



350Louisiana.org



October 16, 2017

Via Hand Delivery

Ms. Lora W. Johnson, CMC
Clerk of Council
Room 1E09, City Hall
1300 Perdido Street
New Orleans, LA 70112

***Re: Entergy New Orleans, Inc.'s Application and Supplemental and Amending for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief
Docket No. UD-16-02***

Direct and Supplemental Direct Testimony of the Alliance for Affordable Energy, Deep South Center for Environmental Justice, 350 Louisiana – New Orleans and Sierra Club

Dear Ms. Johnson:

Undersigned counsel make this filing on behalf of the Alliance for Affordable Energy, Deep South Center for Environmental Justice, 350 Louisiana – New Orleans, and Sierra Club (collectively, “Public Interest Intervenors”). Enclosed, please find the original and three copies of the Direct Testimonies and Supplemental Direct Testimonies of Public Interest Intervenors’ expert witnesses. This filing includes the Direct Testimony and Exhibits of Robert Fagan, Peter J. Lanzalotta, Dr. Elizabeth A. Stanton, and Philip Henderson. This filing also includes the Supplemental Direct Testimonies and Exhibits of Dr. Alexander S. Kolker, Dr. George D. Thurston, and Dr. Beverly Wright.

Public Interest Intervenors’ expert witnesses collectively present the City Council with 10 reasons for finding that Entergy New Orleans, Inc. (“ENO”) has failed to establish that construction of either of ENO’s proposed natural-gas power plants, a combustion turbine or a series of reciprocating engines, is in the public interest. Specifically, the City Council should find that:

- 1) ENO's reliability problems largely stem from its dysfunctional distribution system, which cannot be fixed by a new power plant. Indeed, ENO customers suffered 2,242 power outages in 2016 alone—an average of 9 outages per day—and none of which were caused by unplanned power plant outages or other shortages of capacity. Capacity surpluses can never serve customers if the poles and wires are in such disrepair that they frequently fail to deliver electricity.
- 2) ENO concedes that making transmission upgrades to five existing transmission lines will mitigate **all** reliability-based system constraints over the next ten years without building any new generation. These transmission upgrades are estimated to cost approximately \$57.3 million, which is significantly less than the \$232 million cost of the proposed CT plant and the \$210 million cost of the alternative peaker plant.
- 3) Neither proposal by ENO will protect the citizens of New Orleans from outages due to major weather events such as hurricanes.
- 4) ENO has inflated its peak capacity forecast, making unrealistic assumptions about energy efficiency and renewables in New Orleans, so that it can argue that there is a capacity need to spend more \$232 million on the plant, when the City may actually have a long-term capacity *surplus*.
- 5) ENO is recommending that the City Council base its decision on the unwarranted assumption that the capacity price will skyrocket and remain high for much of the 20-year analysis period. This is a risky bet that exposes ratepayers to higher costs in the likelier event that capacity prices will remain low.
- 6) The ground in New Orleans is naturally prone to subsidence, any human driven activity that causes subsidence will intensify a problem already known to exist. Subsidence in this instance is particularly alarming because the subsidence will occur very close to the newly-strengthened post-Katrina levees system that protects the Lower 9th Ward and nearby communities.
- 7) Either proposed plant would significantly increase air pollution, causing increased numbers of asthma, heart attacks, more frequent emergency room visits, lost school and work days, and increased numbers of deaths.
- 8) False statements by ENO have denied an environmental assessment of its industrial impact on the health, safety, environment, and quality of life predominantly African American and Vietnamese Americans families whose homes and schools are nearby the Michoud site, the location of ENO's proposed gas power plant.
- 9) ENO failed to rigorously analyze alternative resource options such as energy efficiency, and solar PV. ENO failed to conduct a competitive solicitation

process in choosing to pursue its proprietary build gas plant proposals as its preferred option to meet the City's capacity and reliability needs.

