grid in the face of the severe weather impacting New Orleans and the State of Louisiana and the surrounding industrialized Gulf Coast region. This project will set a standard for other utilities in the region and lead to repeatable and scalable solutions for other entities, ensuring rapid adoption of climate resilient energy infrastructure throughout the Gulf Coast.

The battery within the microgrid is able to lower energy costs for customers by discharging during periods of high marginal electricity price in the wholesale market on normal blue-sky days while taking advantage of periods of low electricity prices or the NOSS to charge. This action eliminates the need to dispatch more expensive generation during periods of pricier electricity in the market. This benefits not only the DACs but all customers of the Company by reducing the fuel cost that is reflected in their electricity bills. Benefits obtained from the participation of the battery in the proposed microgrid in the wholesale market are provided in the table below and will be used to offset rate increases to all ratepayers:

(b) (4) [redacted]



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ENO's records show that the average duration of outages over the past several years lasts for fewer hours than the battery will be able to maintain power during island microgrid operations at peak power discharge capability. The battery should, therefore, significantly reduce the duration of outages observed historically for the DACs. ENO intends to work with the CBWG to determine the communication plan and the course of action necessary for members of the community should the microgrid be operating as an island following a storm. ENO believes that this collaboration with the community will enable DACs to have greater insight and participation in recovery efforts after a storm. (b) (4) [redacted] This will add to the amount of time that power can be distributed from the battery to the community during an outage. The technology risk for this project is low, and costs, procedures, deployment timeline, and outcomes can be estimated ahead of time with confidence given that the project tasks are similar to tasks done on other Entergy or ENO projects.

Project Supports Existing Resilience, Decarbonization, or Other Energy Goals. This project aligns with local, state, and national decarbonatization and climate resilience goals. In addition to its

ongoing resiliency efforts, ENO is committed to following the guidance of the state's first-ever Climate Action Plan. Louisiana's Plan contains a set of recommendations to limit the severity of climate change while positioning the state to maintain its economic competitiveness in a low-carbon future. The plan achieves the Governor's goals of reaching net zero greenhouse gas emissions by 2050, putting the state in line with pledges made under the Paris Agreement and by the federal government, 25 other states, and hundreds of companies in the private sector.

The LA Climate Action Plan contains 28 strategies and 84 specific actions to reduce greenhouse gas emissions across the entire state economy. ENO's line hardening and battery solution aligns with specific objectives of the Climate Action Plan[7] by (1) improving health and quality of life for residents and communities, (2) creating a more equitable society, (3) strengthening the economy and workforce, (4) conserving natural resources, and (5) adapting to climate change.

In Louisiana's 2022 annual report, LA demonstrates that action on climate change spurs economic growth. Balancing support for oil and gas with aggressive pursuit of hydrogen, solar, wind, alternative fuels, electric vehicle battery, and CO_2 emissions-reduction projects, LA emerged as a leader in the transition to clean energy even as it reinforces its critical role in the global liquefied natural gas supply chain. Decarbonization, combined with new ideas and established energy workforce and infrastructure advantages, positions LA for long-term economic growth.[8]

Because much of the nation's refined oil and natural gas comes from large refineries in close proximity to New Orleans and the entire industrialized Gulf Coast, the ability to restore power quickly and build and maintain structures that can better withstand devastating hurricanes is vital to the entire region, not just New Orleans.

Potential Impact of Project to Reduce Perceived Risk and Achieve Further Deployment. This project is a comprehensive and consistent approach to resilience that can strengthen the electrical power grid in New Orleans East and throughout the industrialized Gulf Coast, where many other utilities face similar problems. This proof of concept would set a standard and lead to repeatable solutions for other utilities facing similar risks to employ across the Gulf Coast.

As noted previously, these benefits accrue mainly to NOE, which has a high proportion of DACs. Charging(b) (4) [redacted] provides additional benefits of increased parity in clean energy technology access and adoption. ENO's PMO will maintain a risk register as a simple, effective methodology for prioritizing different risks. The risk register will allow each risk to be evaluated and avoided, mitigated, or accepted. The technical risk in the project is low.

(b) (4) [redacted], ENO expects to operate more cost-effectively on a program of this scale and be able [to (a) isolate the project materials for directly planned projects; (b) assure visibility into near- and long-term availability of materials; (c)

[redacted]

[redacted]

[7] Louisiana Climate Action Plan. https://gov.louisiana.gov/assets/docs/CCI-Task-force/CAP/Climate_Action_Plan_FINAL_3.pdf

[8] Louisiana Economic Development Annual Report, 2022.

isolate the project costs from ongoing operations; (d) allow for simpler ramp-up and ramp-down of infrastructure required for project activities; and (e) minimize potential disruptions.]

(b) (4)

[redacted]

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The Project Will Generate Community, Regional, and/or Interregional Resilience. ENO identified DACs in the service areas in figures above per the DAC Reporter.[9] The CEJST map in Fig. 5 clearly shows the high proportion of DACs served by (b) (4)

[redacted]

[redacted]

[

[9] DAC Reporter https://energyjustice.egs.anl.gov/

(b) (4)

Fig. 5. New Orleans East DACs with tract 22071001751 outlined in blue.

(b) (4)

Fig. 6. Proposed project (blue lines and arrows) superimposed on affected DAC.

DOE's FOA (pp. 67–68) identified eight priorities with quantifiable benefits to communities and regions. ENO believes that "an increase in energy resilience including reduced outage frequency and/or duration" is particularly significant as it results in direct benefits to customers who directly benefit from more resilient electrical service following major weather events, with fewer outage minutes and reduced restoration costs. This, in turn, has beneficial ripple effects on the communities in which those customers live and do business.

Table 4 quantifies the estimated benefits of the improved community resilience provided by the proposed project as calculated using the Storm Impact Model.

(b) (4)

[10] The Climate and Economic Justice Screening Tool https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5

[redacted]	(b) (4) [redacted]	[redacted]	[redacted]	[redacted]

As noted previously, these benefits will accrue mainly to NOE, which has a high proportion of DACs, among other communities. (b) (4) [redacted] provides the additional benefit of increased parity in clean energy technology access and adoption.

(b) (4) [redacted]

The hardened distribution and transmission elements are protected from and expected to be unaffected by anticipated flooding and flood debris, negating flooding impact on this project.

Equipment-caused wildfires have not been and are not expected to be a threat to this project area based on experience and projected changes in the climate. The battery equipment will have fire suppression systems built to the UL 9540A and NFPA 855 standards.

How Grant Funding Affects Planned Work. DOE funding is expected to have a major impact on a national imperative. Much of the nation's refined oil and natural gas comes from large refineries located around New Orleans. Further, there are governmental entities in the area such as (b) (4) [redacted] There is also a unique concentration of petrochemical industry production in this region. Thus, the ability to restore power quickly and to build and maintain structures that can better withstand hurricanes is vital to the entire industrialized Gulf Coast, not just New Orleans.

With the funding from DOE serving as a catalyst, ENO can demonstrate a comprehensive and consistent approach to resiliency by combining hardening of transmission and distribution grids with battery backup and solar generator charging to further strengthen the electric grid in the face of increasingly severe weather events. The project mitigates economic risk from outages via the battery backup with four-hour full-load discharge capability. Without DOE funding, the battery component of the project may not be started until much later in this decade, pending New Orleans City Council approval. DACs are disproportionately effected by electricity outages through the costs of spoiled food and medicines, inability to use medical devices (CPAP machines, oxygen concentrators, etc.), as well as the negative health effects of summer heat and humidity or winter cold when the electricity is off line.[11] The battery backup mitigates the more frequent, shorter outages and gives DACs time to respond when a longer outage occurs.

ENO has a history of working with its regulator, the New Orleans City Council, on storm hardening and resiliency efforts. For example, a few years ago, upon Council approval, the Company executed a ~$30M storm hardening plan for New Orleans for pole treatment or replacement, targeted equipment for replacement or upgrade, grid sectionalization and automation, and circuit reconfiguration. Given the recent increase in frequency and intensity of weather events

[11] Casey, J. A., Fukurai, M., Hernandez, D., Balsari, S. Kiang, M. B. V. "Power Outages and Community Health: A Narrative Review." *Current envinronmental health reports vol.7,4 (2020),* https://pubmed.ncbi.nlm.nih.gov/33179170/

and that higher demand is placed on resiliency in even the very recent past, ENO recently filed, consistent with Council direction, a preliminary set of infrastructure hardening projects of approximately $1.3B. These were identified through comprehensive modeling and rigorous analysis, to be implemented over 10 years. The projects are expected to provide significant benefits to customers over many decades in terms of avoided CMI and restoration costs after major weather events. ENO continues to discuss those potential projects, and other resiliency and related issues, at customer and community meetings and continues to work collaboratively with stakeholders to consider, among other things, whether their own ideas and proposals may complement ENO's projects. ENO will soon file, pursuant to a new Council resolution, a recommended set of infrastructure hardening projects for Council consideration and a proposed cost-recovery mechanism and related requests to accelerate ENO's resiliency efforts to foster a system that can better withstand extreme events and avoid or mitigate outages.

As discussed in this application, this project accelerates the work via the additional DOE funding and allows for the "potential" microgrid to become an "actual" microgrid with the addition of the battery backup. DOE funding will add about $54.8M (total) over the next five-year period of performance, nearly all of which will have a direct and meaningful impact to DACs. This work is in addition to the planned work described in the "Report on Resilience Investments."

Workplan

Buy American. As a for-profit entity, ENO is not required to follow Buy America requirements, per DE-FOA-0002740. Based on estimates, all componentry, including but not limited to iron, steel, concrete, polymer, and machinery, will be purchased as much as possible in the US based on ENO's commitment to strengthen the American economy through climate resilience efforts.

Project Objectives: High-level Goals, Objectives, and Outcomes. This project will increase resilience for an area with a high percentage of DACs through the combination of hardening transmission towers, replacing distribution poles with higher-wind-rated poles and pole tops (cross arms and insulators), installing a multi-MWh battery capable of high-MW load discharge, and charging the battery at a nearby solar station. This proof of concept would set a standard for other utilities in the region and lead to repeatable solutions for other entities, ensuring rapid adoption throughout the very much at-risk electric power system in much of the Gulf Coast.

Through this project, ENO intends to make significant investment in DACs as quickly as is safely possible, and add battery backup, all of which is expected to result in less damage, lower restoration costs, fewer interruptions, and quicker recovery times after major storms.

ENO and DOE will share equally in the total estimated cost of $109.6M. The proposed work is supported by the Louisiana Office of Governor John Bel Edwards, who will work with Entergy to ensure alignment with the State of Louisiana's commitment and plans to build a resilient, inclusive, and sustainable economy.

Technical Scope Summary—Minimum of Annual Decision Points. ENO will harden ~97 structures (b) (4) replace ~381 structures in (b) (4) .

The project will be conducted in four budget periods as described below, with more details in

the next section “Work Breakdown Structure and Task Description Summary.”

Budget Period 1: Planning and design: At the end of BP1, Scope and financial estimates will be completed and communicated to Portfolio Management. At this point, 50% of the engineering design for Task 1 and Task 2 will be completed.

Budget Period 2: Conclude detailed design packages, procure materials, and permits, mobilize construction resources, begin construction, and start battery preparation: At the end of BP2, 100% of engineering design will be completed and material procured and staged. (b) (4) [redacted]

Budget Period 3: Complete construction, demobilize, and begin project closeout activities for transmission and distribution hardening and battery (b) (4) [redacted] tested as per specification, and commissioned for operation. (Task 6)

Budget Period 4: Project closeout: At the end of BP4, the Transmission and Distribution Construction will be completed and the system will be fully energized. (Task 7). (b) (4) [redacted]

Budget Period 5: Continuation of Community Benefits: Community benefits will continue through the full 60 period of performance of the grant.

Work Breakdown Structure, Task Description Summary, and Project Schedule

The following tasks will be conducted:

Task 0.0 – Project Management and Planning (All Budget Periods, as required): ENO plans to work with qualified contractors (Alliance Partners) (AP) that will be retained in addition to ENO’s management team. Specifically, ENO plans to use a competitive bidding process among the identified AP to select contractors to perform various aspects of the work, and, if needed, ENO will qualify additional partners to add capacity and execution capabilities. ENO will maintain appropriate project controls in the areas of project safety, cost, and schedule. It will also employ the necessary administrative and technical resources to ensure that project design, quality, and material deliverables are achieved in accordance with the project’s specifications.

Task 0.1 – Kick-Off Meeting (Budget Period 1, Quarter 1): ENO participates in a kick-off meeting with the chosen AP within 30 days of project initiation.

Task 0.2 – National Environmental Policy Act (NEPA) Compliance (All Budget Periods, as required): Recipient shall provide the documentation necessary for NEPA compliance.

Task 0.3 – Continuation Briefing(s) (All Budget Periods, as required): The Recipient will brief DOE on roughly an annual basis to explain the plans, progress, and results of the technical effort. The briefing shall also describe performance relative to project success criteria, milestones, and the Go/No-Go Decision points that are documented in the Project Management Plan (PMP).

Budget Period 1: Planning and Design

Task 1.0 – Hardening Transmission and Distribution:

1.1 Scope development and project planning: Develop the scope of work, estimate, schedule and risk assessment for the selected scope. Quarter (Q) 1

1.2 (b) (4) [redacted]

1.3 [redacted]

Task 2.0 – Battery Energy Storage:

2.1 Scope development and site selection: Develop the scope of work, estimate, schedule. Select the substation and battery install location. Q1-Q2

2.2 (b) (4) [redacted]

2.3 [redacted]

Budget Period 2: Design Completion, Procurement, Permitting and Construction

Task 3.0 – Hardening Transmission and Distribution:

3.1 AP will complete the detailed engineering package. Q1

3.2 Permits (local, federal, railroad, LA Department of Transportation and Development [DOTD], etc.) obtained. Q1-Q2

3.3 Material and supplies procured. Materials will be staged at or near the project locations. Q2-Q3

3.4 Construction to begin:

3.4.1 (b) (4) [redacted]

3.4.2 [redacted]

Task 4.0 – Energy Storage System:

4.1 (b) (4) [redacted]

4.2 [redacted]

Budget Period 3: Construction completion, system operational, and project close-out

Task 5.0 – Hardening Transmission and Distribution:

5.1 (b) (4) [redacted]

5.2 [redacted]

Task 6.0 – Energy Storage System:

6.1 Finalize ESS engineering design package, complete materials procurement and staging for interconnection. Q1

6.2 Complete construction of substation interconnection, conclude civil work and site preparations for battery. Q1

6.3 Install ESS, complete substation interconnection and install microgrid controller. Q2

6.4 System integrated into operational systems and tested. Q3

6.5 Battery operational and commissioned. Q4

6.6 Closing out of associated work orders. BP3 Q4-BP4 Q1]

Budget Period 4: Project Close-out

Task 7.0 – Hardening Transmission and Distribution:

7.1 Continue and complete project close-out activities Q1-Q4]

Task 8.0 – Energy Storage System:

8.1 [(b) (4)

All Budget Periods

Task 9.0 – Community Benefits Plan:

9.1 Create Community Benefit Working Group. (CBWG). BP1Q1

9.2 Engage community and local Businesses. All BPs

9.3 Hold annual high school career fairs. All BPs

9.4 (b) (4)

9.5

9.6

9.7

9.8

9.9

9.10

9.11

Milestone Summary

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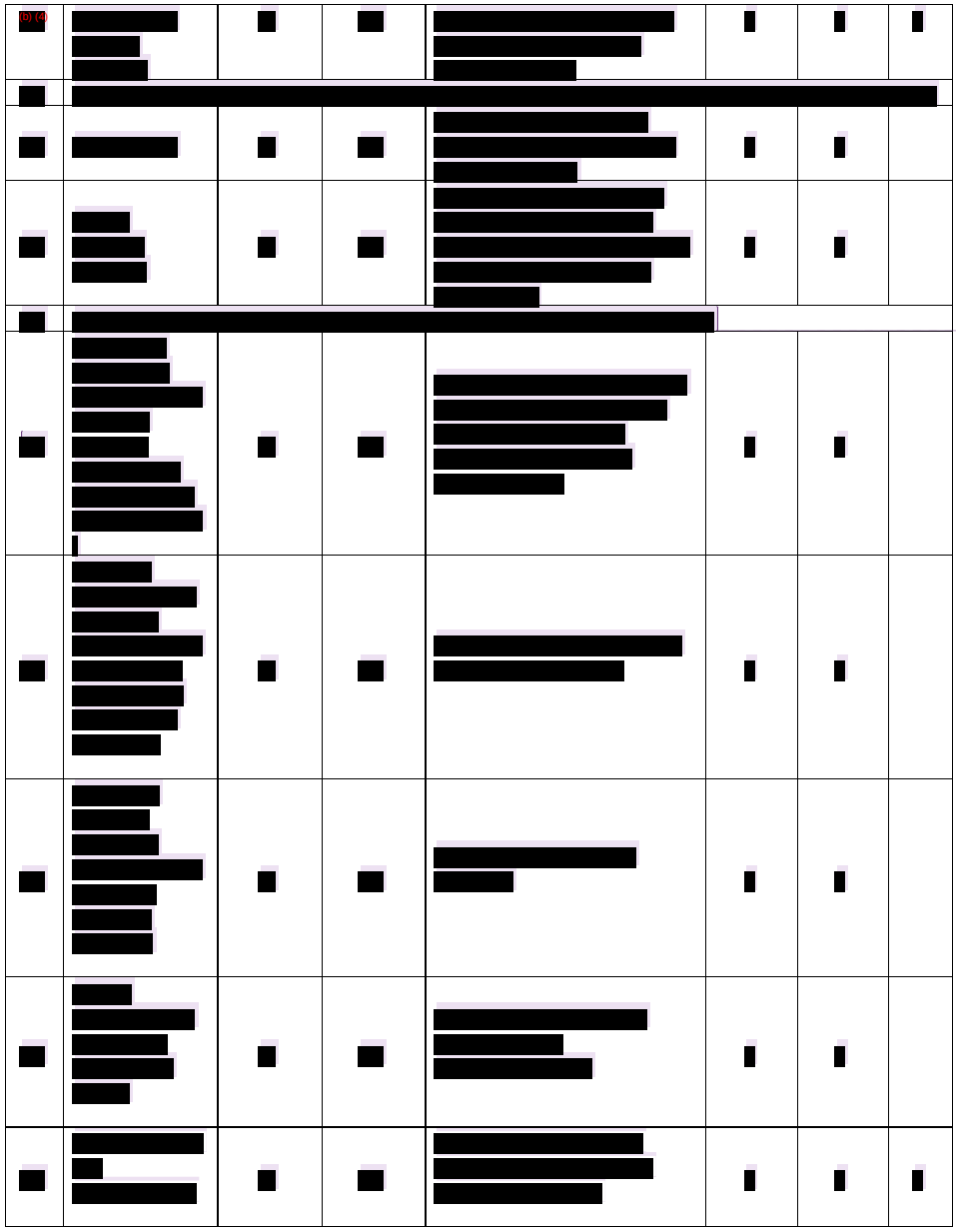
				(b) (4)			



	(b) (4)						

	(b) (4)						

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Go/No Go Decision Points.

(1) DOE grant funding BP1, Q1: If DOE grant funding is received, proceed with project.
(2) Regulatory approval BP1, Q2: If regulatory approvals granted, proceed with project.
(3) Land assessment BP1, Q2: If detailed land assessment verifies viable battery location in area, proceed with project.
(4) Significant material cost escalation or delay BP2, Q3: If material costs escalate by >25% or delivery delayed so that project cannot be completed in 60 months, stop.
(5) Natural disaster (potential delay of project or impact to material availability) at any time during project (BP1-4, all quarters): If natural disaster such as a hurricane or flood delays project or material supply so that it cannot be completed in 60 months, stop.

End of Project Goal. At the end of the project, ENO will have hardened ~97 structures in the [Michoud-Front Street 230 kV transmission line,] hardened ~381 structures in the [Sherwood Forest Distribution Circuit 1601,]installed a battery solution serving more than 1,300 customers at full load for up to four hours that is directly connected to the NOSS for the battery to be charged, and executed a Community Benefits Plan that offers workforce development and distributed community benefits across multiple DACs. The project will result in more climate-resilient infrastructure for New Orleans East residents and businesses.

Project Management Plan. ENO partners with vendors for pole replacement, battery installation, and other aspects of line hardening and microgrid work. There are no significant engineering or permitting obstacles to performing the work. ENO will commence detailed scoping/engineering, permitting, and other essential preliminary activities in the Planning phase and will complete all project activities by the end of the five-year project period.

ENO plans to work with qualified contractors (Alliance Partners) (AP) that will be retained in addition to ENO's management team. [(b) (4)

].

Critical handoffs/interdependencies amongst the project team members will be detailed in the

Project Execution Plan and executed in compliance with Entergy System Policies and Procedures "Entergy Project Delivery Policy" and "Project Delivery Standard."

ENO will hold, at minimum, quarterly project management meetings with key ENO/PMO, vendor, and labor stakeholders.

ENO will, at minimum, collect CMI, line damage, restoration costs, battery performance and lifespan metrics, and feedback from the community. Reports will be delivered to the community and to DOE, as outlined in the Statement of Project Objectives.

ENO will draw upon Entergy's Generation, Transmission, and Distribution capital projects team (the PMO), whose three Project Directors/Managers have 30+ years of large-project experience and have executed more than $3B of programs on or ahead of schedule. The team comprises ~600 qualified professionals in Project Management, Project Controls, Construction Management, and Engineering. The capital project team's approach to project delivery is defined by the tenets of its Implementation Guide (2014), including predictability and certainty of project outcomes—safely deliver high-quality projects on time and on budget, with realistic budgets and baseline schedules from the outset; and accountability for project delivery—establish a clear line of authority throughout the entire project lifecycle, including project governance, oversight, execution, and support. Community and labor disputes are not expected to occur or to have an impact on this project because of execution of the Community Benefits Plan. Project changes, if any, will be addressed through a formal PMO change management process.

The PMO has set up key leading indicators with its partners to manage risks. The tools can be right-sized based on size and complexity of the projects. Listed below are some of the tools and methodologies of how the projects and programs are managed by the team, each of which is based on the size and complexity of the projects.

- **Progress Reporting Metrics.** (b) (4) [redacted] This is reported by partners and also independently reviewed, monitored, quantified, and reported by Entergy to drive a consistent point of view on overall progress.
- **Forensic Schedule Review.** (b) (4) [redacted]
- **Project Metrics/Observations.** (b) (4) [redacted]
- **Dashboard Reporting.** Most of the information listed above is rolled up and presented to executive management in a dashboard to quantitatively review and report performance regarding cost, schedule, key milestones, safety, quality, risks, cash flow, and contingency.

- **Monthly Reporting.** Partners produce a monthly report that illustrates key metrics around schedule, progress, safety, risk, quality, and staffing adherence. The report contains quantitative measures against a baselined plan that is not only monitored by partners but also independently reviewed and validated by Entergy. Entergy produces its own monthly internal report that is shared monthly with executive steering committee.

Technical Qualifications and Resources

Unique Qualifications and Experience of Team. Entergy utilizes a matrix organization with Centers of Excellence in Project Management, Engineering, Construction, Project Controls, and Support Services. The project team will be led by a Manager of Capital Projects as the Project Manager and reports into the Director of Project Management. **Catherine Ranken Ward, Director of Project Management—Capital Projects (20%)** will be overall project manager and principal contact. She has a BS in Civil Engineering (1999) and an MBA (2003), a Six Sigma Blackbelt (2006), and has been certified as a Project Management Professional (PMP) since 2008. Ms. Ward has over 22 years of service with a portfolio of successfully completed projects in distribution and transmission, including large capital projects, design, customer service, operations, continuous improvement, construction, maintenance, and storm response. She currently develops internal and external talent necessary to safely execute a project portfolio with yearly spend of $400–$500M. The key personnel for this project include: **Senior Manager Project Management (Capital Projects) Joshua Francois (50%); Senior Project Manager (Battery) Thomas Martinez (50%); Community Benefits Plan Manager Nyka Scott (25%).**

The Entergy PMO has existed since ~2012 and has executed programs over $3B in size. It consists of ~600 qualified professionals in project management, project controls, construction management, and engineering, with many of the project directors/managers having 30+ years of large electrical project experience.

The PMO has comprehensive standards, guidance, templates, and training when it comes to risk management, which includes robust qualitative and quantitative risk analysis that align with American National Standards Institute standards for project management. (b) (4)

[redacted]

Prior Work with Partners. (b) (4)

[redacted]

2

(b) (4) [redacted]

Existing Equipment and Facilities to Facilitate Project/Justify Any New Equipment or Facilities.

Equipment and Facilities. Project does not require new construction equipment or facilities. ENO and partners have access to equipment and facilities for planning, engineering, and construction. New transmission structures, distribution poles, and battery system will be procured.

Prior Experience. The proposed solution to improve the grid in NOE involves hardening transmission line towers and distribution poles and installation of a 30.8 MWh battery. With many years of experience hardening transmission and distribution lines in preparation for hurricanes, ENO (and Entergy) has experience in hardening both transmission line towers to a wind design rating of 150 mph winds and distribution poles and pole tops (cross arms and insulators) to a wind design rating of 140 mph.

(b) (4) [redacted]

Tech services to be provided by DOE/NNSA FFRDCs. None required.

Other Attachment File(s)

*** Mandatory Other Attachment Filename:** 1234-TechnicalVolume.pdf

Add Mandatory Other Attachment | Delete Mandatory Other Attachment | View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment | Delete Optional Other Attachment | View Optional Other Attachment

Project/Performance Site Location(s)

Project/Performance Site Primary Location

☐ I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: Entergy New Orleans, LLC

UEI: SA8CY7SEKH65

* Street1: (b) (4)

Street2:

* City: New Orleans County:

* State: LA: Louisiana

Province:

* Country: USA: UNITED STATES

* ZIP / Postal Code: 70127-0000 * Project/ Performance Site Congressional District: LA-002

Project/Performance Site Location 1

☐ I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name: Entergy New Orleans, LLC

UEI: SA8CY7SEKH65

* Street1: (b) (4)

Street2:

* City: New Orleans County:

* State: LA: Louisiana

Province:

* Country: USA: UNITED STATES

* ZIP / Postal Code: 70128-0000 * Project/ Performance Site Congressional District: LA-002

Additional Location(s) Add Attachment Delete Attachment View Attachment

OMB Number: 4040-0004
Expiration Date: 11/30/2025

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 04/06/2023

4. Applicant Identifier: DE-FOA-0002740

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Entergy New Orleans, LLC

* b. Employer/Taxpayer Identification Number (EIN/TIN): 82-2212934

* c. UEI: SA8CY7SEKH65

d. Address:

* Street1: 1600 Perdido Street
Street2:
* City: New Orleans
County/Parish:
* State: LA: Louisiana
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 70112-1208

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
* First Name: Nyka
Middle Name:
* Last Name: Scott
Suffix:

Title:

Organizational Affiliation:

* Telephone Number: (b) (6)
Fax Number:

* Email: (b) (6)

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

Q: For-Profit Organization (Other than Small Business)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

National Energy Technology Laboratory

11. Catalog of Federal Domestic Assistance Number:

81.254

CFDA Title:

Grid Infrastructure Deployment and Resilience

*** 12. Funding Opportunity Number:**

DE-FOA-0002740

* Title:

BIL Grid Resilience and Innovation Partnerships (GRIP)

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Line Hardening and Battery Backup in New Orleans, LA

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: LA-002 * b. Program/Project: LA-002

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 01/01/2024 * b. End Date: 12/31/2028

18. Estimated Funding ($):

* a. Federal	54,828,178.00
* b. Applicant	54,828,178.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	109,656,356.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☒ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☐ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Kristen

Middle Name:

* Last Name: Granier

Suffix:

* Title: Director

* Telephone Number: (b) (6) Fax Number:

* Email: (b) (6)

* Signature of Authorized Representative: Kristen Granier * Date Signed: 04/06/2023

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2025

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. 1		$	$	$ (b) (4)	$ [redacted]	$ [redacted]
2. 2				[redacted]	[redacted]	[redacted]
3. 3				[redacted]	[redacted]	[redacted]
4. 4				[redacted]	[redacted]	[redacted]
5. Totals		$	$	$ 54,828,178.05	$ 54,828,178.05	$ 109,656,356.10

Standard Form 424A (Rev. 7- 97)
Prescribed by OMB (Circular A -102) Page 1

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1) 1	(2) 2	(3) 3	(4) 4	Total (5)
a. Personnel	$ [redacted]	$ [redacted]	$ [redacted]	$ [redacted]	$ [redacted]
b. Fringe Benefits	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
c. Travel	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
d. Equipment	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
e. Supplies	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
f. Contractual	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
g. Construction	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
h. Other	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
i. Total Direct Charges (sum of 6a-6h)	[redacted]	[redacted]	[redacted]	[redacted]	$ [redacted]
j. Indirect Charges	[redacted]	[redacted]	[redacted]	[redacted]	$ [redacted]
k. TOTALS (sum of 6i and 6j)	$ [redacted]	$ [redacted]	$ [redacted]	$ [redacted]	$ 109,656,356.11
7. Program Income	$	$	$	$	$

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. 1	$	$	$	$
9. 2				
10. 3				
11. 4				
12. TOTAL (sum of lines 8-11)	$	$	$	$

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$	$	$	$	$
14. Non-Federal	$				
15. TOTAL (sum of lines 13 and 14)	$	$	$	$	$

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)			
	(b)First	(c) Second	(d) Third	(e) Fourth
16. 1	$	$	$	$
17. 2				
18. 3				
19. 4				
20. TOTAL (sum of lines 16 - 19)	$	$	$	$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

OMB Number: 4040-0013
Expiration Date: 02/28/2025

1. * Type of Federal Action:

- [ ] a. contract
- [x] b. grant
- [ ] c. cooperative agreement
- [ ] d. loan
- [ ] e. loan guarantee
- [ ] f. loan insurance

2. * Status of Federal Action:

- [x] a. bid/offer/application
- [ ] b. initial award
- [ ] c. post-award

3. * Report Type:

- [x] a. initial filing
- [ ] b. material change

4. Name and Address of Reporting Entity:

- [x] Prime
- [ ] SubAwardee

** Name:* Entergy New Orleans, LLC

** Street 1:* 1600 Perdido Street *Street 2:*

** City:* New Orleans *State:* LA: Louisiana *Zip:* 70112-1208

Congressional District, if known:

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency:

National Energy Technology Laboratory

7. * Federal Program Name/Description:

Grid Infrastructure Deployment and Resilience

CFDA Number, *if applicable:* 81.254

8. Federal Action Number, *if known:*

9. Award Amount, *if known:*

$

10. a. Name and Address of Lobbying Registrant:

Prefix: ** First Name:* Robert *Middle Name:*

** Last Name:* Hall *Suffix:* III

** Street 1:* 101 Constitution Avenue, NW *Street 2:* Suite 200 East

** City:* Washington *State:* DC: District of Columbia *Zip:* 20001

b. Individual Performing Services (including address if different from No. 10a)

Prefix: ** First Name:* Kristen *Middle Name:*

** Last Name:* Granier *Suffix:*

** Street 1:* 101 Constitution Avenue, MW *Street 2:* Suite 200 East

** City:* Washington *State:* DC: District of Columbia *Zip:* 20001

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

*** Signature:** Kristen Granier

***Name:** *Prefix:* ** First Name:* Kristen *Middle Name:*

** Last Name:* Granier *Suffix:*

Title: **Telephone No.:** **Date:** 04/06/2023

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Standard Form - LLL (Rev. 7-97)

Locations of Work (DE-FOA-0002740)					
Prime or Sub	**Name**	**City**	**State**	**Zip Code + 4**	
Prime	(b) (4) [redacted]	New Orleans	Louisiana	70127-0000	Exemption 4
Prime	(b) (4) [redacted]	New Orleans	Louisiana	70128-0000	Exemption 4

NETL F 451.1-1/3
Revised: 12/3/2014
Reviewed: 12/3/2014
(Previous Editions Obsolete)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

I. INSTRUCTIONS

The proposer shall prepare this Environmental Questionnaire (EQ) as accurately and completely as possible. Supporting information can be provided as attachments. The proposer must identify the location of the project and specifically describe the activities that would occur at that location. The proposer must provide specific information and quantities, regarding air emissions, wastewater discharges, solid wastes, etc., to facilitate the necessary review. In addition, the proposer must submit with this EQ a FINAL copy of the project's statement of work (SOW) or statement of project objective (SOPO) that will be used in the contract/agreement between the proposer and the U.S Department of Energy (DOE).

II. QUESTIONNAIRE

A. PROJECT SUMMARY

1. Solicitation/Project Number: DE-FOA-0002740 Proposer: DOE GDO OCED
2. This Environmental Questionnaire pertains to a: ☒ Recipient or Prime Contractor ☐ Sub-recipient or Subcontractor
3. Principal Investigator: _____ Telephone Number: _____
4. Project Title: Line Hardening and Battery Backup in New Orleans, Louisiana
5. Expected Project Duration: 48 months
6. Location of Activities covered by **this** Environmental Questionnaire: (City/Township, County, State):
   New Orleans, Orleans Parish, Louisiana
7. List the full scope of activities planned (only for the location that is the subject of this Environmental Questionnaire).
   1. Hardening ~97 structures
   2. Hardening ~381 structure
   3. Installation of [redacted]
8. List all other locations where work would be performed by the primary contractor of the project and subcontractor(s). Each of the following must have an individual Environmental Questionnaire.

Subcontractor or sub-recipient	Location of activities for this project

9. Identify and select the checkbox with the predominant project work activities under Group A, B, or C

Group A

☐ Routine administrative, procurement, training, and personnel actions. Contract activities/awards for management support, financial assistance, and technical services in support of agency business, programs, projects, and goals. Literature searches and information gathering, material inventories, property surveys; data analysis, computer modeling, analytical reviews, technical summary, conceptual design, feasibility studies, document preparation, data dissemination, and paper studies. Technical assistance including financial planning, assistance, classroom training, public meetings, management training, survey participation, academic contribution, technical consultation, and stakeholders surveys. Workshop and conference planning, preparation, and implementation which may involve promoting energy efficiency, renewable energy, and energy conservation.

STOP! *If all work activities related to this project can be classified and described within categories under Group A, proceed directly to Section III CERTIFICATION BY PROPOSER. No additional information is required.*
If project work activities are described in either Group(s) B or C; then continue filling out questionnaire.

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

Group B

☐ Laboratory Scale Research, Bench Scale Research, Pilot Scale Research, Proof-of-Concept Scale Research, or Field Test Research. Work DOES NOT involve new building/facilities construction and site excavation/groundbreaking activities. This work typically involves routine operation of existing laboratories, commercial buildings/properties, offices and homes, project test facilities, factories/power plants, vehicles test stands and components, refueling facilities, utility systems, or other existing structures/facilities. Work will NOT involve major change in facilities missions and operations, land use planning, new/modified regulatory/operating permit requirements. Includes work specific to routine DOE Site operations and Lab research work activities, but NOT building construction and site preparation. DOE work typically involves laboratory facilities and lab equipment operations, buildings and grounds management activities; and buildings and facilities maintenance, repairs, reconfiguration, remodeling, equipment use and replacement.

Group C

☑ Pilot Test Facilities Construction, Pilot Scale Research, Field Scale Demonstration, or Commercial Scale Application. Work typically involves facility construction, site preparation/excavation/groundbreaking, and/or demolition. This work would include construction, retrofit, replacement, and/or major modifications of laboratories, test facilities, energy system prototypes, and power generation infrastructure. Work may also involve construction and maintenance of utilities system right-of-ways, roads, vehicle test facilities, commercial buildings/properties, fuel refinery/mixing facilities, refueling facility, power plants, underground wells, and pipelines, and other types of energy research related facilities. This work may require new or modified regulatory permits, environmental sampling and monitoring requirements, master planning, public involvement, and environmental impact review. Includes work specific to DOE Site Operations and Lab operation activities involving building and facilities construction, replacement, decommissioning/demolition, site preparation, land use changes, or change in research facilities mission or operations.

B. PROPOSED PROJECT ALTERNATIVES

1. If applicable, list any project alternatives considered to achieve the project objectives.

C. PROJECT LOCATION

1. Provide a brief description of the project location (physical location, surrounding area, adjacent structures).

(b) (4) [redacted]

2. **Attach** a project site location map of the project work area.

Project map is attached.

D. ENVIRONMENTAL IMPACTS

NEPA procedures require evaluations of possible effects (including land use, energy resource use, natural, historic and cultural resources, and pollutants) from proposed projects on the environment.

1. Land Use

a. Characterize present land use where the proposed project would be located.

☐ Urban	☐ Industrial	☑ Commercial	☐ Agricultural
☑ Suburban	☐ Rural	☑ Residential	☐ Research Facilities
☐ Forest	☐ University Campus	☐ Other: _____	

b. Identify the total size of the facility, structure, or system and what portion would be used for the proposed project.

(b) (4) [redacted]

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

c. Describe planned construction, installation, and/or demolition activities, i.e., roads, utilities system right-of-ways, parking lots, buildings, laboratories, storage tanks, fueling facilities, underground wells, pipelines, or other structures.

☐ No construction would be anticipated for this project.

Installation of (b) (4) [redacted]

d. Describe how land use would be affected by operational activities associated with the proposed project.

☑ No land areas would be affected.

e. Describe any plans to reclaim areas that would be affected by the proposed project.

☑ No land areas would be affected.

f. Would the proposed project affect any unique or unusual landforms (e.g., cliffs, waterfalls, etc.)?

☑ No ☐ Yes (describe)

g. Would the proposed project be located in or near local, state, or federal parks; forests; monuments; scenic waterways; wilderness; recreation facilities; or tribal lands? ☑ No ☐ Yes (describe)

2. Construction Activities and/or Operation

a. Identify project structure(s), power line(s), pipeline(s), utilities system(s), right-of-way(s) or road(s) that will be constructed and clearly mark them on a project site map or topographic map as appropriate. ☑ None

b. Would the proposed project require the construction of waste pits or settling ponds?

☑ No ☐ Yes (describe and identify location, and estimate surface area disturbed)

c. Would the proposed project affect any existing body of water? ☑ No ☐ Yes (describe)

d. Would the proposed project impact a floodplain or wetland? ☑ No ☐ Yes (describe)

No wetlands mitigation assumed based on desktop mapping.

e. Would the proposed project potentially cause runoff/sedimentation/erosion? ☐ No ☑ Yes (describe)

Stormwater run-off may occur during project construction activities. Stormwater best management practices will be deployed and maintained throughout the project construction.

f. Would the proposed project include activities located on perma-frost, near fault zones, or involve fracturing, well drilling, geologic stimulation, sequestration, active seismic data collection, and/or deepwater operations?

☑ No ☐ Yes (describe)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

g. Would the proposed project involve any of the following: nanotechnology; recombinant DNA or genetic engineering; facility decommissioning or disposition of equipment/materials; or management of radioactive wastes/materials?
☑ No ☐ Yes (describe)

3. Biological Resources

a. Identify any State or Federally listed endangered or threatened plant or animal species potentially affected by the proposed project.
☑ None

b. Would any designated critical habitat be affected by the proposed project? ☑ No ☐ Yes (describe)

c. Describe any impacts that construction would have on any other types of sensitive or unique habitats.
☐ No planned construction ☐ No habitats ☑ None ☐ Impact (describe)

d. Would any foreign substances/materials be introduced into ground or surface waters, soil, or other earth/geologic resource because of project activities? How would these foreign substances/materials affect the water, soil, biota, and geologic resources? ☑ No ☐ Yes (describe)

e. Would any migratory animal corridors be impacted or disrupted by the proposed project? ☑ No ☐ Yes (describe)

4. Socioeconomic and Infrastructure Conditions

a. Would local socio-economic changes result from the proposed project? ☐ No ☑ Yes (describe)

DOE funding for this project has four benefits: faster implementation, increased resilience benefits, minimal disruption to beneficiaries, and decreased cost burden to DACs.

b. Would the proposed project generate increased traffic use of roads through local neighborhoods, urban or rural areas?
☑ No ☐ Yes (describe)

However, ENO will evaluate whether road closures or detours are necessary due to construction activities and will effectively communicate to our customers.

c. Would the proposed project require new transportation access (roads, rail, etc.)? Describe location, impacts, costs.
☑ No ☐ Yes (describe)

d. Would the proposed project create a significant increase in local energy usage? ☑ No ☐ Yes (describe)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

5. Historical/Cultural Resources

a. Describe any historical, archaeological, or cultural sites in the vicinity of the proposed project; note any sites included on the National Register of Historic Places. ☑ None

b. Would construction or operational activities planned under the proposed project disturb any historical, archaeological, or cultural sites? ☐ No planned construction ☑ No historic sites ☐ Yes (describe) ☐ No Impact (discuss)

c. Has the State Historic Preservation Office been contacted with regard to this project? ☑ No ☐ Yes (describe)

d. Would the proposed project interfere with visual resources (e.g., eliminate scenic views) or alter the present landscape? ☑ No ☐ Yes (describe)

e. Would the proposed project be located on or adjacent to tribal lands, lands considered to be sacred, or lands used for traditional purposes? Describe any known tribal sensitivities for the proposed project area.

6. Atmospheric Conditions/Air Quality

a. Identify air quality conditions in the immediate vicinity of the proposed project with regard to attainment of National Ambient Air Quality Standards (NAAQS). This information is available under the Green Book Non-Attainment Areas for Criteria Pollutants located at http://www.epa.gov/air/oaqps/greenbk/astuc.html

	Attainment	Non-Attainment
O_3 - 1 Hour	☑	☐
O_3 - 8 Hour	☑	☐
SO_x	☑	☐
PM - 2.5	☑	☐
PM - 10	☑	☐
CO	☑	☐
NO_2	☑	☐
Lead	☑	☐

b. Would proposed project require issuance of new or modified local, state, or federal air permits to perform project related work and activities? ☑ No ☐ Yes (describe)

c. Would the proposed project be in compliance with local and state air quality requirements? ☑ Yes
If not, please explain.

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

d. Would the proposed project be classified as either a New Source or a major modification to an existing source?
☑ No ☐ Yes (describe)

e. What types of air emissions, including fugitive emissions, would be anticipated from the proposed project, and what would be the maximum annual rate of emissions for the project?

	Maximum per Year	Total for Project
☐ SO_x		
☐ NO_x		
☐ PM - 2.5		
☐ PM - 10		
☐ CO		
☐ CO_2		
☐ Lead		
☐ H_2S		
☐ Organic solvent vapors or other volatile organic compounds--List:		
☐ Hazardous air pollutants -- List:		
☐ Other -- List:		
☑ None		

f. Would any types of emission control or particulate collection devices be used?
☑ No ☐ Yes (describe, including collection efficiencies)

g. How would emissions be vented?

No air emissions will be emitted.

7. Hydrologic Conditions/Water Quality

a. What nearby water bodies may be affected by the proposed project? Provide distance(s) from the project site.

No water bodies will be affected.

b. What sources would supply potable and process water for the proposed project?

No potable or process water is needed.

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

c. Quantify the wastewater that would be generated by the proposed project.