- 10) The public record shows troubling indications of ENO's long-term plan for building a gas plant, and the City Council's consultants willing support, dating several years prior to complete, public review of ENO's application and the need, costs, and benefits of building such a proposal. This raises concerns about the fairness of this proceeding and the assurance of due process.

For the foregoing reasons, as well as others, the City Council should reject both proposed generation facilities and find that consideration of a complete set of alternatives is essential to the protection of consumer interests. A competitive solicitation should be issued for New Orleans capacity needs and its bids received and thoroughly reviewed.

BACKGROUND

On June 20, 2016, Entergy New Orleans ("ENO") filed an Application for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief ("Application"). The Application sought approval to construct New Orleans Power Station ("NOPS"), a 226 MW summer capacity combustion turbine gas power plant to be located at ENO's Michoud facility in New Orleans East. As part of the application, ENO submitted the Direct Testimonies of Charles L. Rice, Orlando Todd, Seth E. Cureington, Jonathan E. Long, Charles W. Long, Shauna Lovorn-Marriage, and Robert Breedlove.

On November 3, 2016, pursuant to Resolution No. R-16-506, the New Orleans City Council directed ENO to file supplemental testimony addressing 1) the four proposed Aurora modeling production runs requested by the Council Advisors; 2) groundwater withdrawal and subsidence at the Michoud site and surrounding area; 3) air quality effects of the proposed NOPS; and 4) and other matters that ENO deems necessary to support its application or address Intervenor's concerns. On November 18, 2016, ENO filed the Supplemental Testimonies of Seth E. Cureington and Jonathan E. Long.

On February 14, 2017, ENO filed a Motion to suspend the procedural schedule in order to analyze the implications of an updated load forecast ENO received in January. This Motion was granted on March 6, 2017.

On July 6, 2017, ENO filed a supplemental and amending application requesting that the City Council approve either 1) a combustion turbine resource with a summer capacity of 226 MW or 2) seven reciprocating internal combustion engine generator sets. As part of this supplemental application, ENO submitted the testimonies of Charles L. Rice, Orlando Todd, Seth E. Cureington, Jonathan E. Long, Charles W. Long, Bliss M. Higgins, George Losonsky, and Robert A. Breedlove.

Pursuant to the City Council's resolution, the Public Interest Intervenor's file the enclosed testimony. As detailed in the Public Interest Intervenor's Testimony, ENO has failed to establish that construction of NOPS is in the public interest. Therefore, the City Council should reject

ENO's Application and Supplemental and Amending Application. In support of this contention, the Public Interest Intervenors represent the following:

Robert Fagan, Synapse Energy Economics: Robert Fagan is a mechanical engineer and energy economics analyst with over 25 years of experience. Mr. Fagan has testified before FERC and state commissions throughout the nation on electrical utility and grid planning. Mr. Fagan has extensively studied the Midwest Independent System Operator (MISO) regional transmission organization, of which Entergy New Orleans is a part, and testified in recent FERC dockets on the state of MISO's capacity auctions—one of the key factors in ENO's claim that it needs to build a more than \$200 million gas plant.

Mr. Fagan concludes that Entergy New Orleans' economic and reliability cases for building new gas-fired power plants in East New Orleans are not well-supported and misleading. To make it appear as if a gas-fired power plant is necessary, Entergy New Orleans makes unrealistic assumptions about energy efficiency potential in New Orleans and about MISO capacity market prices that are readily contradicted by even ENO's own energy-efficiency consultant and the most recent MISO data. In reality, New Orleans likely faces, at most, a modest capacity shortfall that could far more cheaply be met with purchases on the MISO capacity market—where clearing prices are very low and enormous sums of new capacity, especially clean renewables, are coming online. Entergy also failed to give adequate consideration to pursuing a portfolio of less expensive alternatives, such a combination of transmission system improvements, renewable energy generation, energy efficiency, and energy storage options. These solutions would ensure system reliability. Even by ENO's estimates, it would cost just \$57 million to implement transmission improvements to meet NERC standards to maintain reliability and avoid cascading outages—and even less if New Orleans simply continues to implement distributed and utility-owned solar, storage options, and substantial energy efficiency measures that lower peak energy demand. That is a fraction of the \$210-232 million ENO estimates for building its gas plants. Simply put, New Orleans already has all of the solutions it needs to power the City reliably and cost-effectively and should not gamble well over \$200 million in ratepayer money on a new gas plant.