		Gallons/day	Gallons/year
☐	Non-contact cooling water		
☐	Process water		
☐	Sanitary		
☐	Other -- describe:		
☑	None		

d. What would be the major components of each type of wastewater (e.g., coal fines)? ☑ No wastewater produced

e. Identify the local treatment facility that would receive wastewater from the proposed project.
☑ No discharges to local treatment facility

f. Describe how wastewater would be collected and treated. ☑ No wastewater produced

g. Would any run-off or leachates be produced from storage piles or waste disposal sites? ☑ No ☐ Yes (describe source)

h. Would project require issuance of new or modified water permits to perform project work or site development activities?
☑ No ☐ Yes (describe)

i. Where would wastewater effluents from the proposed project be discharged? ☑ No wastewater produced

j. Would the proposed project be permitted to discharge effluents into an existing body of water?
☑ No ☐ Yes (describe water use and effluent impact)

k. Would a new or modified National Pollutant Discharge Elimination System (NPDES) permit be required?
☑ No ☐ Yes (describe)

l. Would the proposed project adversely affect the quality or movement of groundwater? ☑ No ☐ Yes (describe)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

m. Would the proposed project require issuance of an Underground Injection Control (UIC) permit?
☑ No ☐ Yes (describe)

n. Would the proposed project be located in or near a wellhead protection area, drinking water protection area, or above a sole source aquifer or underground source of drinking water (USDW)?
☑ No ☐ Yes (describe)

8. Solid and Hazardous Wastes

a. Identify and estimate wastes that would be generated from the project. Solid wastes are defined as any solid, liquid, semi-solid, or contained gaseous material that is discarded, has served its intended purpose, or is a manufacturing or mining by-product (See EPA Municipal Solid Waste and Municipal Solid Waste by State).

	Annual Quantity
☐ **Municipal solid waste (e.g., paper, plastic, etc.)**	
☐ **Coal or coal by-products**	
☐ **Other -- Identify:**	
☐ **Hazardous waste – Identify:**	
☑ **None**	

b. Would project require issuance of new or modified solid waste and/or hazardous waste related permits to perform project work activities? ☑ No ☐ Yes (explain)

c. How and where would solid waste disposal be accomplished?
☑ None generated
☐ On-site (identify and describe location)
☐ Off-site (identify location and describe facility and treatment)

d. How would wastes for disposal be transported?
No waste will be generated

e. Describe hazardous wastes that would be generated, treated, handled, or stored under this project. Hazardous waste information can be found at EPA Hazardous Waste website. ☑ None

f. How would hazardous or toxic waste be collected and stored? ☑ None used or produced

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

g. If hazardous wastes would require off-site disposal, have arrangements been made with a certified TSD (Treatment, Storage, and Disposal) facility?
☑ Not required ☐ Arrangements not yet made ☐ Arrangements made with a certified TSD facility (identify)

9. Health/Safety Factors

a. Identify hazardous or toxic materials that would be used in the proposed project.
☑ None ☐ Hazardous or toxic materials that would be used (identify):

b. Describe the potential impacts of this project's hazardous materials on human health and the environment.
☑ None

c. Would there be any special physical hazards or health risks associated with the project? ☑ No ☐ Yes (describe)

d. Does a worker safety program exist at the location of the proposed project? ☐ No ☑ Yes (describe)
ENO employees and its contractors comply OHSA standards and the Institute of Electrical and Electronics Engineers (IEEE) industry best practices.

e. Would additional safety training be necessary for any new laboratory, equipment, or processes involved with the project?
☑ No ☐ Yes (describe)

f. Describe any increases in ambient noise levels to the public from construction and operational activities.
☐ None ☑ Increase in ambient noise level (describe)
There is potential for a minimal increase in ambient noise during construction.

g. Would project construction result in the removal of natural or other barriers that act as noise screens?
☐ No construction planned ☑ No ☐ Yes (describe)

h. Would hearing protection be required for workers? ☐ No ☑ Yes (describe)
Hearing protection is required during any project where the decibel level exceeds 85.

10. Environmental Restoration and/or Waste Management

a. Would the proposed project include CERCLA removals or similar actions under RCRA or other authorities?
☑ No ☐ Yes (describe)

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

b. Would the proposed project include siting, construction, and operation of temporary pilot-scale waste collection and treatment facilities or pilot-scale waste stabilization and containment facilities? ☑ No ☐ Yes (describe)

c. Would the proposed project involve operations of environmental monitoring and control systems?
☑ No ☐ Yes (describe)

d. Would the proposed project involve siting, construction, operation, or decommissioning of a facility for storing packaged hazardous waste for 90 days or less? ☑ No ☐ Yes (describe)

E. REGULATORY COMPLIANCE

1. For the following laws, describe any existing permits, new or modified permits, manifests, responsible authorities or agencies, contacts, etc., that would be required for the proposed project

a. Resource Conservation and Recovery Act (RCRA): ☑ None ☐ New Required ☐ Modification Required
Describe:

b. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):
☑ None ☐ New Required ☐ Modification Required
Describe:

c. Toxic Substance Control Act (TSCA): ☑ None ☐ New Required ☐ Modification Required
Describe:

d. Clean Water Act (CWA): ☑ None ☐ New Required ☐ Modification Required
Describe:

e. Underground Storage Tank Control Program (UST): ☑ None ☐ New Required ☐ Modification Required
Describe:

f. Underground Injection Control Program (UIC): ☑ None ☐ New Required ☐ Modification Required
Describe:

g. Clean Air Act (CAA): ☑ None ☐ New Required ☐ Modification Required
Describe:

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

h. Endangered Species Act (ESA): ☑ None ☐ New Required ☐ Modification Required
Describe:

Based upon the US Fish & Wildlife Information for Planning & Consultation map,no Threatened or Endangered Species or Critical Habitat is located within the project footprint.

i. Floodplains and Wetlands Regulations: ☑ None ☐ New Required ☐ Modification Required
Describe:

Based upon the US Fish & Wildlife National Wetlands Inventory map,no wetlands or water bottoms is located within the project footprint.

j. Fish and Wildlife Coordination Act (FWCA): ☑ None ☐ New Required ☐ Modification Required
Describe:

Based upon US Fish & Wildlife maps, the project footprint will not affect any Threatened or Endangered Species or Critical Habitat, nor any wetlands or water bottoms.

k. National Historic Preservation Act (NHPA): ☑ None ☐ New Required ☐ Modification Required
Describe:

No historic properties are located near project location.

l. Coastal Zone Management Act (CZMA): ☑ None ☐ New Required ☐ Modification Required
Describe:

Because the project is within the LA Coastal Zone, but no wetlands are impacted, a Letter of No Significant Impact will be obtained from the LA Office of Coastal Management.

2. Identify any other environmental laws and regulations (Federal, state, and local) for which compliance would be necessary for this project, and describe the permits, manifests, and contacts that would be required.

None

F. DESCRIBE ANY ISSUES THAT WOULD GENERATE PUBLIC CONTROVERSY REGARDING THE PROPOSED PROJECT. ☑ None

G. WOULD THE PROPOSED PROJECT PRODUCE ADDITIONAL DEVELOPMENT, OR ARE OTHER MAJOR DEVELOPMENTS PLANNED OR UNDERWAY, IN THE PROJECT AREA?

☑ No ☐ Yes (describe)

H. SUMMARIZE THE SIGNIFICANT IMPACTS THAT WOULD RESULT FROM THE PROPOSED PROJECT.

☑ None (provide supporting detail) ☐ Significant impacts (describe)

ENO intends to make significant investment in line hardening in Disadvantaged Communities (DACs) as quickly as safely possible, and add battery backup, all of which is expected to result in less damage, lower restoration costs, fewer interruptions, and quicker recovery times after major storms.

U.S. DEPARTMENT OF ENERGY

ENVIRONMENTAL QUESTIONNAIRE

I. PROVIDE A DESCRIPTION OF HOW THE PROJECT WOULD BE DECOMMISSIONED, INCLUDING THE DISPOSITION OF EQUIPMENT AND MATERIALS.

(b) (4) [redacted] During decommissioning, consistent with the company's waste management and minimization standard, the options include, in order of preference, repurpose, reuse, recycle, and only choosing disposal if no other option existed.

III. CERTIFICATION BY PROPOSER

I hereby certify that the information provided herein is current, accurate, and complete as of the date shown immediately below.

Signature: Kristen Granier Digitally signed by Kristen Granier Date: 2023.04.04 17:31:35 -04'00' Date (mm/dd/yyyy): 04/04/2023

Typed Name: Kristen Granier

Title: Director

Organization: Entergy Services, Inc.

IV. REVIEW AND APPROVAL BY DOE

I hereby certify that I have reviewed the information provided in this questionnaire, have determined that all questions have been appropriately answered, and judge the responses to be consistent with the efforts proposed.

DOE Project Manager

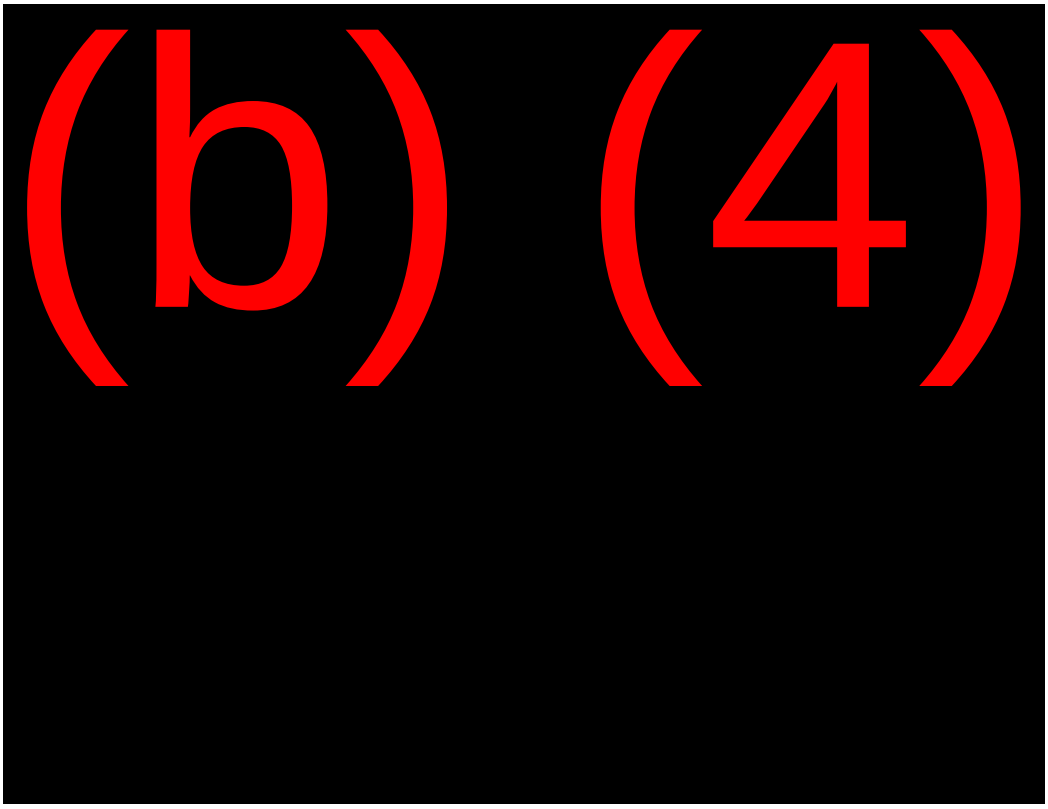
Signature: _____ Date (mm/dd/yyyy): _____

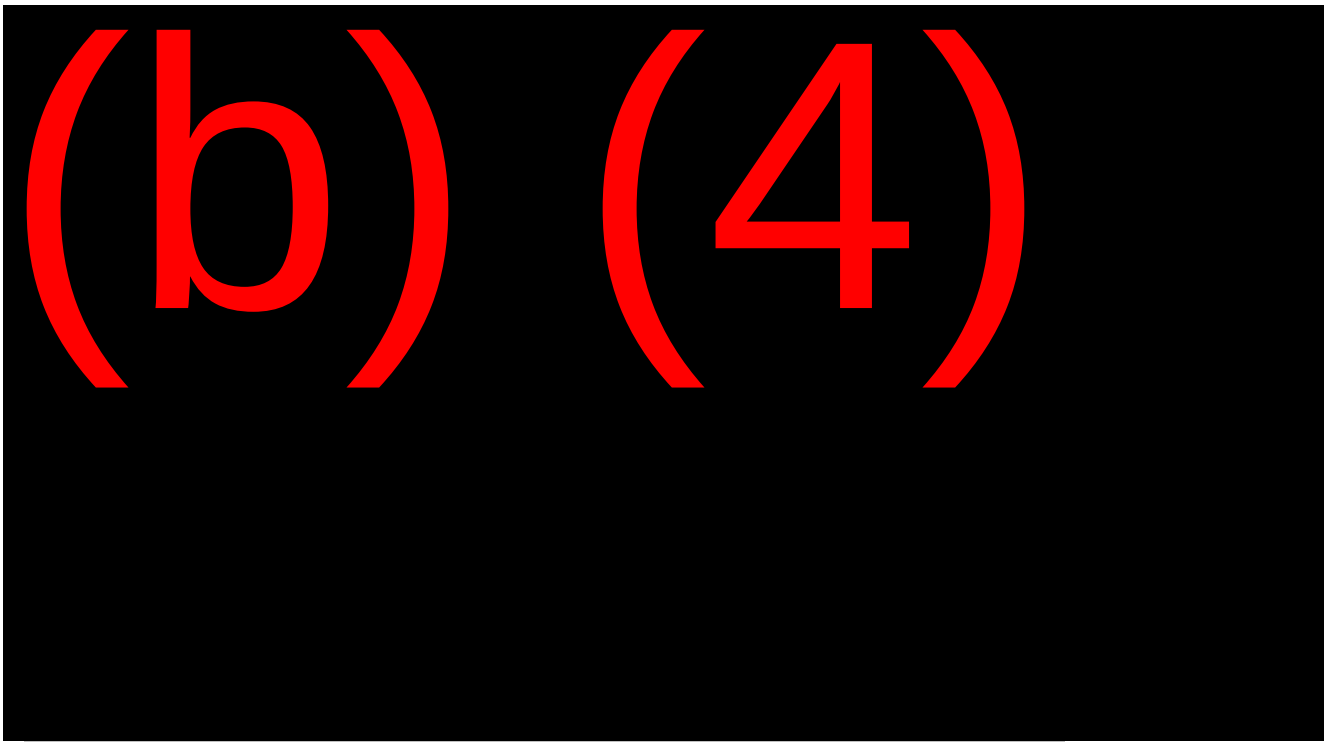
Typed Name: _____

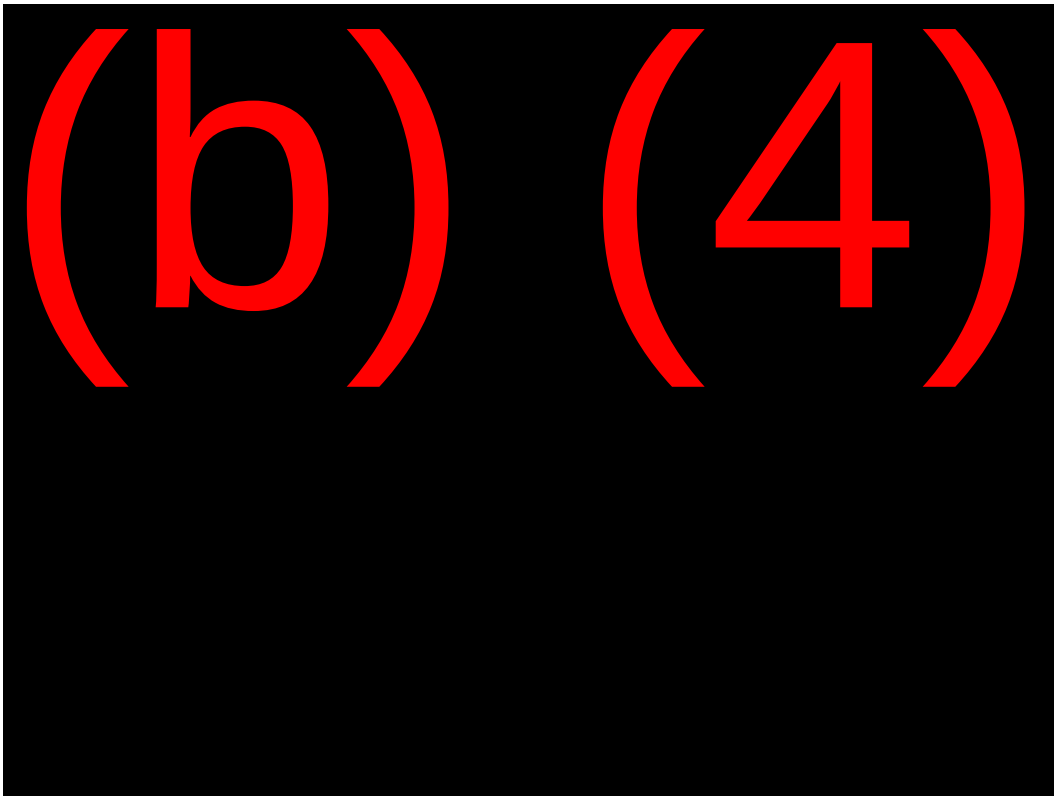
ENO GRIP DE-FOA-0002740

Environmental Questionnaire

C.2. Project site location map






(b) (4)

GREATER NEW ORLEANS INC
REGIONAL ECONOMIC DEVELOPMENT

10 PARISHES
Jefferson
Orleans
Plaquemines
St. Bernard
St. Charles
St. James
St. John the Baptist
St. Tammany
Tangipahoa
Washington

March 28, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans (ENO) – GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of Greater New Orleans, Inc. (GNO, Inc.), I am writing in support of ENO's pursuit of Department of Energy (DOE) funding for its Line Hardening and Battery Backup Project in New Orleans East (the Project). The Project has the prospect of transforming New Orleans East and providing continuity, health, and safety to businesses and families throughout Greater New Orleans. GNO, Inc. is the regional economic development organization for the 10 parishes of Southeast Louisiana, including Orleans Parish. Thus, GNO, Inc. recognizes both the local and regional benefits of this project, while underscoring its critical economic impact on a national level.

This transmission hardening project can prevent outages and rectify a failure-prone current condition. As seen in Hurricane Ida, the existing transmission infrastructure failed, which left Louisiana's largest city and economic engine without power for days. This shut down businesses and impeded the administration, facilitation, and operation of major facilities, like ports and airports, and of national industries, like biomedicine and oil and gas.

New Orleans East, most immediately connected by this specific line, is home to a largely disadvantaged population – 88.5 percent (64,289 out of 72,645 residents). New Orleans East, while having great room for economic growth and generation of new opportunities that improve community prosperity, is already home to important institutions, such as the headquarters of Liberty Bank – the nation's largest Black-owned bank. NASA's Michoud Assembly Facility, responsible for much of Artemis assembly, is located in the East, alongside tenants including Boeing, Lockheed Martin, and the United States Coast Guard.

Improving transmission infrastructure will safeguard economic development in New Orleans East and secure enhanced opportunities for community members, while having a ripple effect well beyond. A grant award can advance business attraction to and investment within the disadvantaged community, while creating new high-wage, high-demand careers for members of the community. ENO's application itself will directly benefit regional economic development and community members though its agreement with the New Orleans Career Center (NOCC). NOCC is a partner of GNO, Inc. and a hub for high-quality technical education. This partnership will empower individuals to improve the community where they live, while growing regional capacity to implement continuous grid infrastructure improvements and improve communal resilience.

Upon the passage of the Infrastructure Investment and Jobs Act (IIJA), GNO, Inc. brought together leaders across the Greater New Orleans business community to identify infrastructure priorities. Grid hardening was widely accepted as the primary regional need, and DOE's GRIP program was pinpointed as an opportunity for resolution. So, our pressing vulnerability can be largely addressed through ENO's application, via this targeted program. We are extremely supportive of this application, and we are committed to working with ENO to ensure successful implementation, and long-term outcomes for our City, region, and nation.

Sincerely,

(b) (6)

Michael Hecht
President & CEO

1100 Poydras Street, Suite 3475, New Orleans, LA 70163
Phone: 504.527.6900 Fax: 504.527.6970 www.gnoinc.org

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March 3, 2023

Deanna Rodriguez, President,
Entergy New Orleans
1600 Perdido, Bldg. 505
New Orleans, LA 70120

Re: Entergy New Orleans IIJA GRIP Application for transmission & distribution line hardening and solar battery installation in New Orleans East (the Project)

Dear Ms. Rodriguez,

As the Executive Director of the New Orleans Career Center (NOCC), I am submitting this letter of support and confirming our intent to negotiate a Workforce Development Agreement (WDA) with Entergy New Orleans (ENO) in its pursuit of Department of Energy funding for the Project. New Orleans East has one of the highest poverty rates in New Orleans and has yet to fully recover from Hurricane Katrina. The Project will bring much needed infrastructure investment to the area, will attract economic development opportunities, and create jobs for New Orleans East residents. The New Orleans area is expected to see more than 70,000 new jobs that require more than a high school diploma, but less than a 4-year college degree, over the next decade.

NOCC provides high school and adult learners facing systemic barriers to employment with career preparation and technical skills training to earn industry-based credentials for employment in high-wage, high-demand economic sectors. All students are people of color and considered low-income.
A WDA between NOCC and ENO will include the following:

- Courses designed to align with high-demand employment needs including training related to green energy, such as solar panel and battery installation/maintenance and wind turbine manufacturing, as well as more traditional utility jobs, such as linepersons. All these positions will be needed to make theNOE Project a success. These skills can also be used in non-ENO related jobs, meaning this program can train workers for other industries requiring similar skills.
- Wrap-around services including literacy, mental health consultation, transportation, and childcare.
- ENO's commitment to a percentage of IIJA GRIP funding for this program, an estimated $1M investment, and ENO staff support over the coming five years.
- NOCC's continuing partnership with all New Orleans Public Schools located in New Orleans East and its commitment to recruit students from those schools in particular to participate in the Project..
- NOCC's and ENO's joint commitment to recruit local non-profits like Together New Orleans and Get Lit Stay Lit, both of whom install solar rooftop panels and battery backup, to participate in an internship program.
- NOCC and ENO's commitment to recruit private sector employers such as Advanced Cutting Solution, which manufactures wind turbines, to participate in an internship program.
- Goal of training at least 200 students annually over the 5-year period to enter high-quality, good- paying jobs for which they may not otherwise be qualified, for a total of 1,000 employed in clean energy jobs by the end of the grant.

We are extremely excited about this opportunity to partner with ENO to improve the lives of so many.

Sincerely,

(b) (6)

Claire Jecklin
Founding CEO

LaTOYA CANTRELL, MAYOR
CITY OF NEW ORLEANS

March 28, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

RE: LETTER OF COMMITMENT - ENTERGY NEW ORLEANS APPLICATION TO DEPARTMENT OF ENERGY GRIP PROGRAM

Dear Ms. Rodriguez,

The City of New Orleans is happy to partner with Entergy New Orleans (ENO) on its application to the Department of Energy IIJA GRIP program for upgrades to transmission and distribution lines in New Orleans East.

This project will provide additional reliability and sustainability to the City of New Orleans, particularly New Orleans East, and our joint commitment on workforce development and engaging diverse suppliers for this project will ensure that residents of New Orleans will have access to living-wage jobs and contracting opportunities. Specifically, the City and ENO's Supplier Diversity teams will work together to identify DBE certified suppliers whose scopes of services match the grid resiliency requirements. ENO and the City will conduct continuous engagement sessions with identified suppliers to orient them to doing business with ENO, as well as coordinate meet and greet sessions between the prime suppliers and DBE certified suppliers to maximize disadvantaged business utilization rates.

The City's Office of Workforce Development will also work with ENO Workforce Development and Talent Pipelines to develop and provide customized training for individuals to meet minimum qualifications for the high-wage and high-demand jobs created by this project. Additionally, the City is already involved in ENO's line worker program, partnering with Delgado Community College to ensure that line workers have the requisite reading, writing, and math skills development. The program has $95,000 from the Louisiana Workforce Commission to cover tuition costs for 10 students.

We are excited about this opportunity and look forward to our future collaboration upon the grant award.

Sincerely,

(b) (6) [redacted]

LaToya Cantrell
Mayor, City of New Orleans

1300 PERDIDO STREET | SUITE 2E04 | NEW ORLEANS, LOUISIANA | 70112
PHONE 504.658.4900 | FAX 504.658.4938 | WWW.NOLA.GOV

IBEW LOCAL 2286 and 995
INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
AFL-CIO-CLC

Local 2286
4850 Stone Oak Drive
Beaumont, Tx 77705
(409) 840-4806

Local 995
8181 Tom Drive
Baton Rouge, La 70815
(225) 927-6462

March 23rd, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of IBEW Local 2286 and IBEW Local 995, I write to confirm our partnership/commitment with Entergy New Orleans (ENO) in their pursuit of Department of Energy funding for its Line Hardening and Battery Backup Project in New Orleans East (the Project).

This project will upgrade both transmission and distribution lines and install a solar battery in New Orleans East. Through this project, Entergy New Orleans intends to make significant investment in an impoverished community as quickly and safely as possible, and add battery backup, all of which is expected to result in less damage, lower restoration costs, fewer interruptions, and quicker recovery times after major storms.

Entergy New Orleans has a long history of working with the IBEW locals in its service territory and has committed to applying lessons learned from these efforts for the current project. We are eager and committed to providing a skilled labor force to support the resilience projects in New Orleans.

We are in full support of this grant submission and we hope for its approval so that we, as a team, can provide more stability, reliability and quality of life for the customers who are served by Entergy and the employees and contractors who work for Entergy and who are represented by the IBEW.

It is IBEW Locals 2286 and 995's mission to provide safe and sustainable jobs for the 2,400+ combined men and women we represent. We accomplish this by holding accountability high and ensuring that the company's we work with and the customers that they serve have a trained, qualified, skilled and professional workforce on every jobsite, each and every day.

We feel that if this grant is approved, and our partnership is solidified, there will be a positive impact on our communities by providing safe and reliable power by the hard-working men and women of the IBEW who work and live in these same communities.

In solidarity,

(b) (6)

Johnny Johnson,
Business Manager
IBEW Local 2286

In solidarity,

(b) (6)

Jason DeDon,
Business Manager
IBEW Local 995

March 31st, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of the Louisiana Chamber of Commerce Foundation (LCCF), I write to confirm our support for ENO's GRIP application pursuing Department of Energy funding for transmission and distribution hardening and solar battery back up in New Orleans East.

LCCF's mission is to help drive the economic growth of Louisiana by empowering and sustaining the minority business community through the development of local chambers and developing business innovation centers that provide the education and technical assistance needed to grow our local business community. This mission is achieved through public and private sector engagement that helps provide access to procurement opportunities, capacity development through technical assistance for minority businesses and chambers of commerce, and advocacy for minority business growth and development at the local, state, and national levels.

We work directly with local minority community leaders and business owners. As the New Orleans area prepares for the impacts of external weather events it is imperative that we address the needs of communities that have been historically marginalized and need technological advancements available to protect and provide in the event of an outage. This project in New Orleans East will bring much needed resiliency to a community that has been overlooked since Hurricane Katrina.

We are proud to support and partner with ENO to ensure that the socially and economically disadvantaged communities in New Orleans East are aware of the investment and participate in a meaningful way.

(b) (6)

David St. Etienne, CEO

President CEO

(b) (6)

Kelisha Garrett

Vice President & C.O.O. Government Affairs

March 24, 2023

Entergy Services, LLC
639 Loyola Avenue
New Orleans, LA 70130

I write to confirm the intended relationship between Entergy operating companies (Entergy Arkansas, LLC, Entergy Louisiana, LLC, Entergy Mississippi, LLC, Entergy New Orleans, LLC, and Entergy Texas, Inc.) ("Entergy") and Hancock Whitney Bank ("Hancock Whitney"), in the joint pursuit of creating pathways to low cost capital for underutilized and underrepresented businesses. We are currently finalizing a Memorandum of Understanding ("MOU"). We expect the MOU to have an initial term of two years that may be extended by mutual agreement.

We recognize that diverse and local businesses often lack sufficient funding to cover working capital and overhead costs of provided goods, equipment and services. Further, Hancock Whitney and Entergy desire to increase funding opportunities for suppliers that qualify as third party diverse certified or locally owned businesses within their overlapping service areas of Louisiana, Mississippi, Alabama and Texas.

Hancock Whitney distinctively understands the hardships that extreme weather events can create for the joint customer base we share with Entergy, especially our disadvantaged communities. Hancock Whitney has the unique opportunity of also being an Entergy customer and supports the potential benefits of reduced outages and restoration costs that will result from the line hardening and battery back-up projects which will be accelerated in some areas as a result of the potential funding awards.

Our organizations share over a century's old history in the communities in which we operate, a testament to our commitments to the community. A key tenet of our intended program with diverse and local suppliers is the delivery of financial education and other programs designed to educate diverse and local suppliers regarding good business, financial and operational practices.

Sincerely,

(b) (6) [redacted]

Laura B. Sullivan (Ethridge)
Executive Vice President, Chief Marketing Officer
Marketing Department
2510 14th St., Gulfport MS, 39503

(b) (6)
www.thrivenola.org
1433 N. Claiborne Ave
New Orleans, LA 70116

March 9, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of Thrive New Orleans (Thrive), I am confirming our commitment to partner with ENO in its pursuit of Department of Energy funding for its Line Hardening and Battery Backup Project in New Orleans East (the Project).

As a non-profit committed to advancing racial equality through economic opportunity, climate resiliency, and community stability, we believe ENO's Project is necessary for the growth of the New Orleans East Community as it will spur living-wage jobs and create critical infrastructure that combats climate change and creates resilient communities.

Over the past several years, Entergy has provided over $100,000 to fund Thrive programs. ENO funding has helped create an online BIPOC Contractor List for employers, create equitable procurement toolkits and templates for private sector organizations, and host 13 statewide business assistance workshops including a very successful Green Infrastructure Business Assistance Workshop where 41 BIPOC entrepreneurs received 55-hours of technical assistance from experts in green infrastructure. Eleven of those attendees received funding to secure new contracts because of their training. This partnership will continue to build the capacity of BIPOC entrepreneurs through the Green Infrastructure Business Assistance program and ENO will ensure they are aware of contracts available through this partnership.

Thrive serves BIPOC entrepreneurs with a focus on green workforce and we are happy to commit to our continued partnership on our Green Workforce and Business Training Program (the Program). If this grant is funded and this partnership is supported, (b) (4) The Program will focus on individuals who have faced barriers to employment, such as previous incarceration or other systemic hardships. Cohort members will learn how to install rain gardens, permeable pavers, bioswales, and more, and sharpen their skills through apprenticeship programs. (b) (4) Members will receive OSHA, TWIC, Horticulture, Heavy Equipment and Clean Water Certifications qualifying them for jobs that pay a living wage. We anticipate training 250 individuals over the 5-year term of the project and with an expectation that all will be hired by local employers.

We look forward to ENO's grant award and our continued partnership.

Signature
(b) (6)
Title Executive Director, Thrive New Orleans
Chuck Morse

United States Business Council
for Sustainable Development

March 10, 2023

Ms. Deanna Rodriguez
President and CEO
Entergy New Orleans
1600 Perdido Street
New Orleans LA, 70112

Dear Ms. Rodriguez:

Thank you for the opportunity to provide a letter of support for Entergy's application for Topic Area 1 "Grid Resilience Grants" under the BIL Grid Resilience and Innovation Partnerships (GRIP) Funding Opportunity Announcement (FOA) which seeks to *"support activities that reduce the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfire, and natural disaster."*

In alignment with Entergy's proposed project, the U.S. Business Council for Sustainable Development (US BCSD) was created to provide leading businesses a platform to collaborate, design, and implement sustainability and resilience solutions at scale. Our cross-sector platforms, projects and partnerships bring companies together to solve circular economy, carbon, energy, water and equity challenges across North America.

If the proposed "Line Hardening and Battery Backup in New Orleans, LA Project" is approved, we will work with Entergy to engage faculty and students from Historically Black Colleges and Universities (HBCUs) in the project by hosting quarterly webinars that provide opportunities for learning about electric power production, transmission, and distribution in more resilient and sustainable ways. Representatives from Alcorn State University, Howard University, Jackson State University, North Carolina Agricultural & Technical State University, Prairie View A&M University, Southern University, and the University of Arkansas Pine Bluff will be invited to attend. We estimate more than 3500 students and faculty will participate. Entergy Subject Matter Experts will provide presentations for the students on various aspects of the project as the implementation proceeds from design to completion stage over a 5-year completion timeline. We will host 20 separate webinar sessions during the course of the project at a proposed budget of $580,000.

Sincerely,

(b) (6)

Claude Griffin
Executive Director
United States Business Council for Sustainable Development

The FIRST 72+
2915 Perdido Street
New Orleans LA 70119
www.first72plus.org
(b) (6)

March 15, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Dear Ms. Rodriguez,

I am the Executive Director of the First 72+, a non-profit dedicated to stopping the cycle of incarceration. One way of doing so is by providing formerly incarcerated individuals with career opportunities. I am excited that Entergy New Orleans (ENO) has a similar goal and wishes to partner with us regarding its Dept. of Energy IIJA GRIP grant application for the New Orleans East Transmission and Distribution line upgrades and installation of solar battery back-up power (The Project).

This grant is critical to the residents of New Orleans East as it will provide additional reliability and sustainability to the region. Additionally, the community benefits that ENO is proposing, especially with the First72+, will have a significant impact on our community. ENO and the First72+ will partner to recruit up to 100 formerly incarcerated individuals annually for ENO's lineworker training program or up to 500 individuals trained over the project period. These workers are needed to work on the transmission and distribution line upgrades for this Project, as well as other projects that ENO will undertake. Training First72+ participants will provide opportunities for living-wage jobs and lower recidivism rates for our community.

In addition to job training/placement, the First72+ assists participants in finding transitional housing, wrap-around services for mental health and family issues, stress management and transportation. We also provide participants with a re-entry package, which includes clothing, bedsheets, and a cellphone. (b) (4) As such, we are fully supportive of ENO's application and look forward to executing a Community Benefits Agreement upon the award of the grant funding.

With warmest regards,

(b) (6)

Chad A. Sanders
Executive Director

HISPANIC CHAMBER of COMMERCE of Louisiana

March 16, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re:Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of the Hispanic Chamber of Commerce of Louisiana ("HCCL"), I am writing to express our support for ENO's pursuit of Department of Energy funding for its Line Hardening and Battery Backup Project in New Orleans East.

The HCCL understands how important the Project is to the New Orleans East Community, which has not seen significant economic growth in decades despite its large population. New Orleans East is incredibly attractive to industry expansion as it provides access to multiples modes of transportation: interstate, rail, and water. And this Project will promote industrial growth in New Orleans East as reliable and sustainable energy is a draw for new industry.

The HCCL is excited to participate in this project by coordinating semi-annual events with the New Orleans and Black Chamber over the life of the project, which will focus on contracting opportunities for local and minority-owned businesses in the area. We are excited about the commitment of ENO to provide access to contracting opportunities for local and minority-owned businesses, and to work with us to build the awareness and knowledge needed to secure the contracts. We will also promote ENO's Community Benefit Plan listening sessions among our members and encourage people to attend and provide their ideas and feedback.

We are extremely supportive of this grant application and look forward to working with ENO once it is awarded.

Kindest regards,

(b) (6)

Mayra E. Pineda
President & CEO

NEW ORLEANS
CHAMBER

March 20, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of the New Orleans Chamber of Commerce ("NOCC"), I am writing to express our support for ENO's pursuit of Department of Energy funding for its Line Hardening and Battery Backup Project in New Orleans East (the Project).

The NOCC understands how important the Project is to the New Orleans East Community, which has not seen significant economic growth in decades despite its large population. New Orleans East is incredibly attractive to industry expansion as it provides access to multiples modes of transportation: interstate, rail, and water. And this Project will promote industrial growth in New Orleans East as reliable and sustainable energy is a draw for new industry.

The NOCC is excited to participate in this project by coordinating semi-annual events with the Hispanic Chamber and Black Chamber over the life of the project, which will focus on contracting opportunities for local and minority-owned businesses in the area. We are excited about the commitment of ENO to provide access to contracting opportunities for local and minority-owned businesses, and to work with us to build the awareness and knowledge needed to secure the contracts. We will also promote ENO's Community Benefit Plan listening sessions among our members and encourage people to attend and provide their ideas and feedback.

We are very supportive of this grant application and look forward to working with ENO once it is awarded.

Sincerely,

[redacted]

Sandra L. Lindquist
President & CEO

New Orleans Chamber of Commerce
1515 Poydras Street, Suite 1010, New Orleans, LA 70112

www.neworleanschamber.org
[redacted]

Rebuilding Together New Orleans

March 21, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Support for Entergy New Orleans' (ENO) GRIP Application for its New Orleans East Project

Dear Ms. Rodriguez,
As the Executive Director of Rebuilding Together New Orleans, I am excited to offer support for ENO's GRIP application to the Department of Energy for its Line Hardening and Battery Backup Project in New Orleans East (the Project).

As you know, RTNO is a non-profit dedicated to providing health and safety repairs to low- income homeowners in New Orleans. (b) (4) [redacted]

This support builds on a partnership that spans decades of support to hundreds of families. Notably, ENO was the only group that stepped up to support families impacted by the 2017 tornado that damaged large swaths of New Orleans East. (b) (4) [redacted]

The Project will bring reliability and resiliency to New Orleans East, and we look forward to our continued partnership to bring energy savings to New Orleans customers.

Sincerely,

(b) (6) [redacted]

William Stoudt
Executive Director
Rebuilding Together New Orleans
2801 Marais St, New Orleans, LA 70117
(b) (6) [redacted]

April 5, 2023

VIA E-MAIL: (b) (6)
Alvin-o Williams, President
Southern Region Minority Supplier Development Council
400 Poydras Street, Suite 1960
New Orleans, LA 70130

Re: Letter of partnership documentation for the Entergy proposal titled (b) (4) ***prepared in response to the U.S. Department of Energy ("DOE") Funding Opportunity Announcement ("FOA") No. DE-FOA-0002740, "BIL – Grid Resilience and Innovation Partnership (GRIP)"***

Dear Ms. Moller:

The Southern Region Minority Supplier Development Council, Inc. ("SRMSDC") is pleased to provide this letter documenting our community partnership and support of Entergy regarding its proposal titled (b) (4) prepared in response to the above-referenced DOE FOA. Together, Entergy and SRMSDC will advance the deployment of grid automation technology to increase the flexibility, efficiency, and reliability of its electric system and service in our region. In addition, this project will increase the grid's resiliency and prepare for the potential future deployment of renewable generation.

As a corporate member of the SRMSDC, we appreciate your ongoing support. Your support enables us to maintain a database of BIPOC businesses across Alabama, Arkansas, Louisiana, and Mississippi. It also helps us provide corporate peer-to-peer and small business training and development. Combined, we help both corporate, and BIPOC businesses optimize their ESG goals. If the Entergy proposal is selected for funding by DOE, SRMSDC will support Entergy by:

- Improving Entergy's level of community engagement by assisting Entergy in engaging with labor unions, local governments, Tribal entities, and other BIPOC stakeholders from disadvantaged communities.
- Providing outreach assistance that helps attract or reengage American businesses that understand the significance of supporting laborers from all types of communities within Entergy's footprint.
- Assist Entergy with incorporating and measuring supply chain equity business practices into their supply chain.
- Help Entergy achieve its Justice40 goals by helping them identify tools they can use to help them measure and report the active and ongoing socio-economic impact of their diversity, equity, inclusion, and accessibility goals.

Please keep me informed as to the progress of your proposal. If DOE awards funding to Entergy in response to the proposal, SRMSDC looks forward to continuing our partnership now and on the resulting project.

Sincerely,

Alvin-o Williams
President
Southern Region Minority Supplier Development Council

HBCU CDAC
Community Development Action Coalition

TRANSFORMING CAMPUSES **AND COMMUNITIES**

April 4, 2023, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for T&D Project in New Orleans East

Dear Ms. Rodriguez,

On behalf of the HBCU Community Development Coalition and Dillard University (collectively "CDAC"), I am writing to confirm our support for ENO's GRIP application pursuing Department of Energy ("DOE") funding for transmission and distribution hardening and solar battery back up in New Orleans East.

CDAC's program on Clean Energy Initiatives recently won the DOE's Community Clean Energy Coalition Prize. As part of the award, we will be conducting an initiative called *Green Town* at Dillard University. CDAC will deploy place-based initiatives and energy-related solutions, increasing awareness and opportunities for HBCUs with a new clean energy training program. CDAC will also decrease the community energy burden with community solar projects.

(b) (4) [redacted]

We are proud to support and partner with ENO and fully support your GRIP Grant application.

Sincerely,

(b) (6) [redacted]
Ron Butler
CEO

7900 NW 27th Avenue • Suite 236 • Miami, FL 3314(b) (6) [redacted] • HBCUcoalition.com • (b) (6) [redacted]

YouthForce
NOLA

March 23, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Dear Ms. Rodriguez,

On behalf of YouthForce NOLA, I am pleased to submit this letter in support of Entergy New Orleans' GRIP Application to the Department of Energy seeking funding for the Transmission and Distribution line hardening and solar battery project in New Orleans East (the Project).

YouthForce NOLA leads a citywide effort of educators, training providers, businesses, policymakers to give students the awareness, skills, and experiences they need to thrive economically and be the most sought-after talent for hiring and advancement in high-wage career pathways. These partnerships expose public school students — including low-income students and students of color — to high-demand regional career pathways and support them to take their first steps into the workforce.

Entergy New Orleans (ENO) is a robust partner to YouthForce NOLA. Earlier this month, ENO sponsored our Career Expo through which 1,400+ were exposed to Entergy's work — as well as that of 80 additional regional employers in health sciences, skilled crafts, digital media/IT, and business services — in a fun, interactive, and relaxed environment. Additionally, ENO has committed to host five high school interns this summer as a part of ENO's Know Your Power intern program through which interns will have the opportunity to work on the Project Entergy New Orleans has outlined in this proposal packet to the Department of Energy. Finally, ENO will be participating in a YouthForce NOLA workshop that brings together a diverse group of stakeholders to determine what actionable lessons, activities, and routines can be delivered consistently in our classrooms and training spaces.

Funding of this project is vital to New Orleans East as it will bring additional reliability and sustainability to an area that has not received the same investments as other areas of the City yet has continued to sustain damage from hurricanes and severe storms.

We look forward to our continued partnership with ENO and fully support your application to the Department of Energy for funding for this Project.

Sincerely,

(b) (6)

Cate Swinburn
President & Co-founder

Real-World Skills. Real-Life Success.

March 24, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans (ENO) GRIP Application for Transmission and Distribution line hardening and solar battery installation in New Orleans East

Dear Ms. Rodriguez,

The National Theatre for Children (NTC) is pleased to support ENO's GRIP Application to the Department of Energy seeking funding for the transmission and distribution line hardening and solar battery project in New Orleans East (The Project).

NTC is currently partnering with ENO on its *Energy Academy Program*, a comprehensive energy efficiency curriculum to enrolled schools, which includes:

- Live School Events, including educational assemblies that align with national and state education standards for science, math, and English language arts. Parent-connect events will also be offered. Last year, thirty-two (32) elementary schools and two (2) middle schools will participate in these events. Most of the schools who participated serve many children of color and/or low-income children. And for 2023 we have signed up 12 schools to date, half of which are public schools educating majority BIPOC and low-income students.
- Print Materials in English, Spanish and Vietnamese and will include primary workbooks with activities for grades 2 and 5 and parent-student handbooks for grade 8.
- Energy education webinars for teachers, with content adjusted for each grade span, presented four times each calendar year (approximately February, April, August, and October).
- E-Learning Package to enrolled schools and their educators with digital games and activities like e-books, graphic novels, lessons, and assessments.
- Providing 4,100 energy-saving kits to 34 participating schools annually that will provide ENO with approximately 797,088 kWh of verifiable energy savings annually.

These strategies will increase parity in clean energy technology and access for families across New Orleans East. As your partner in providing energy savings to low-income, public-school students/families we are excited that Entergy is focusing on bringing reliability and resiliency to New Orleans East, a disadvantaged community that will benefit from our programs as well as the Project.

Nikki Swoboda, Director of Marketing

YOUTH EMPOWERMENT PROJECT

MAIN OFFICE | 1600 Oretha Castle Haley Blvd. | New Orleans, LA 70113

March 23, 2023

Ms. Deanna Rodriguez
President, Entergy New Orleans
1600 Perdido Street
New Orleans, LA 70112

Re: Entergy New Orleans' (ENO) GRIP Application for its Transmission and Distribution upgrades and battery installation in New Orleans East

Dear Ms. Rodriguez,

Youth Empowerment Project (YEP) is pleased to offer this letter of support for ENO's GRIP application to the Department of Energy for its Line Hardening and Battery Backup Project in New Orleans East (the Project). Founded in 2004, YEP is a New Orleans-based non-profit organization that provides comprehensive services to vulnerable young people. Since YEP's inception as the first juvenile reentry program for formerly incarcerated children in Louisiana, we have expanded to engage young people who live in poverty, are out of school or work, or have experienced trauma.

Through four service areas, YEP provides mentoring, high school equivalency preparation, employment readiness, and enrichment programming. As a community-based nonprofit, these programs have been developed in response to unmet community needs and are aligned with YEP's core purpose, which is to empower young people to improve their lives and the lives of others. We have been serving the New Orleans community for 19 years, and to date, we have served more than 8,500 youth participants, paired more than 1,500 youth with adult mentors, helped 575 graduates earn their high school equivalency diplomas and connected 357 young people to formal employment.

With ENO's help, and a $500,000 contribution, we have opened the New Orleans East Opportunity Center, which offers afterschool programming, high school equivalency instruction in English and Spanish, weekly mentor groups and a 10-week employment readiness training.

The Project is crucial in providing reliable and resilient service to New Orleans East, and we are excited about possible opportunities to continue to partner with ENO to deliver high-quality, comprehensive services to young people and families in our region.

(b) (6)

Melissa Sawyer
Co-Founder & CEO, Youth Empowerment Project
www.youthempowermentproject.org

Joshua Francois, PMP

Sr. Manager of Capital Projects for South Central and Southeast Louisiana.

For nearly 20 years Josh has been a noteworthy leader within the engineering, construction, and project management fields. Through his career Josh has been credited with driving change to ensure customer and stakeholder commitments are met. Josh has a proven record for effectively leading and safely delivering capital projects in the manufacturing, aerospace, and utility sectors. Josh has a Bachelor of Science in Construction Engineering Technology, Associate of Science, Project Management Professional Certification, Risk Management Certification, and OSHA 30.

Currently, Josh is the Sr. Manager of Capital Projects for distribution projects in South Central and Southeast Louisiana. In this role he is responsible for leading a diverse matrixed organization of internal and external resources to execute capital projects. The portfolio of projects / programs currently managed have an annual spend upwards of $125M with incremental increases targeted in the five-year capital plan.

Throughout his career with Entergy, Josh has held leadership positions in project management and construction management within transmission and distribution focus. His positional growth has led to increased responsibility for executing capital projects in Louisiana, Arkansas, and Mississippi service territories with the majority in the Louisiana territory. He has built a strong reputation and relationships for building resolutions for complex project challenges.

His experience and diverse background have equipped him to effectively lead teams to predictably execute all greenfield / brownfield capital projects safely, regardless of scope and complexity.

Entergy Experience:

2022-Current- Sr, Manager, Capital Projects
2021-2022- Manger PMEC

Total portfolio accountability: provide leadership to team of project managers and construction engineers for overall development / execution of distribution projects with cost and schedule predictability.

2021-2021- Manager, Construction
2018-2021- Supervisor, Construction

Total construction accountability: provided leadership to a team of operations coordinators and construction engineers in the development of construction plans/estimates and execution of portfolio projects. Influenced budget performance and safety performance / culture.

2018-2018- Project Manager, Sr
2014-2018- Project Manager

Total project accountability: client relations, engineering, cost management, schedule management, and construction management

JOSHUA L. FRANCOIS, PMP

(b) (4), (b) (6)

EXECUTIVE SUMMARY:

Project Management Professional with proven experience leading execution of small/large scale capital projects with emphasis on supervision and management. Successfully executed multiple projects for a Fortune 200 Utility Company and a Fortune 500 Construction Company. Primary accountabilities include team leadership, strategic direction, portfolio management, cost/schedule/risk management, contract management, quality, safety, relations, etc. These projects have included: electric substations, transmission lines, distribution lines, industrial piping systems, pressure vessels, and structural steel. Well-versed in project management principles and construction execution.

QUALIFICATIONS:

- Manage portfolio annual budgets upwards of $125M within business unit goals
- Manage contract compliance with regard quality, safety, and cost
- Negotiate contracts for best value with minimized portfolio risk
- Lead dispute resolutions and contract change negotiations to ensure accurate and fair outcomes
- Provide strategic vision for team members (field and office) to exceed performance goals
- Lead teams to execute small and large-scale capital projects on all phases of project life cycle- planning to close out
- Strong foresight for planning long duration projects and dedicated to improving construction methods to reduce cost
- Effectively communicate program/project statuses with all stakeholders
- Accurately generate program/project estimates to include: new vertical construction, demolition and rebuild, pressure vessel, cryogenic piping systems, electrical substation, transmission lines, distribution lines, and general manufacturing
- Lead teams on scope of work and bid requirement development for traditional bid events and EPC
- Lead teams on bid proposals and submittal packages according to the owner's specifications
- Lead teams on billing and material ordering procedures, to procure all material and equipment requirements for each program/project and support effective communication with supply chain and accounting
- Lead teams on schedule and cost management utilizing various software for EVM and CPM tracking
- Sound knowledge of OSHA health/safety guidelines for the construction industry

TECHNICAL SKILLS:

Efficient with the following software:

Microsoft Office Project	Solid Works	Microsoft Excel
Primavera	Microsoft Word	Maximo
AutoCAD	Microsoft Access	MathCAD

PROFESSIONAL EXPERIENCE:

Entergy Corporation- Baton Rouge, LA

Sr. Manager of Capital Projects in Distribution- *(Responsibilities)* June 2022 - Present
Manager of Project Management, Engineering, and Construction in Distribution May 2021 - June 2022

- Total accountability for performance of annual budget upwards of $125M with incremental increases year over year
- Provide leadership, oversight, and strategic direction to a diverse matrixed organization of internal and external resources to predictably execute capital projects
- Accountability for cost, schedule, and risk management for all jurisdictional programs / projects
- Influence performance outcomes through active engagement to ensure customer and stakeholder commitments are met
- Drive cost efficiencies and consistency through tool development / implementation, coaching, and mentoring of direct and in-direct reports
- Develop and manage contractor execution strategy ensuring the safety performance, quality of work scope, cost, and schedule meet or exceed expectations
- Manage portfolio status reporting, interface with management of all stakeholders to achieve intended results, represent portfolio in internal leadership meetings, external regulatory hearings, customer meetings, and prepare written testimony as appropriate

Nyka M. Scott

(b) (6) [redacted]

Executive Summary

Highly skilled professional seeking to use my experience gained as the Director of Public Affairs for a subsidiary of a Fortune 500 company, Executive Counsel to a large state agency, my MBA, and 18 years of legal practice. Experience in providing legal counsel, human resource support, intergovernmental relations, and legal skills to a 200+ employee entity.

Professional Experience

Entergy New Orleans, LLC **October 2021-present**
New Orleans, Louisiana
Director of Public Affairs

- Act as company liaison for city, state, and federal elected and governmental officials.
- Identify and manage public engagement activities and stakeholder outreach.
- Handle and oversee special projects and events.
- Work with Communications and Customer Service Teams on messaging, dissemination of information and market research studies.
- Work collaboratively with internal business leaders across all operating companies to support growth and public policy objectives.
- Participate in key business, community, and trade associations on behalf of the company.
- Identify issues of public policy and company importance and monitor legislation critical to advancing company's public policy and business objectives.

Baker Donelson Bearman Caldwell & Berkowitz **January 2005-November 2014**
New Orleans, Louisiana **January 2019-October 2021**
Counsel/Client Development Liaison

- Represented large independent transmission company before public service commissions in Louisiana, Mississippi, Arkansas and Texas, and the New Orleans City.
- Worked with a team of attorneys representing an international district energy company before local and state governmental entities.
- Managed $450m transaction, overseeing 8 attorneys in 6 different states to transfer over 85 alcohol beverage permits.
- Member of the Firm's lateral recruiting team focusing on attorney recruitment and expansion of the Firm's footprint.

Southeast LA Flood Protection Authority-East **November 2014-August 2018**
New Orleans, Louisiana
Executive Counsel

- Managed outside counsel and litigation while representing the Agency and its member Levee Districts in Orleans, East Jefferson, and St. Bernard Parishes.
- Prepare and implement a Strategic Plan and Cultural Change Initiative with a select group of employees.
- Negotiate and draft various agreements between the Agency and public and private entities.
- Work with the Chief Administrative Officer and Board President on re-structuring the Agency, managing Human Resources, Grant Writing and Governmental Affairs employees.
- Attend community and neighborhood meetings regarding outreach on various flood protection projects.

THOMAS A. MARTINEZ, JR.
Professional Engineer, licensed in Texas
(b) (6) [redacted]

OBJECTIVE To become project manager of power development projects utilizing my experience and expertise to make excellent judgement in project selection, ensuring that the projects meet company objectives for safety, budget, and schedule.

EXPERIENCE

Entergy Services, Inc.: Capital Projects
Sr. Project Manager, June 2018 to Present

- Directed and led projects through the Texas regulatory process obtaining Certificate of Convenience and Necessity (CCN) by planning and executing route studies, land owner open houses, CCN applications, and filing of expert testimony.
- Led project teams to develop large transmission projects through all phases of the project lifecycle from alternative selection to execution in accordance with the applicable corporate standards, guidelines, policies and processes.
- Expertly navigated a $124M portfolio of >$20M transmission capital projects through the Entergy Stage Gate Process (SGP) and coordinated all activities to meet the requirements of Entergy's SGP and associated deliverables
- Regularly provide briefings to senior Entergy leadership, including the Operating Company President, regarding the design, budget, and schedule progress for the transmission capital investment programs.
- Leveraged extensive project development experience to proactively identify potential project issues and developed mitigation plans to prevent impacts to project performance.
- Drove on-time completion of project milestones by proactively identifying roadblocks and working with management to make the necessary decisions to keep project execution on track
- Led a cross functional team of CC&A, Supply Chain, Engineering, Environmental, and Regulatory Subject Manager Experts to execute projects with cost and schedule certainty while meeting all applicable corporate standards. Directly responsible for monitoring contractor safety, schedule, cost, quality of work, and compliance with contractual requirements during project execution

Entergy Services, Inc.: Capital Projects
Sr. Engineer, Dec 2015 to June 2018

- Responsible for managing the MISO Definitive Planning Phase for all new generation units.
- Provide technical support to assure conformity of design for electrical, instrumentation, and controls drawings and specifications related to large capital projects including new combined cycle units, simple cycle units, and reliability projects at legacy sites.
- Responsible for developing scopes of work for use in the RFP (Request for Proposal) bid process.

- Coordinate with Subject Matter Experts to ensure projects meet standards and regulations from all applicable stakeholders.
- Responsible for writing Records of Decision and White Papers to document decisions made through engineering group, including things such as analysis of variable speed drives for cooling tower motors, definition of islanding for combined cycle units, and summary of V/Hz issues in generator settings.

Entergy Texas, Inc.: Lewis Creek Plant

Sr. Engineer, Nov 2014 to Dec 2015

Engineer III, Jan 2011 to Nov 2014

- Managed plant O&M and Capital projects as a contract manager. Responsible for ensuring projects were executed safely, on time, and within budget. Projects included Distributed Control System upgrades, Generator Re-wedge, Turbine Valve work, NERC Component change outs, Main step-up transformer replacement, Medium Voltage relay upgrade for Arc Flash reduction, and automation of plant equipment.
- Provided technical expertise and support for plant electrical equipment. Create POD (Project Outage Database) projects identifying scopes, budget, and risk/compliance metrics.
- Plant NERC Champion: Ensured that all NERC procedures and processes were followed by plant personnel, coordinated all testing and replacement of NERC devices and relays with compliance technical specialists, and completed all self-certification processes for the NERC reliability standards.

Baker Hughes

Field Engineer III, Dec 2009 to Dec 2010

- Field engineer for the installation and monitoring of Electrical Submersible Pump systems for oil production.

National Oilwell Varco

Project Engineer – AC Drives, June 2006 to Oct 2009

- Designed various AC Variable Frequency Drive systems for land rigs, offshore rigs, and drill ships.
- Was responsible for assuring that designs followed all standards and specifications
- Wrote all technical documents, studies, test documents, and commissioning procedures associated with the projects.
- Coordinated all electrical drawings to mechanical drawings and mechanical drawings to the associated Bill of Material.
- Worked with other groups within company to integrate systems to create a well-integrated product.

EDUCATION

LOUISIANA STATE UNIVERSITY, Baton Rouge, LA

Graduated: (b) (6)

Bachelor of Science, Major: Electrical Engineering

Catherine Ranken Ward, MBA, PMP

(b) (6)

Summary

22 years of service and team leadership at Entergy Corporation with an experience portfolio in distribution and transmission that includes large capital projects, design, customer service, operations, continuous improvement, construction, maintenance and storm response.

Experience

November 2020-current

Director, Project Management • Capital Projects-Transmission •

Develops internal and external talent necessary to safely execute project portfolio with yearly spend of $400-500M across Arkansas, Texas, Mississippi, and Louisiana service territories. Team includes 21 internal Project Managers and multiple contract proejct management resources. Project portfolio of completed projects includes greenfield and brownfield river crossings, GIS and open-air substations, transmission 500kV-69kV, and distribution lines 13.2-34.5kV. Develops contracting strategy, collaborates with Engineering, Procurement and Construction partners on project specific solutions and revised the standard EPC contract template to define risk allocation. Led the Large Projects Storm Branch during Hurricane IDA and Hurricane Laura. Assisted with the development of the Resiliency program. Developed multiple project execution processes to gain efficiencies and consistency across the department such as PM User Guide, Change Order Log, Bid Process, Gate Presentations. Experience presenting to Board of Directors and developing and executing large scale transmission projects ($100M plus).

June 2014-November 2020

Sr. Manager, Project Management • Capital Projects-Transmission •

Directly Managed projects from $20-135M and a team of 5 internal project management resources. Proficiency in budgetary and financial processes. Excellent rapport with field staff and transmission business function leadership, enabling targeted delivery of safety messages, goals and objectives. Collaboratively works with Supply Chain, Financial Business Partners, Construction Management and Project Controls. Routinely performs site visits to observe and coach on safety performance and monitor field progress.

Jan 2014-June 2014

Region Engineering Supervisor • Distribution Engineering •

Managed exempt and non-exempt team members to deliver design packages for reliability improvements and new construction to the distribution network.

Feb 2013-Jan 2014

Regional Customer Service Manager • Entergy Louisiana •

Managed corporate response to customer grievances, media inquiries, communicated new initiatives/products to internal and external customers.

Jan 2010-Feb 2013
Substation Operations Manager • Louisiana Grid •
Directed planning and scheduling of substation and transmission line maintenance and planned capital projects. Developed method to accurately forecast Grid O&M and Capital spend within 2% of budget using earned value methodology.

Jan 2010-Dec 2006
Transmission Project Manager • Entergy Services •
Managed a $90M portfolio of discipline build line and substation projects. Responsible for cost projection, schedule attainment and scope development. Placed all assets in-service on schedule and under budget.

Dec 2006-Feb 2005
Six Sigma Blackbelt • Entergy Services •
Led cross functional team to improve outage submittal system through automation and process improvement reducing O&M expenses.

Feb 2005-Jan 2000
Transmission Construction Eng. • Entergy Gulf States LA •
Transmission Line Maintenance Eng. • Entergy Gulf Sates LA •

Education

Master of Business Administration Louisiana State University(b) (6)

Bachelor of Science
Civil Engineering
Louisiana State University(b) (6)

Certifications

Project Management Professional
(2008-current)

Six Sigma Blackbelt (2006)

Engineer-in-Training EI.0019181
(2000-current)

Other Activities

LSU College of Engineering Diversity Advisory Board 2013 to current
(b) (6)

APPENDIX F – PROJECT DESCRIPTION AND ASSURANCES DOCUMENT TEMPLATE (PDAD)

Project title: Line Hardening and Battery Backup in New Orleans, LA

Applicant Name: Entergy New Orleans, LLC

Applicant Address: 1600 Perdido Street, New Orleans, LA 70112-1208

Names of all team member organizations (if applicable):

Principal Investigator (Name, Address if different than Applicant's, Phone Number, E-mail):
Catherine Ward, (b) (6)

Business Point of Contact (Name, Address if different than Applicant's, Phone Number, E-mail):
Nyka Scott, (b) (6)

Include any statements regarding confidentiality.

The information included herein is prepared solely for DOE use. It may include information based on assumptions and hypothetical scenarios not representative of current business plans. These hypothetical scenarios do not represent any or all current or future Entergy business plans but are merely estimates, projections, and discussion points. As a result, actual outcomes may differ. This information may also include commercially sensitive proprietary information, legal advice from counsel, a nd/or other confidential non-public information not appropriate for general distribution.

Federal Share: $54,828,178
Cost Share: $54,828,178
Total Estimated Project Cost: $109,656,356

Item 1: Specify (mark with "X")" the FOA Topic Area and as applicable the Area of Interest (AOI):

X_____Topic Area 1: **Grid Resilience Grants** (BIL section 40101(c))

_____Topic Area 2: **Smart Grid Grants** (BIL section 40107)

_____Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 1 (**Transmission** System Applications)

_____Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 2 (**Distribution** System Applications)

_____Topic Area 3: **Grid Innovation Program** (BIL section 40103(b)) – Area of Interest 3 (**Combination** System Applications)

(b) (4)

Item 2: Specify (mark with "X")" the entity type of the applicant organization:

_____electric grid operator

_____electricity storage operator

X_____electricity generator

X_____transmission owner or operator

X_____distribution provider

_____fuel supplier

If further description is needed for the specified entity type, please provide below:

Item 3: Please provide the total amount (USD) of qualifying resilience investments (as outlined in DE-FOA-00002740) that has been spent for the previous 3 years. Please also provide the time period utilized for calculation of this amount.

Total Amount: (b) (4)
Time Period for Resilience Investments: 2019-2021

Note: Topic Area 1 applicants must submit as part of their application, a report detailing past, current, and future efforts by the eligible entity to reduce the likelihood and consequences of disruptive events. This report should include efforts over at least the previous 3 years and at least the next 3 years and any broader resilience strategy used by the applicant.

Item 4: Is the eligible entity a Small Utility as defined in DE-FOA-0002740 (sells no more than 4,000,000 MWh of electricity per year)? If NO is selected, skip to Item 7.

_____Yes

X_____No

Note: If YES, applicant must provide their Form 861 for the last reporting year submitted to the Energy Information Administration (EIA).

Item 5: Per BIL section 40101(e)(2) (C) APPLICATION LIMITATIONS.—An eligible entity may not submit an application for a grant provided by the Secretary under subsection (c) and a grant provided by a State or Indian Tribe pursuant to subsection (d) during the same application cycle.

Therefore, is the eligible entity a Subaward/Subcontract recipient for an application submitted under IIJA Section 40101(d), ALRD 2736? If "YES", please describe the differences between the GRIP FOA 2740 application [40101(c)] and the ALRD 2736 [40101(d)] applications in the box below:

_____Yes

X_____No

(b) (4) [redacted]

[redacted]

Item 6: Specify (mark with "X")" the entity type of the applicant organization:

_____a State

_____a combination of 2 or more States

_____an Indian Tribe

_____a unit of local government

_____a public utility commission

If further description is needed for the specified entity type, please provide below:

Item 7:

Authorized Organizational Representative (AOR): please provide name, address, phone number and e-mail address for the authorized agent to bind the entity

Authorized Organizational Representative (AOR):

Name: Kristen Granier

Address: 101 Constitution Ave, NW, Suite 200 East, Washington, DC 20001

Phone: (b) (6)

E-mail: [redacted]

Item 8: Signature of Authorized Organizational Representative (AOR)

(b) (6) [redacted]

U.S. Department of Energy, Grid Resilience and Innovation Partnerships

Entergy New Orleans LLC Report on Resilience Investments

Introduction

The residents of New Orleans are especially vulnerable to power outages due to extreme weather events. Like all Americans, they depend on electricity to power their homes and businesses, and to support critical services and infrastructure such as government, military, police, fire, health care, water/sewage/drainage, natural gas, food, and communications systems and services. Due to a variety of trends, our customers' dependence upon the electric grid is increasing, which, in turn, is increasing demands and expectations for a resilient system. The challenges our customers face from power outages are more significant than was the case in prior decades due to the impacts of climate change. Additionally, the impact of outages is only expected to increase over the next decade due to the increasing electrification of technology and industrial processes, including the use of electric vehicles and other sustainability efforts, creating new, potentially significant risks from prolonged outages.

Entergy New Orleans (ENO or the Company) is an electric utility serving electricity to over 209,000 customers and natural gas to more than 110,000 customers in Orleans Parish, Louisiana. ENO has a history of working with its regulator, the New Orleans City Council (Council), on storm hardening and resiliency efforts. A few years ago, upon Council approval, ENO executed an approximately $30M storm hardening plan for New Orleans, which included pole treatment or replacement, targeted equipment for replacement or upgrade, grid sectionalization and automation, and circuit reconfiguration.

ENO has dedicated significant resources and prioritized programs with the intent to reduce the likelihood of events in which operations of the electric grid are disrupted, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster and has implemented several programs/philosophies that increase reliability:

- In addition to ENO's traditional reliability and infrastructure improvement programs, after Hurricanes Katrina, Rita, Gustave, Ike and Isaac, ENO implemented additional storm hardening strategies and investments like installing stronger poles, using additional down guys and anchors, installing more durable crossbars (fiberglass instead of wood) and improving Base Insulation Level of an installed structure.

- Since 2018, ENO has only used Class 1 feeder poles, where feasible, and nothing smaller than Class 3 poles for all primary applications.

- ENO's reliability philosophy requires all facilities be brought up to ENO's current design standards when a pole is replaced.

- ENO has a FOCUS Program, which is a systemic approach to identify devices resulting in repeat outages and addressing all issues on that section of the feeder. The program improves the reliability performance of FOCUS-identified devices as well as the overall distribution system by addressing specific outage causes through a focused inspection and mitigation program.

- Implemented a "Fix it Now" (FIN) crew, which allows for a dedicated crew that can quickly change course and respond to imminent issues and request without putting customer commitments at risk. The FIN Crew is also in charge of responding to repair needs that can't be worked into the network crews' 2-week schedule.

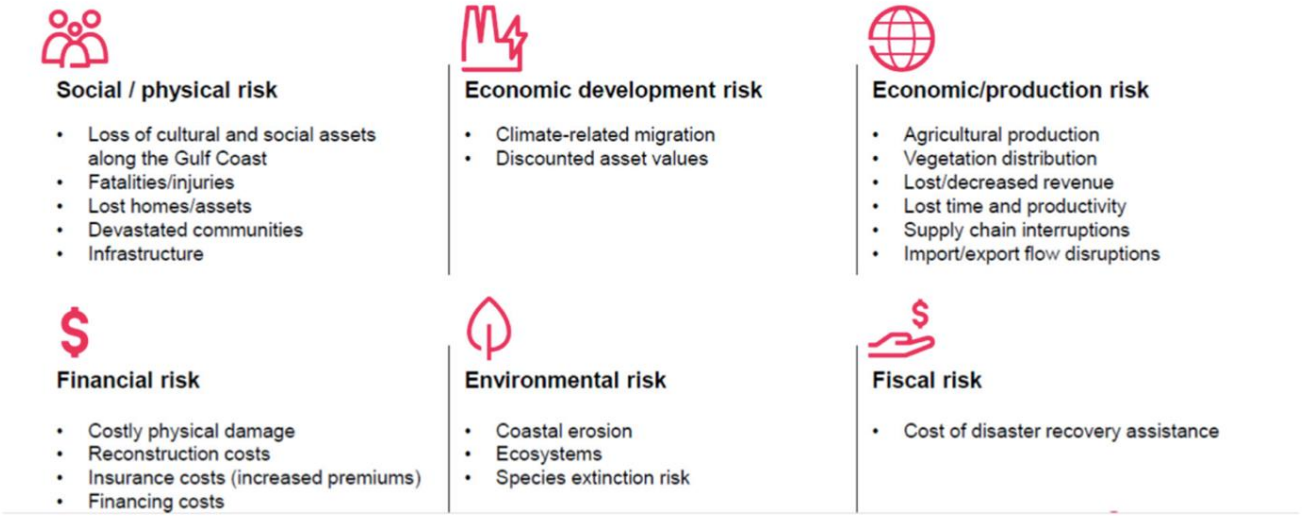
All of these efforts proved successful in the wake of Hurricanes Zeta and Ida.

In the three-year period 2019-2021, (b) (4) was spent in efforts to increase the resiliency of our power supply.

(b) (4)

Our Region and Associated Risks

Figure 1: Significant Risks Created by Severe Weather Events



Our region has always been vulnerable to weather events, such as hurricanes, flooding, thunderstorms, and tornadoes. However, the past five years have seen a dramatic increase in the frequency and severity of these events. Hurricane Zeta (2020) and Hurricane Ida (2021) caused unprecedented loss of life and property damage to New Orleans. Louisiana has now become the first state to record back-to-back years with a hurricane with wind speeds of 150mph or higher.[1]

The 2020 and 2021 Atlantic hurricane seasons have shown that extreme weather events are impacting the New Orleans area, and the entire Gulf Coast region, with increased frequency and severity, with greater costs and disruptions to ENO, its customers, and New Orleans itself.

In 2020, New Orleans was threatened by five major storms that made landfall in Louisiana, and it was heavily impacted by Hurricane Zeta in late October 2020. That storm landed near Cocodrie, Louisiana as a Category 3 hurricane, and was the strongest to make landfall in the continental United States so late in the season (October 28, 2020). In 2021, Hurricane Ida, a Category 4 hurricane, was so destructive that it ranks only behind Hurricane Katrina in the damage done to Louisiana. Hurricane Ida made landfall near Port Fourchon, Louisiana, devastating the town of Grand Isle. Winds uprooted trees, tore roofs from buildings and knocked out power for hundreds of thousands across the state.[2]

Hurricane Ida caused power outages across the New Orleans area, including New Orleans East. 88.5% (64,289 out of 72,645) of the residents of New Orleans East live in Disadvantaged Communities (DACs) as defined by the DAC Reporter and the Climate and Economic Justice Screening Tool (CEJST) and 85% identify as Black or African American. According to the ALICE (Asset Limited, Income Constrained, Employed) report (2018), 65% of New Orleans East residents are below the ALICE threshold, which means they cannot afford a basic household survival budget which includes food, housing, electricity, and health care. This number includes ~31% who fall below the federal poverty level.

The energy burden is extraordinarily high for DACs in Louisiana, which in 2020 had the nation's highest per capita electricity consumption.[3]

Between 2005 and 2017, no hurricanes higher than a Category 2 struck the United States. Since 2017, however, eight major hurricanes have made landfall in the contiguous United States or Puerto Rico: Harvey (2017), Irma (2017), Maria (2017), Michael (2018), Laura (2020), Zeta (2020), Ida (2021), and Ian (2022). In the past few years alone, the U.S. experienced a record-setting number of billion-dollar weather and climate disasters (22 events in 2020), with another 20 separate billion-dollar events impacting the nation in 2021. In broader context, the total cost of U.S. billion-dollar disasters over the last 5 years (2017-2021) is $742.1 billion, with a 5-year annual cost average of $148.4 billion.

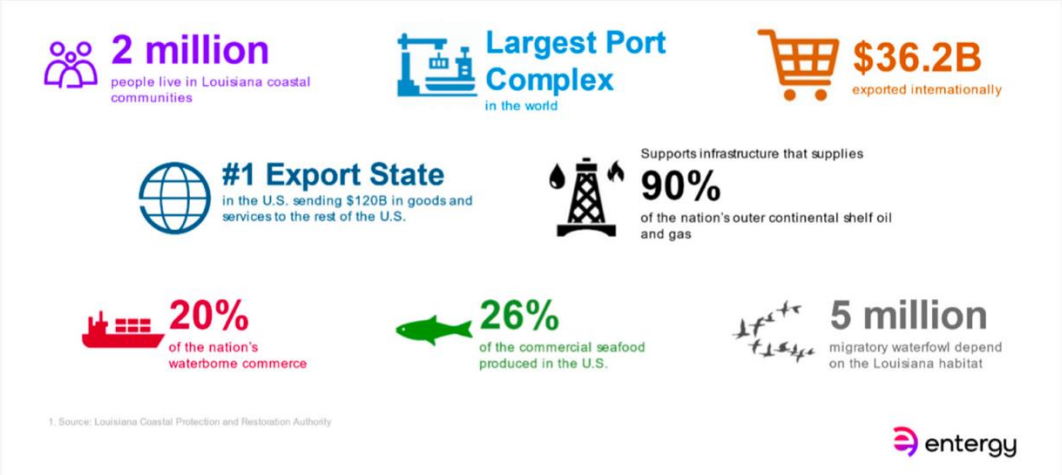
Failure to address the risks will have serious and costly implications considering that a resilient New Orleans -- and Gulf Coast -- is vital to the economic livelihood of our region's future. In addition, Louisiana's risk exposure has national and international implications, as shown in the figure below.

[1] Royal Meteorological Society, https://www.rmets.org/metmatters/impacts-hurricane-ida

[2] *The New York Times*, Hurricane Ida, a Powerful Category 4 Storm, Batters Louisiana, https://www.nytimes.com/2021/08/29/us/hurricane-ida-a-powerful-category-4-storm-batters-louisiana.html

[3] U.S. Energy Information Administration, https://www.eia.gov/todayinenergy/detail.php?id=49036

Figure 2: Risk Exposure of Louisiana to National and International Implications



2019: Disruptive Events and Resilience Programs

Disruptive Events:

- In October 2019, Tropical Storm Olga spawned surprisingly strong winds that knocked down trees and caused damage to New Orleans and the metro area, leaving over 2000 customers without electricity.

Resilience Efforts Undertaken:

- Installed 50 reclosers, which was designed to cut customer interruption by one quarter.
- Began a new program under which the entire distribution grid, backbone and laterals, will be inspected on a five to eight-year cycle. ENO anticipates that after the initial 8-year cycle, we will transition to a 5-year cycle for ongoing maintenance.
- Completed 18 Feeders and 937 line fuses.

Cost of Resilience Programs:

Table 2: Resilience Investment in 2019

Resilience Project Area	2019 spend ($M)
Transmission	(b) (4)
Distribution	
TOTAL	

2020: Disruptive Events and Resilience Programs

Disruptive Events:

- In 2020, Hurricane Zeta struck ENO's service area. The storm's powerful winds caused approximately $32M in damage to distribution and transmission infrastructure and widespread outages. The storm produced peak outages for 178,171 customers in the New Orleans area, approximately 90% of the Company's customer base.

Resilience Efforts Undertaken:

- **New Orleans Power Station:** The 128-megawatt power station is designed to help support the delivery of reliable power to customers more efficiently with less environmental impact. Following the devastating effects of Hurricane Ida, the fifth strongest hurricane in history to make landfall in the U.S., the New Orleans Power Station was restarted and provided first lights to New Orleans less than 48 hours after Ida left the region, sending electricity initially to nearby neighborhoods in New Orleans East, followed by critical facilities in the city and surrounding areas.

- **New Orleans Solar Station** - Engineered to withstand 134 mph hurricane conditions, approximately 70,500 solar panels were implemented. The station is providing clean energy to more than 3,100 area homes and offsets the equivalent of nearly 6,150 passenger vehicles' emissions in one year.

Table 3: Resilience Investment in 2020

Resilience Project Area	2020 spend ($M)
Transmission	(b) (4)
Distribution	
New Orleans Power Station	
New Orleans Solar Station	
TOTAL	

2021: Disruptive Events and Resilience Programs

Disruptive Events:

- In August 2021, Hurricane Ida caused significant damage to ENO's system, including to over 900 distribution poles, 1,300 distribution cross-arms, 700 spans of distribution wires, and 300 distribution transforms. The total amount of restoration costs was approximately $169M.

- After Hurricane Ida in 2021, the greater New Orleans area was completely isolated from the bulk electric system, with all eight transmission lines into that region rendered out of service. After the first transmission tie line into the Jefferson/Orleans area was reconnected, Ninemile 6 and the New Orleans Power Station were utilized in tandem, building load and restoring power to the region.

Resilience Efforts Undertaken:

- In 2021, following Hurricane Ida, and in light of the back- to-back years of historically severe weather affecting the areas served by the Company and the other Entergy Operating Companies ("EOCs"), including both major hurricanes and severe winter storms, the EOCs consulted their own internal subject matter experts and stakeholders, evaluated the practices of other utilities across the country, and undertook a holistic analysis of the opportunities available for creating a more resilient system.

- ENO is accelerating its Distribution Automation (DA) Program that will fast track installation of DA communications system to reap the benefits of increased sectionalization and is a combination of devices and an integrated communication network that can take automatic action to reduce the impact of a fault on the distribution system.

- The FIN Crew performed infrared inspections of distribution facilities to identify and prevent outages that could result from imminent failure conditions as well as investigating repeat outages to assess and repair the fundamental cause of the outage.

- ENO identified work to be performed on three sets of substation exit cables that could yield significant reliability benefits, reducing the potential for customer interruptions. ENO entered into an MOU with the City of New Orleans to build a $60m, 60MW substation to power the Sewerage and Water Board's Carrollton-area plant, which will increase reliability by providing service at the transmission level.

Table 4: Resilience Spend in 2021

Resilience Project Area	2021 spend ($M)
Transmission	(b) (4)
Distribution	
TOTAL	

Figure 3: Entergy's Resilient Future

Current and Future-Planned Resiliency Projects

Given the increase in frequency and intensity of extreme weather events, and higher demand being placed on resiliency, ENO recently filed, consistent with Council direction, a preliminary set of infrastructure hardening projects totaling approximately $1.3B, identified through comprehensive modeling and rigorous analysis. These projects are planned to be implemented over 10 years and expected to provide significant benefits to customers over many decades in terms of avoided customer minutes interrupted and avoided restoration costs. That filing also included planning-level details regarding the potential costs and benefits of deploying feeder-level microgrids across New Orleans to enhance local resiliency. ENO has and continues to discuss those potential projects and other resiliency and related issues at various customer and community meetings. We will continue to work with stakeholders in a collaborative way to consider, among other things, whether their own ideas and proposals may complement the Company's projects. In the near term ENO will file, pursuant to a new Council resolution, a recommended set of accelerated infrastructure hardening projects for Council consideration, as well as a proposed cost recovery mechanism and related requests, to accelerate the Company's resiliency efforts to foster a more hardened system that can better withstand extreme events and avoid or mitigate customer outages from such events.

While the majority of resilience dollars are for Distribution and Transmission hardening, ENO is also committed to creating more resilient neighborhoods that are able to withstand more frequent weather events and has worked with local non-profits to provide service after a storm event. Through an $80,000 grant from ENO, Feed the Second Line's "Get Lit, Stay Lit" program has added to their city-wide resilience network by installing a solar and battery backup system to Fritai in the Tremé neighborhood. "Get Lit, Stay Lit" was created following Hurricane Ida with the goal to install solar and battery backup systems to more than 300 restaurants throughout New Orleans. These restaurants will serve as community gathering hubs to help residents in the immediate aftermath of a major storm by offering cooling and charging stations and food.

ENO is committed to delivering the most targeted, reliable infrastructure. In order to focus our hardening efforts, the Company made use of a Storm Resilience Model (SRM) to assist in identifying the projects for

inclusion in a hardening plan. The SRM employs a data- driven decision-making methodology utilizing robust and sophisticated algorithms to evaluate the assets on ENO's system and calculate resilience costs and estimated benefits of hardening those assets in terms of avoided customer minutes interrupted and avoided future storm restoration costs. The ultimate purpose of the SRM is to identify and prioritize projects that would have the highest benefits to customers. It would not be feasible, logistically nor financially, to address the risk arising from every single asset on electric system. The SRM thus serves to identify and prioritize which set of assets the hardening of which would deliver the most benefits in terms of avoided customer outage minutes and avoided future storm restoration costs for the money spent. In this way, the SRM facilitates the prudent and efficient use of finite resources to achieve the most significant reduction of risk that can be achieved through reasonable diligence.

For electric utility systems, resilience relative to severe weather events has at least three critical dimensions: (1) hardening, which involves building or improving a system in ways that will make it better able to withstand the impacts caused by severe weather events; (2) modernization, which includes adapting the system to reflect or incorporate newer technologies that can improve the system's ability to withstand non-normal events, including self–healing networks, smart sensors, fault-detection technology, and microgrids; and (3) recovery, which includes incorporating customer-sited generation and back-up options and designing resources to assist with recovery after a major weather event.

ENO expects that the proposed accelerated infrastructure hardening will produce significant customer benefits by, among other things, lowering future post-storm restoration costs and decreasing the number of customers impacted and the duration of the overall outage after major weather events (*i.e.*, shortening the period during which customers are without electricity).

Statement of Project Objectives

[Line Hardening and Battery Microgrid in New Orleans, LA]

A. OBJECTIVES

The goal of the project is to create a cost-effective, reliable, and resilient electrical grid with a battery powered microgrid to withstand climate change impacting disadvantaged communities in New Orleans East.

The objectives of the project are to (1) replace 381 distribution poles with higher wind rated poles; (2) hardening 97 transmission structures, (3) install and interconnect a substation energy storage/delivery system (Battery storage) to restore power to the community during a substation transformer or transmission failure; and (4) execute a Community Benefits Plan partnering with minority serving institutions and community-based organizations to deliver educational programming including STEM training, scholarships, and paid apprenticeships.

B. SCOPE OF WORK

The scope of work includes: (1) replacing 381 distribution poles with higher wind rated poles and pole tops (cross arms and insulators) (b) (4) ; (2) hardening 97 transmission structures (b) (4) , (3) installing one multi-MWh battery capable of high MW load discharge (b) (4) ; (4) distributing community benefits through a workforce development program with education and community partners.]

The project will be conducted in 5 budget periods:

Budget Period 1: Planning & Design

Complete the bid process for Alliance partners.
Finalize scope and begin detailed engineering. Engineers, project managers, and construction personnel will conduct field walkdowns of the transmission and distribution system to gather information and to develop action plans.

Budget Period 2: Develop detailed design packages, procure materials, and obtain permits, mobilize construction resources, and begin construction

Detailed engineering design packages will be completed early in BP2. Permits will be developed/ acquired. Materials and supplies for the project will be acquired and stored and will ultimately be staged at or near the project locations. Construction resources will be mobilized, and construction activities (hardening of transmission and distribution system) will begin in BP2 and will involve matting and other activities to minimize environmental impact of construction.
(b) (4)

Budget Period 3: Complete construction, demobilize, complete energy storage interconnection, commissioning, and proceed to project closeout

Structure hardening on the transmission and distribution system will continue and complete during this BP. (b) (4)

Budget Period 4: Construction project close-out

(b) (4) [redacted]

Budget Period 5: Project Close-out

ENO will continue Community Benefits activities throughout the 60 month period of performance of the grant.

All Budget Periods: Community Benefits Plan Activities
ENO understands the importance of being a good neighbor and creating a climate of opportunity and engagement with the local community. The Community Benefits Plan has numerous activities that will be completed during the duration of this grant. Activities in the community benefits plan include:

(b) (4) [redacted]

C. TASKS TO BE PERFORMED

All Budget Periods

Overall Project Management and Planning

The recipient will perform project management activities to include project planning and control, subcontractor control, financial management, data management, management of supplies and/or equipment, risk management, and reporting as required to successfully achieve the overall objectives of the project.

Task 0.0 – Project Management and Planning

(b) (4) [redacted] ENO will qualify additional partners to add capacity and execution capabilities. ENO will maintain appropriate project controls in the areas

of project safety, cost, and schedule. It will also employ the necessary administrative and technical resources to ensure that project design, quality, and material deliverables are achieved in accordance with the project's specifications.

Task 0.1: Project Management and Planning

0.1 Project Management Plan (PMP): Within 30 days of award, the Recipient shall submit a PMP to the designated Federal Project Officer (FPO). The PMP shall be revised and resubmitted as often as necessary, during the project, to capture any major/significant changes to the planned approach, budget, key personnel, major resources, etc.

The Recipient shall manage and direct the project in accordance with the accepted PMP to meet all technical, schedule and budget objectives and requirements. The Recipient will coordinate activities to effectively accomplish the work. The Recipient will ensure that project plans, results, and decisions are appropriately documented, and that project reporting and briefing requirements are satisfied.

0.2 National Environmental Policy Act (NEPA) Compliance
As required, the Recipient shall provide the documentation necessary for NEPA compliance.

0.3 Continuation Briefing(s):
The Recipient will brief DOE on roughly an annual basis to explain the plans, progress, and results of the technical effort. The briefing shall also describe performance relative to project success criteria, milestones, and the Go/No-Go Decision points that are documented in the Project Management Plan (PMP).

Budget Period 1: Planning & Design

Task 1.0 –Hardening Transmission and Distribution

1.1 Scope development & Project Planning: Develop the scope of work, estimate, schedule, and risk assessment for the selected scope.

1.2 (b) (4) [redacted]

Task 2.0 –Battery Energy Storage

[2.1 Scope development & Site selection: Develop the scope of work, estimate, schedule. Select the substation and battery install location.]

2.2 (b) (4) [redacted]

Budget Period 2: Design completion, Procurement, Permitting and Construction

Task 3.0 – Hardening Transmission and Distribution

3.1 AP will complete the detailed engineering package.

3.2 Permits (local, federal, railroad, Department of Transportation and Development, etc.) will be obtained.

3.3 Material and supplies procured. Materials will be staged at or near the project locations.

3.4 Construction to begin:

3.4.1 (b) (4) [redacted]

Task 4.0 – (b) (4) [redacted]

Budget Period 3: Construction completion, system operational, and project close-out
Task 5.0 – Hardening Transmission and Distribution

5.1 (b) (4) [redacted]

Task 6.0 – Energy Storage System

6.1 Finalize ESS engineering design package, complete materials procurement and staging for interconnection.
6.2 Complete construction of substation interconnection, conclude civil work and site preparations for battery
6.3 Install ESS, complete substation interconnection and install microgrid controller.
6.4 System integrated into operational systems and tested.
6.5 Battery operational and commissioned.
6.6 Closing out of associated work orders.

Budget Period 4: Project Close-out

Task 7.0 – Hardening Transmission and Distribution

7.1 Continue and complete project close-out activities.

Task 8.0 – Energy Storage System

8.1 (b) (4) [redacted]

All Budget Periods
Task 9.0 – Community Benefits Plan

9.1 Create and Maintain Community Benefit Working Group.
9.2 Engage community and local Businesses.
9.3 Hold annual high school career fairs.
9.4 (b) (4) [redacted]

D. DELIVERABLES

In addition to the reports specified in the "Federal Assistance Reporting Checklist", the Recipient will provide the following to the DOE Project Officer (identified in Block 15 of the Assistance Agreement as the Program Manager):

- Summary of accomplishments and project work report will be prepared for inclusion in the GRIP Office annual programmatic progress report. Report will be due by October 31 of each year.
- Project Management Plan
- NEPA Compliance
- Design Report
- Project Complete Report with photographs

E. BRIEFINGS AND TECHNICAL PRESENTATIONS

Kickoff Briefing - Not more than 30 days after submission of the Project Management Plan, the Recipient shall prepare and present a project summary briefing as part of a Project Kickoff Meeting.

Pre-Continuation Briefing - Not less than 90 days prior to the planned start of a budget period, the Recipient shall brief the DOE on the results to date, and their plans for the subsequent periods of work. The DOE will consider the information from this briefing, as well as the content of deliverables submitted to date, prior to authorizing continuing the project.

Final Project Briefing - Not less than 30 days prior to the end of the project, the Recipient shall prepare and present a Final Project Briefing on the results and accomplishments of the entire project.

Other Briefings – The Recipient shall prepare and present technical, financial, and/or administrative briefings as requested by the DOE. Additionally, the DOE may require Recipients to make technical presentations at national and/or industry conferences.

Entergy New Orleans

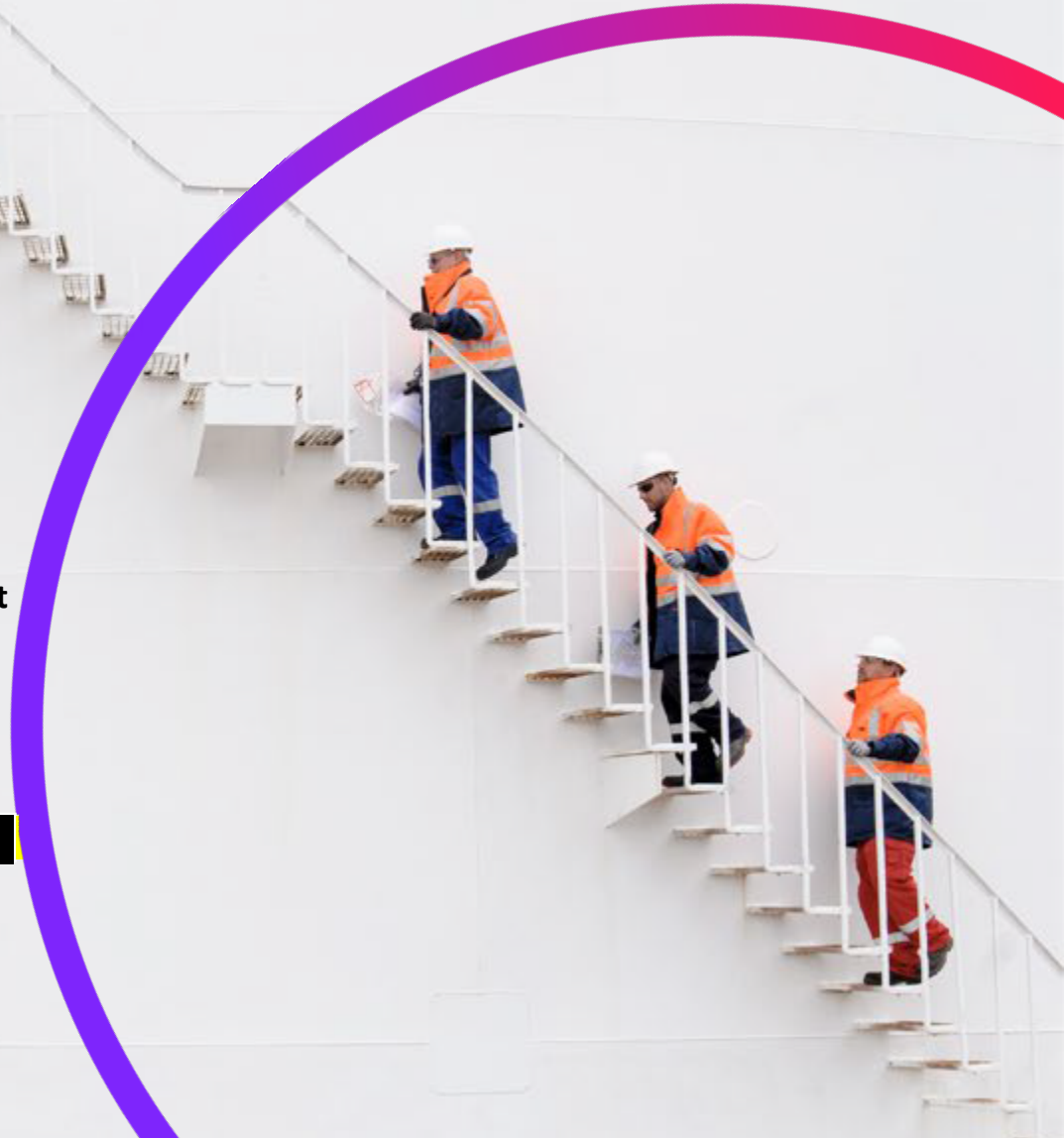
Line Hardening and Battery Backup Project

Director of Project Management (Capital Projects), **Catherine Ranken Ward**
Senior Manager Project Management (Capital Projects), **Joshua Francois**
Senior Project Manager (Battery), **Thomas Martinez**
Community Benefits Plan Manager, **Nyka Scott**

Project Plan:

- **Hardening Transmission (HT): hardening ~97 structures** (b) (4) **nt i m wind load tower available.**
- **Hardening Distribution (HD): hardening ~381 structures** (b) (4)
- (b) (4)

DOE investment: **$54.8 million**
Total project cost: **$109.6 million**



Project Goals

- ENO plans significant investments in line hardening and the addition of a battery back up in Disadvantaged Communities (DACs) to reduce the cost and impact of major weather events by reducing the number and duration of outages

- This project reflects our desire to accelerate our resiliency initiatives to enhance our local grid's resiliency against severe weather-related events

- New Orleans is an ideal location for investment in grid resilience because of the devastating impact hurricanes and large storms can have on the electric grid

- DOE GRIP funding will allow us to address equity issues to better position our neighbors in DACs to withstand impacts of weather events by increasing economic stability and mitigating climate change impacts to those in New Orleans East

Project Impacts

- The goal of this accelerated infrastructure hardening and microgrid project is to provide an innovative, cost-effective, and resilient local grid supporting over 49,000 residential, commercial, and industrial customers, 89% of which live in DACs in New Orleans East

- With DOE funding, the Gulf Coast will be more equipped to address the future risks posed by extreme weather events, which are becoming more frequent, severe, unpredictable, and costly and are disproportionately impacting the Gulf Coast region

- DOE funding enables a portion of the cost of the proposed hardening to be recovered without increasing rates that residents of New Orleans East in the affected DACs cannot afford

entergy

Project Title: Line Hardening and Battery Backup in New Orleans, LA

Name of Applicant: Entergy New Orleans, LLC

Name of Project Manager: Catherine Ward, Director, Project Management

Project Cost: $109.6M; cost match = $54.8M

Project Summary: Entergy New Orleans, LLC intends to make significant investments in line hardening in Disadvantaged Communities (DACs) and add battery backup, all of which is expected to reduce the cost and impact of major weather events by reducing the number and duration of outages as well as the cost of restoration. This project reflects our desire to accelerate our resiliency initiatives to enhance our local grid's resiliency against severe weather-related events.

Project Objectives: The devastating impact that hurricanes and large storms can have on the electric grid in New Orleans makes it an ideal and necessary location for additional investment in grid resilience, which is key to improving the livelihood of ENO's customers and the communities served, in particular DACs.

The goal of this accelerated infrastructure hardening and microgrid project is to provide an innovative, cost-effective, and resilient local grid supporting over 49,000 residential, commercial, and industrial customers, 89% of which live in DACs in New Orleans East.

Project Description: This project will modernize and improve the grid by completing three key tasks, each of which benefits New Orleans East, which has a very high proportion of DACs:

- Hardening Transmission (HT): hardening ~97 structures (b) (4) [redacted] This will improve the wind rating for all structures to 150 mph, the current industry maximum wind load tower available.
- Hardening Distribution (HD): hardening ~381 structures (b) (4) [redacted]
- Installation of Battery (IB): installation of a (b) (4) [redacted]

Potential Impacts: These three tasks work in combination to reduce the likelihood and the consequences of major disruptive events, increasing community and regional resilience. With DOE funding, the Gulf Coast will be more equipped to address the future risks posed by extreme weather events, which are becoming more frequent, severe, unpredictable, and costly and are disproportionately impacting the Gulf Coast region.

Instructions and Summary

Award Number: _____ **Date of Submission:** _____

Award Recipient: _____ **Form submitted by:** _____

(May be award recipient or sub-recipient)

Please read the instructions on each worksheet tab before starting. If you have any questions, please ask your DOE contact!
Do not modify this template or any cells for formulas!

1. If using this form for award application, negotiation, or budget revision, fill out the blank white cells in workbook tabs a. through j. with total project costs.
2. Blue colored cells contain instructions, headers, or summary calculations and should not be modified. Only blank white cells should be populated.
3. Enter detailed support for the project costs identified for each Category line item within each worksheet tab to autopopulate the summary tab.
4. The total budget presented on tabs a. through i. must include both Federal (DOE) and Non-Federal (cost share) portions.
5. All costs incurred by the preparer's sub-recipients, contractors, and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.
6. Ensure all entered costs are allowable, allocable, and reasonable in accordance with the administrative requirements prescribed in 2 CFR 200, and the applicable cost principles for each entity type: FAR Part 31 for For-Profit entities; and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.
7. Add rows as needed throughout tabs a. through j. If rows are added, formulas/calculations may need to be adjusted by the preparer. Do not add rows to the Instructions and Summary tab. If your project contains more than five budget periods, consult your DOE contact before adding additional budget period rows and columns.
8. ALL budget period cost categories are rounded to the nearest dollar.

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of Information Resources Management Policy, Plans, and Oversight, AD-241-2 - GTN, Paperwork Reduction Project (1910-5162), U.S. Department of Energy 1000 Independence Avenue, S.W., Washington, DC 20585; and to the Office of Management and Budget, Paperwork Reduction Project (1910-5162), Washington, DC 20503.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

The values in this summary table are from entries made in subsequent tabs, only blank white cells require data entry

Section A - Budget Summary

	Federal	Cost Share			Total Costs	Cost Share %	Proposed Budget Period Dates
Budget Period 1	(b) (4)				$18,262,665	50.00%	01/01/2024 - 12/31/2024
Budget Period 2						50.00%	01/01/2025 - 12/31/2025
Budget Period 3						50.00%	01/01/2026 - 12/31/2026
Budget Period 4						50.00%	01/01/2027 - 12/31/2027
Budget Period 5						50.00%	01/01/2028 - 12/31/2028
Total	$54,828,178	$54,828,178			$109,656,356	50.00%	

Section B - Budget Categories

CATEGORY	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Costs	% of Project	**Comments** (as needed)
a. Personnel	(b) (4)							
b. Fringe Benefits								
c. Travel								
d. Equipment								
e. Supplies								
f. Contractual								
Sub-recipient								
Contractor								
FFRDC								
Total Contractual								
g. Construction								
h. Other Direct Costs								
Total Direct Costs								
i. Indirect Charges								
Total Costs						$109,656,356	100.00%	

Additional Explanation (as needed):

a. Personnel

INSTRUCTIONS - PLEASE READ!!!

1. List project costs solely for employees of the entity completing this form. All personnel costs for subrecipients and contractors must be included under f. Contractual.
2. All personnel should be identified by position title and not employee name. Enter the amount of time (e.g., hours or % of time) and the base hourly rate and the total direct personnel compensation will automatically calculate. Rate basis (e.g., rate negotiated for each hour worked on the project, labor distribution report, state civil service rates, etc.) must also be identified.
3. If loaded labor rates are utilized, a description of the costs the loaded rate is comprised of must be included in the Additional Explanation section below. DOE must review all components of the loaded labor rate for reasonableness and unallowable costs (e.g. fee or profit).
4. If a position and hours are attributed to multiple employees (e.g. Technician working 4000 hours) the number of employees for that position title must be identified.
5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Position Title	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hrs)	Hourly Rate ($/Hr)	Total Budget Period 1	Time (Hrs)	Hourly Rate ($/Hr)	Total Budget Period 2	Time (Hrs)	Hourly Rate ($/Hr)	Total Budget Period 3	Time (Hrs)	Hourly Rate ($/Hr)	Total Budget Period 4	Time (Hrs)	Hourly Rate ($/Hr)	Total Budget Period 5			
T&D 1,3,5,7	Director, Project Management																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr. Manager Distribution Project Development																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Project Manager Distribution Project Development																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr. Manager PMEC																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Project Manager PMEC																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Engineering																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Construction Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Region Manager Customer Service																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Portfolio Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Cost Analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Safety Project Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Project Control Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Project Scheduler																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr. Manager Project Management																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr. Project Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Manager Engineering (Sub/Line)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr Project Manager (Sub)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr Project Manager (Civil)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr Project Manager (Line)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Document Control																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Manager Engineering (Relay)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr Project Manager (Relay)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr Agent Right of Way																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Supv Environmental																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Environmental Analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Sr. Manager Construction																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Controls Analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Project Controls Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Manager Asset Management																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Customer Service Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Legal Real Estate																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Procurement Specialist																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Vegetation Management Operations Coordinator																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
Battery personnel 2,4,6,8	Project Manager - Execution																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Site Engineer - Execution																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Commercial Attorney																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Procurement Specialist																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Manager IT																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Regulatory/legal/environmental specialist																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Director, Compliance - contracting officer																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Manager Compliance - contract administrator																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Compliance staff - Analyst I																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Compliance staff - Sr. staff analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Compliance staff - Lead Analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Compliance staff - Accounting (invoicing)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Finance business partners - compliance																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Sr. Accountant (invoicing/review)																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Internal Audit - Sr. Mgr																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
All	Internal Audit - analyst																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
9	Community benefit plan - Manager																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
9	Community benefit plan - Workforce Development																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
9	Community benefit plan - Supplier Diversity																		Entergy HR's Market Reference Value for this job title plus 4% cost of living increase annually
	Total Personnel Costs	(b) (4)																	

(b) (4)

Additional Explanation (as needed):

b. Fringe Benefits

INSTRUCTIONS - PLEASE READ!!!

1. Fill out the table below by position title. If all employees receive the same fringe benefits, you can show "Total Personnel" in the Labor Type column instead of listing out all position titles.
2. The rates and how they are applied should not be averaged to get one fringe cost percentage. Complex calculations should be described/provided in the Additional Explanation section below.
3. The fringe benefit rates should be applied to all positions, regardless of whether those funds will be supported by Federal Share or Recipient Cost Share.
4. Each budget period is rounded to the nearest dollar.

Labor Type	Budget Period 1			Budget Period 2			Budget Period 3			Budget Period 4			Budget Period 5			Total Project
	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	Personnel Costs	Rate	Total	
Sr. Manager Distribution Project Development	(b) (4)															
Director, Project Management																
Project Manager Distribution Project Development																
Sr. Manager PMEC																
Project Manager PMEC																
Engineering																
Construction Manager																
Region Manager Customer Service																
Portfolio Manager																
Cost Analyst																
Safety Project Manager																
Project Control Manager																
Project Scheduler																
Sr. Manager Project Management																
Sr. Project Manager																
Manager Engineering (Sub/Line)																
Sr Project Manager (Sub)																
Sr Project Manager (Civil)																
Sr Project Manager (Line)																
Document Control																
Manager Engineering (Relay)																
Sr Project Manager (Relay)																
Sr Agent Right of Way																
Supv Environmental																
Environmental Analyst																
Sr. Manager Construction																
Controls Analyst																
Project Controls Manager																
Manager Asset Management																
Customer Service Manager																
Legal Real Estate																
Procurement Specialist																
Vegetation Management Operations Coordinator																
Project Manager - Execution																
Site Engineer - Execution																
Commercial Attorney																
Procurement Specialist																
Manager IT																
Regulatory/legal/environmental specialist																
Director, Compliance - contracting officer																
Manager Compliance - contract administrator																
Compliance staff - Analyst I																
Compliance staff - Sr. staff analyst																
Compliance staff - Lead Analyst																
Compliance staff - Accounting (invoicing)																
Finance business partners - compliance																
Sr. Accountant (invoicing/review)																
Internal Audit - Sr. Mgr																
Internal Audit - analyst																
Community benefit plan - Manager																
Community benefit plan - Workforce Development																
Community benefit plan - Supplier Diversity																
Total:	(b) (4)															

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required at the time of award negotiation if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information if not previously submitted.

_____ A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is/was included with the project application.*

__X__ There is not a current federally approved rate agreement negotiated and available.**

*Unless the organization has submitted an indirect rate proposal which encompasses the fringe pool of costs, please provide the organization's benefit package and/or a list of the components/elements that comprise the fringe pool and the cost or percentage of each component/element allocated to the labor costs identified in the Budget Justification (Form EERE 335.1).

**When this option is checked, the entity preparing this form shall submit an indirect rate proposal in the format provided in the Sample Rate Proposal at https://www.energy.gov/eere/funding/downloads/sample-indirect-rate-proposal-and-profit-compliance-audit, or a format that provides the same level of information and which will support the rates being proposed for use in the performance of the proposed project.

Additional Explanation (as necessary): Please use this box (or an attachment) to list the elements that comprise your fringe benefits and how they are applied to your base (e.g. Personnel) to arrive at your fringe benefit rate.
Fringe benefits here include incentive compensation, 401K and/or Pension costs, and current health and welfare benefits. It also includes a non-productive loader element to cover vacation and other paid time off as well as payroll taxes.

c. Travel

INSTRUCTIONS - PLEASE READ!!!

1. Identify Foreign and Domestic Travel as separate items. Examples of Purpose of Travel are subrecipient site visits, DOE meetings, project mgmt. meetings, etc. Examples of Basis for Estimating Costs are past trips, travel quotes, GSA rates, etc.
2. All listed travel must be necessary for performance of the Statement of Project Objectives.
3. Only travel that is directly associated with this award should be included as a direct travel cost to the award.
4. Federal travel regulations are contained within the applicable cost principles for all entity types.
5. Travel costs should remain consistent with travel costs incurred by an organization during normal business operations as a result of the organizations written travel policy. In absence of a written travel policy, organizations must follow the regulations prescribed by the General Services Administration.
6. Columns E, F, G, H, I, J, and K are per trip.
7. The number of days is inclusive of the day of departure and the day of return.
8. Recipients should enter City and State (or City and Country for International travel) in the Depart from and Destination fields.
9. Each budget period is rounded to the nearest dollar.

SOPO Task #	Purpose of Travel	Depart From	Destination	No. of Days	No. of Travelers	Lodging per Traveler	Flight per Traveler	Vehicle per Traveler	Per Diem Per Traveler	Cost per Trip	Basis for Estimating Costs
	Domestic Travel	**Budget Period 1**									
2	Site Visit - Scoping & Planning	The Woodlands, TX	New Orleans, LA	2	1	(b) (4)					Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Scoping & Planning	Jackson, MS	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Scoping & Planning	Little Rock, AR	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Scoping & Planning	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	International Travel										
	Budget Period 1 Total										
	Domestic Travel	**Budget Period 2**									
4	Site Visit - Detailed Engineering	The Woodlands, TX	New Orleans, LA	2	2	(b) (4)					Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Detailed Engineering	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Detailed Engineering	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Site Visit - Detailed Engineering	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	International Travel										
	Budget Period 2 Total										
	Domestic Travel	**Budget Period 3**									
6	Jan Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2	(b) (4)					Current estimates from travel vendor & US GSA Per Diem Rates
	Jan Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Jan Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Jan Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Feb. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Feb. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Feb. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Feb. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Mar. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Mar. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Mar. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Mar. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Apr. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Apr. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Apr. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Apr. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	May Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	May Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	May Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	May Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	June Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	June Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	June Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	June Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	July Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	July Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	July Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	July Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Aug. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Aug Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Aug Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Aug Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Sept. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Sept. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Sept. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Sept. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Oct. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Oct. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Oct. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Oct. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Nov. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Nov. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Nov. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Nov. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Dec. Site Visit #1 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Dec. Site Visit #2 - Construction & Battery Interconnection & Commission & Closeout	Jackson, MS	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Dec. Site Visit #3 - Construction & Battery Interconnection & Commission & Closeout	Little Rock, AR	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	Dec. Site Visit #4 - Construction & Battery Interconnection & Commission & Closeout	The Woodlands, TX	New Orleans, LA	2	2						Current estimates from travel vendor & US GSA Per Diem Rates
	IT Site Visit	Jackson, MS	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	IT Site Visit	Jackson, MS	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Supplier & Diversity	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	The Woodlands, TX	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
9	Community Visit - Work Force Development	New Orleans, LA	New Orleans, LA	2	1						Current estimates from travel vendor & US GSA Per Diem Rates
	International Travel										
	Budget Period 3 Total										
	Domestic Travel	**Budget Period 4**									
	Budget Period 4 Total										
	Domestic Travel	**Budget Period 5**									
	Budget Period 5 Total										
	PROJECT TOTAL										

Additional Explanation (as needed):

d. Equipment

INSTRUCTIONS - PLEASE READ!!!

1. Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year. Please refer to the applicable Federal regulations in 2 CFR 200 for specific equipment definitions and treatment.

2. List all equipment below, providing a basis of cost (e.g. contractor quotes, catalog prices, prior invoices, etc.). Briefly justify items as they apply to the Statement of Project Objectives. If it is existing equipment, provide logical support for the estimated value shown.

3. During award negotiations, provide a contractor quote for all equipment items over $50,000 in price. If the contractor quote is not an exact price match, provide an explanation in the additional explanation section below. If a contractor quote is not practical, such as for a piece of equipment that is purpose-built, first of its kind, or otherwise not available off the shelf, provide a detailed engineering estimate for how the cost estimate was derived.

4. Each budget period is rounded to the nearest dollar.

SOPO Task #	Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
Budget Period 1						
	Budget Period 1 Total			$0		
Budget Period 2						
3	Distribution Poles and Pole Top Hardware	(b) (4)	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the distribution project scope
3	Upgrade 230kV Transmission Structures	[redacted]	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the project scope
4	Substation equimpent (Relay upgrades & protections materials)	[redacted]	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the substation Battery interconnection Scope
	Distribution Poles, wire, and Protection equipment	[redacted]	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the substation Battery interconnection Scope
	Budget Period 2 Total			[redacted]		
Budget Period 3						
6	IT Hardware	[redacted]	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the Energy Storage System Integration project scope
	Microgrid Controller	[redacted]	[redacted]	[redacted]	Historical company spend on these items, industry standard, industry knowledge of engineers	Required to satisfy the needs of the Energy Storage System Integration project scope
				[redacted]		
				[redacted]		
				[redacted]		
	Budget Period 3 Total			[redacted]		
Budget Period 4						
	Budget Period 4 Total			[redacted]		
Budget Period 5						
	Budget Period 5 Total			[redacted]		
	TOTAL EQUIPMENT			[redacted]		

Additional Explanation (as needed):

f. Contractual

INSTRUCTIONS - PLEASE READ!!!

1. The entity completing this form must provide all costs related to sub-recipients, contractors, and FFRDC partners in the applicable boxes below.

2. Sub-recipients (partners, sub-awardees): Subrecipients shall submit a Budget Justification describing all project costs and calculations when their total proposed budget exceeds either (1) $100,000 or (2) 25% of total award costs. These sub-recipient forms may be completed by either the sub-recipients themselves or by the preparer of this form. The budget totals on the sub-recipient's forms must match the sub-recipient entries below. A subrecipient is a legal entity to which a subaward is made, who has performance measured against whether the objectives of the Federal program are met, is responsible for programmatic decision making, must adhere to applicable Federal program compliance requirements, and uses the Federal funds to carry out a program of the organization. All characteristics may not be present and judgment must be used to determine subrecipient vs. contractor status.

3. Contractors: List all contractors supplying commercial supplies or services used to support the project. For each Contractor cost with total project costs of $100,000 or more, a Contractor quote must be provided. A contractor is a legal entity contracted to provide goods and services within normal business operations, provides similar goods or services to many different purchasers, operates in a competitive environment, provides goods or services that are ancillary to the operation of the Federal program, and is not subject to compliance requirements of the Federal program. All characteristics may not be present and judgment must be used to determine subrecipient vs.contractor status.

4. Federal Funded Research and Development Centers (FFRDCs): FFRDCs must submit a signed Field Work Proposal during award application. The award recipient may allow the FFRDC to provide this information directly to DOE, however project costs must also be provided below.

5. Each budget period is rounded to the nearest dollar.

SOPO Task #	Contractor Name/Organization	Purpose and Basis of Cost	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Project Total
1, 3, 5, 7	One vendor TBD - Entergy will follow supply chain processes to select contractor	Distribution Hardening Contractor	(b) (4)					
1, 3, 5, 7	One vendor TBD - Entergy will follow supply chain processes to select contractor	Transmission Hardening Contractor						
All	Vendor TBD - External consulting for administration and compliance	Pricing indication from a vendor who offers this type of service						
All	Vendor TBD - external auditing firm	Required by the DOE. Based on industry standard.						
All	Vendor TBD - outside legal work	Hire external legal vendor to assist with permits and rights of way and other similar items, including help during the closeout period. Dollar amount based on historical spend on similar projects.						
All	Vendor TBD - outside environmental consulting	Hire external vendor to provide environmental surveys for permits, including help during the closeout period. Dollar amount based on historical spend on similar projects.						
4,6	TBD - Battery vendor	Battery Installation EPC						
	TBD - Substation an Distribution Construction	Distribution and Substation Construction						
	TBD - Engineering Consultant Vendor	Battery Engineering Oversight						
	TBD - IT Contract	Software and Tech Integration						
		Sub-tota						
		Total Contractua						

Additional Explanation (as needed):

h. Other Direct Costs

INSTRUCTIONS - PLEASE READ!!!
1. Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs must not be included in the indirect costs (for which the indirect rate is being applied for this project). Examples are: tuition, printing costs, etc. which can be directly charged to the project and are not duplicated in indirect costs (overhead costs).
2. Basis of cost are items such as vendor quotes, prior purchases of similar or like items, published price list, etc.
3. Each budget period is rounded to the nearest dollar

SOPO Task #	General Description and SOPO Task #	Cost	Basis of Cost	Justification of need
			Budget Period 1	
9	Community Benefits Working Group (CBWG) - Funds to support quarterly meetings	(b) (4)	Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to enable quarterly meetings of the CBWG.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Funding to remove barriers for individuals attending community listening sessions		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to remove barriers for individuals attending the community listening sessions which will occur 3 times each budget period.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Grant funds to be allocated by the CBWG and informed by input received during community listening sessions		Cost reflects ENO commitment as documented in the CBP. Costs are to enable community benefit grants to be allocated by the CBWG and informed by input received from the community listening sessions.	Additional support to communities of the project/grant in addition to project benefits
9	New Orleans Career Center (NOCC)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with the NOCC. Cost is to enable clean energy workforce training for at least 200 students, from local disadvantaged communities, per budget period through the NOCC.	Additional support to communities of the project/grant in addition to project benefits
9	First 72+		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with First 72+. Costs will provide re-entry kits to program participants, which may include a cellphone, bed linens, clothing, transportation vouchers - all things needed for job training and eventual employment.	Additional support to communities of the project/grant in addition to project benefits
9	Chambers of Commerce (New Orleans, Louisiana, Hispanic and Black)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the Chambers to collectively sponsor semi-annual events for local and diverse contractors to educate them on contracting opportunities for the Project.	Additional support to communities of the project/grant in addition to project benefits
9	Southern Region Minority Supplier Development Council (SRMSDC)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the SRMSDC to assist ENO with engaging labor unions, local governments, tribal entities and other BIPOC stakeholders from DACs; assist ENO with incorporating and measuring supply chain equity business practices into ENO's supply chain; and identify tools to achieve Justice40 goals.	Additional support to communities of the project/grant in addition to project benefits
9	THRIVE		Cost reflects ENO commitment as documented in the CBP and are based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with THRIVE. Cost is to enable THRIVE to host green infrastructure business assistance workshops for BIPOC entrepreneurs to recieve 55 hours of technical assistance to prepare them for securing new contracts created through this projects. Cost estimate is based on 25 BIPOC businesses/year participating in this program.	Additional support to communities of the project/grant in addition to project benefits
9	Delgado Community College		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with this program. The costs is to enable the training of 5 lineman annually.	Additional support to communities of the project/grant in addition to project benefits
9	HBCU Community Development Coalition & Dillard University		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with the entities involved in this program. Entergy will support the next phase of DOE's Community Clean Energy Coalition Prize, in which the HBCU CDAC will work toward building their proposed multiorganization coalition, clearly defining their community need, and ensuring their plan aligns with at least one DOE Justice40 policy priority.	Additional support to communities of the project/grant in addition to project benefits
9	US Business Council for Sustainable Development (USBCSD)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with USBCSD. Cost is to enable webinars for HBCU students and faculty to provide opportunities for learning about a variety of green energy topics. Cost estimate is based on target of 700 HBCU students and faculty participating during each budget period.	Additional support to communities of the project/grant in addition to project benefits
	Budget Period 1 Total			
			Budget Period 2	
9	Community Benefits Working Group (CBWG) - Funds to support quarterly meetings		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to enable quarterly meetings of the CBWG.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Funding to remove barriers for individuals attending community listening sessions		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to remove barriers for individuals attending the community listening sessions which will occur 3 times each budget period.	Additional support to communities of the project/grant in addition to project benefits
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9	First 72+		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with First 72+. Costs will provide re-entry kits to program participants, which may include a cellphone, bed linens, clothing, transportation vouchers - all things needed for job training and eventual employment.	Additional support to communities of the project/grant in addition to project benefits
9	Chambers of Commerce (New Orleans, Louisiana, Hispanic and Black)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the Chambers to collectively sponsor semi-annual events for local and diverse contractors to educate them on contracting opportunities for the Project.	Additional support to communities of the project/grant in addition to project benefits
9	Southern Region Minority Supplier Development Council (SRMSDC)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the SRMSDC to assist ENO with engaging labor unions, local governments, tribal entities and other BIPOC stakeholders from DACs; assist ENO with incorporating and measuring supply chain equity business practices into ENO's supply chain; and identify tools to achieve Justice40 goals.	Additional support to communities of the project/grant in addition to project benefits
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9	Delgado Community College		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with this program. The costs is to enable the training of 5 lineman annually.	Additional support to communities of the project/grant in addition to project benefits
9	HBCU Community Development Coalition & Dillard University		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with the entities involved in this program. Entergy will support the next phase of DOE's Community Clean Energy Coalition Prize, in which the HBCU CDAC will work toward building their proposed multiorganization coalition, clearly defining their community need, and ensuring their plan aligns with at least one DOE Justice40 policy priority.	Additional support to communities of the project/grant in addition to project benefits
9	US Business Council for Sustainable Development (USBCSD)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with USBCSD. Cost is to enable webinars for HBCU students and faculty to provide opportunities for learning about a variety of green energy topics. Cost estimate is based on target of 700 HBCU students and faculty participating during each budget period.	Additional support to communities of the project/grant in addition to project benefits
	Budget Period 2 Total			
			Budget Period 3	
9	Community Benefits Working Group (CBWG) - Funds to support quarterly meetings		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to enable quarterly meetings of the CBWG.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Funding to remove barriers for individuals attending community listening sessions		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to remove barriers for individuals attending the community listening sessions which will occur 3 times each budget period.	Additional support to communities of the project/grant in addition to project benefits
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9	First 72+		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with First 72+. Costs will provide re-entry kits to program participants, which may include a cellphone, bed linens, clothing, transportation vouchers - all things needed for job training and eventual employment.	Additional support to communities of the project/grant in addition to project benefits
9	Chambers of Commerce (New Orleans, Louisiana, Hispanic and Black)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the Chambers to collectively sponsor semi-annual events for local and diverse contractors to educate them on contracting opportunities for the Project.	Additional support to communities of the project/grant in addition to project benefits
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9	Delgado Community College		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with this program. The costs is to enable the training of 5 lineman annually.	Additional support to communities of the project/grant in addition to project benefits
9	HBCU Community Development Coalition & Dillard University		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with the entities involved in this program. Entergy will support the next phase of DOE's Community Clean Energy Coalition Prize, in which the HBCU CDAC will work	Additional support to communities of the project/grant in addition to project benefits

SOPO Task #	General Description and SOPO Task #	Cost	Basis of Cost	Justification of need
9	US Business Council for Sustainable Development (USBCSD)	[redacted]	Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with USBCSD. Cost is to enable webinars for HBCU students and faculty to provide opportunites for learning about a variety of green energy topics. Cost estimate is based on target of 700 HBCU students and faculty participating during each budget period.	Additional support to communities of the project/grant in addition to project benefits
	Budget Period 3 Total			
			Budget Period 4	
9	Community Benefits Working Group (CBWG) - Funds to support quarterly meetings		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to enable quarterly meetings of the CBWG	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Funding to remove barriers for individuals attending community listening sessions		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to remove barriers for individuals attending the community listening sessions which will occur 3 times each budget period.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Grant funds to be allocated by the CBWG and informed by input received during community listening sessions		Cost reflects ENO commitment as documented in the CBP. Costs are to enable community benefit grants to be allocated by the CBWG and informed by input received from the community listening sessions.	Additional support to communities of the project/grant in addition to project benefits
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9	First 72+		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with First 72+. Costs will provide re-entry kits to program participants, which may include a cellphone, bed linens, clothing, transportation vouchers - all things needed for job training and eventual employment.	Additional support to communities of the project/grant in addition to project benefits
9	Chambers of Commerce (New Orleans, Louisiana, Hispanic and Black)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the Chambers to collectively sponsor semi-annual events for local and diverse contractors to educate them on contracting opportunities for the Project.	Additional support to communities of the project/grant in addition to project benefits
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9	Delgado Community College		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with this program. The costs is to enable the training of 5 lineman annually.	Additional support to communities of the project/grant in addition to project benefits
9	HBCU Community Development Coalition & Dillard University		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with the entities involved in this program. Entergy will support the next phase of DOE's Community Clean Energy Coalition Prize, in which the HBCU CDAC will work	Additional support to communities of the project/grant in addition to project benefits
9	US Business Council for Sustainable Development (USBCSD)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with USBCSD. Cost is to enable webinars for HBCU students and faculty to provide opportunites for learning about a variety of green energy topics. Cost estimate is based on target of 700 HBCU students and faculty participating during each budget period.	Additional support to communities of the project/grant in addition to project benefits
	Budget Period 4 Total			
			Budget Period 5	
9	Community Benefits Working Group (CBWG) - Funds to support quarterly meetings		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to enable quarterly meetings of the CBWG.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Funding to remove barriers for individuals attending community listening sessions		Cost reflects ENO commitment as documented in the CBP and was estimated based on Entergy experience with similar projects and engagements. Cost is to remove barriers for individuals attending the community listening sessions which will occur 3 times each budget period.	Additional support to communities of the project/grant in addition to project benefits
9	CBWG - Grant funds to be allocated by the CBWG and informed by input received during community listening sessions		Cost reflects ENO commitment as documented in the CBP. Costs are to enable community benefit grants to be allocated by the CBWG and informed by input received from the community listening sessions.	Additional support to communities of the project/grant in addition to project benefits
9	New Orleans Career Center (NOCC)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with the NOCC. Cost is to enable clean energy workforce training for at least 200 students, from local disadvantaged communities, per budget period through the NOCC.	Additional support to communities of the project/grant in addition to project benefits
9	First 72+		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with First 72+. Costs will provide re-entry kits to program participants, which may include a cellphone, bed linens, clothing, transportation vouchers - all things needed for job training and eventual employment.	Additional support to communities of the project/grant in addition to project benefits
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9	Southern Region Minority Supplier Development Council (SRMSDC)		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with similar projects and engagement. The cost is to enable the SRMSDC to assist ENO with engaging labor unions, local governments, tribal entities and other BIPOC stakeholders from DACs; assist ENO with incorporating and measuring supply chain equity business practices into ENO's supply chain; and identify tools to achieve Justice40 goals.	Additional support to communities of the project/grant in addition to project benefits
9	THRIVE		Cost reflects ENO commitment as documented in the CBP and are based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with THRIVE. Cost is to enable THRIVE to host green infrastructure business assistance workshops for BIPOC entrepreneurs to recieve 55 hours of technical assistance to prepare them for securing new contracts created through this projects. Cost estimate is based on 25 BIPOC businesses/year participating in this program.	Additional support to communities of the project/grant in addition to project benefits
9	Delgado Community College		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with this program. The costs is to enable the training of 5 lineman annually.	Additional support to communities of the project/grant in addition to project benefits
9	HBCU Community Development Coalition & Dillard University		Costs reflects ENO commitment as documented in the CBP and are based on ENO experience with the entities involved in this program. Entergy will support the next phase of DOE's Community Clean Energy Coalition Prize, in which the HBCU CDAC will work	Additional support to communities of the project/grant in addition to project benefits
9	US Business Council for Sustainable Development (USBCSD)		Cost reflects ENO commitment as documented in the CBP and was estimated based on past Entergy experience with similar projects and engagements. This cost is informed by discussions with USBCSD. Cost is to enable webinars for HBCU students and faculty to provide opportunites for learning about a variety of green energy topics. Cost estimate is based on target of 700 HBCU students and faculty participating during each budget period.	Additional support to communities of the project/grant in addition to project benefits
	Budget Period 5 Total			
	TOTAL OTHER DIRECT COSTS			

Additional Explanation (as needed):

i. Indirect Costs

INSTRUCTIONS - PLEASE READ!!!

1. Fill out the table below to indicate how your indirect costs are calculated. Use the box below to provide additional explanation regarding your indirect rate calculation.

2. The rates and how they are applied should not be averaged to get one indirect cost percentage. Complex calculations or rates that do not do not correspond to the below categories should be described/provided in the Additional Explanation section below. If questions exist, consult with your DOE contact before filling out this section.

3. The indirect rate should be applied to both the Federal Share and Recipient Cost Share.

4. NOTE: A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim resulting cost as a Cost Share contribution, nor can the Recipient claim "unrecovered indirect costs" as a Cost Share contribution**. Neither of these costs can be reflected as actual indirect cost rates realized by the orgnaization, and therefore are not verifiable in the Recipient records as required by Federal Regulation (200.306(b)(1))

5.. Each budget period is rounded to the nearest dollar.

	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total	Explanation of BASE
Provide ONLY Applicable Rates:							
Overhead Rate	(b) (4)						
General & Administrative (G&A)							de minimus rate
FCCM Rate, if applicable							
OTHER Indirect Rate							
Indirect Costs (As Applicable):							
Overhead Costs							
G&A Costs							
FCCM Costs, if applicable						$0	
OTHER Indirect Costs						$0	
Total indirect costs requested:							

A federally approved indirect rate agreement, or rate proposed (supported and agreed upon by DOE for estimating purposes) is required if reimbursement of indirect costs is requested. Please check (X) one of the options below and provide the requested information if it has not already been provided as requested, or has changed.

_____ An indirect rate has been approved or negotiated with a federal government agency. A copy of the latest rate agreement is included with this application and will be provided electronically to the Contracting Officer for this project.
_____ The organization does not have a current, federally approved indirect cost rate agreement and has provided an indirect rate proposal in support of the proposed costs.
__X__ This organization has elected to apply a 10% de minimis rate in accordance with 2 CFR 200.414(f).

You must provide an explanation (below or in a separate attachment) and show how your indirect cost rate was applied to this budget in order to come up with the indirect costs shown.

Additional Explanation (as needed): *IMPORTANT: Please use this box (or an attachment) to further explain how your total indirect costs were calculated. If the total indirect costs are a cumulative amount of more than one calculation or rate application, the explanation and calculations should identify all rates used, along with the base they were applied to (and how the base was derived), and a total for each (along with grand total).

Cost Share

PLEASE READ!!!

1. A detailed presentation of the cash or cash value of all cost share proposed must be provided in the table below. All items in the chart below must be identified within the applicable cost category tabs a. through i. in addition to the detailed presentation of the cash or cash value of all cost share proposed provided in the table below. Identify the source organization & amount of each cost share item proposed in the award.

2. Cash Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) for costs incurred and paid for during the project. This includes when an organization pays for personnel, supplies, equipment, etc. for their own company with organizational resources. If the item or service is reimbursed for, it is cash cost share. All cost share items must be necessary to the performance of the project. **Contractors may not provide cost share.** Any partial donation of goods or services is considered a discount and is not allowable.

3. In Kind Cost Share - encompasses all contributions to the project made by the recipient, subrecipient, or third party (an entity that does not have a role in performing the scope of work) where a value of the contribution can be readily determined, verified and justified but where no actual cash is transacted in securing the good or service comprising the contribution. In Kind cost share items include volunteer personnel hours, the donation of space or use of equipment, etc. The cash value and calculations thereof for all In Kind cost share items must be justified and explained in the Cost Share Item section below. All cost share items must be necessary to the performance of the project. If questions exist, consult your DOE contact before filling out In Kind cost share in this section. **Contractors may not provide cost share**. Any partial donation of goods or services is considered a discount and is not allowable.

4. Funds from other Federal sources MAY NOT be counted as cost share. This prohibition includes FFRDC sub-recipients. Non-Federal sources include any source not originally derived from Federal funds. Cost sharing commitment letters from subrecipients and third parties must be provided with the original application.

5. Fee or profit, including foregone fee or profit, **are not allowable** as project costs (including cost share) under any resulting award. The project may only incur those costs that are allowable and allocable to the project (including cost share) as determined in accordance with the applicable cost principles prescribed in FAR Part 31 for For-Profit entities and 2 CFR Part 200 Subpart E - Cost Principles for all other non-federal entities.

6. NOTE: A Recipient who elects to employ the 10% de minimis Indirect Cost rate **cannot claim the resulting indirect costs as a Cost Share contribution.**

7. NOTE: A Recipient **cannot claim "unrecovered indirect costs"** as a Cost Share contribution, **without prior approval.**

8. Each budget period is rounded to the nearest dollar.

Organization/Source	Type (Cash or In Kind)	Cost Share Item	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	Total Project Cost Share
Entergy	Cash	Half of the entire proposed project and budget	(b) (4)	[redacted]	[redacted]	[redacted]	[redacted]	$54,828,178
		TOTAL COST SHARE	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	$54,828,178

Total Project Cost: $109,656,356 **Cost Share Percent of Award: 50.0%**

Additional Explanation (as needed):

Applicant Name: 0 Award Number: 0

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget			
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)		Total (g)
1. Budget Period 1				(b) (4)			(b) (4)
2. Budget Period 2							
3. Budget Period 3							
4. Budget Period 4							
5. Budget Period 5							
6. Totals				$54,828,178	$54,828,178		$109,656,356

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity					Total (5)
	Budget Period 1	Budget Period 2	Budget Period 3	Budget Period 4	Budget Period 5	
a. Personnel	(b) (4)					
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual						
g. Construction						
h. Other						
i. Total Direct Charges (sum of 6a-6h)						
j. Indirect Charges						
k. **Totals** (sum of 6i-6j)						$109,656,356
7. Program Income						$0