Dr Alexander S. Kolker is a coastal geologist at the Louisiana Universities Marine Consortium, studying the geology and oceanography of coastal systems, and how people and climate impact these systems. Much of Dr. Kolker's research focuses on subsidence, sediment transport pathways, and groundwater discharge impact the Mississippi River Delta and the Louisiana coastal zone.

Dr. Kolker previously filed Direct Testimony in this proceeding noting the high levels of subsidence near Michoud and the proposed NOPS facility and noting that studies show a strong relationship between water withdrawal and subsidence. Dr. Kolker also notes that the area containing and surrounding the proposed NOPS is vulnerable to flooding. This area faces at least two imminent flood risks: storm surge from hurricanes and rainfall from intense thunderstorms. In his Supplemental Direct Testimony, Dr. Kolker notes the

flaws in Dr Losonsky's analysis, including that a change in elevation must be determined by measuring two points in time, not the one point in time examined by Dr. Losonsky and the fact that the modeling was conducted only for a 10-year period rather than over the proposed usual life of the generating station. Dr. Kolker continues to recommend that the City Council hire an independent, outside engineering or scientific firm to investigate whether NOPS will cause subsidence to the plant, the surrounding community, or nearby flood protection structures.

Dr. Elizabeth A. Stanton, Ph.D. Director and Senior Economist of the Applied Economics Clinic. Dr. Stanton is the founder and Director of the Applied Economics Clinic, a non-profit consulting group housed at Tufts University's Global Development and Environment Institute. She has more than 17 years of professional experience as a political and environmental economist, and provides expert testimony, analysis, modeling, policy briefs, and reports for public interest groups on the topics of energy, environment, consumer protection, and equity.

In her Direct Testimony, Dr. Stanton establishes that ENO needs less capacity than it has reported, demonstrating that properly accounting for ENO's own planned solar investments, including the Council's 2 percent annual efficiency target and adding reasonable expectations regarding future rooftop solar installations brings ENO's capacity surplus up to 46 MW. Dr. Stanton also demonstrates that ENO has not considered a full set of alternatives to meet New Orleans' needs, including failing to consider all of the ways in which renewable energy could meet New Orleans' needs.

Dr. Beverly Wright is the Founder and Executive Director of the Deep South Center for Environmental Justice in New Orleans, Louisiana. Dr. Wright's research shows the geographic correlation between race and pollution, revealing, to statistical significance, the location of toxic and hazardous industrial facilities to operate near predominantly African American communities along the Mississippi River Industrial Corridor in Louisiana.

In her Direct Testimony, Dr. Wright established that Entergy's application for the proposed NOPS, which is to be built in close geographic proximity to predominantly African American and Vietnamese American residents in New Orleans East, would result in racially disproportionate pollution burdens in complete disregard of environmental justice and with profound adverse consequences for nearby residents as well as the entire city. Entergy failed to assess the impacts this power plant would have on the health and general welfare of nearby residents who are predominantly African American and Vietnamese American, critical infrastructure, the environment, and citywide efforts to ensure equity and resilience. In her Supplemental Testimony, Dr. Wright establishes that there remains significant problems regarding the fairness of the process used to determine whether the proposed Entergy gas power plant is in the public interest. Dr. Wright also presents extensive evidence of ENO's false statement in its 2004 air permit, which continues in effect today through a series of renewal permits, that resulted in there being no environmental assessment of its industrial impact on nearby residential neighborhoods

and schools. Finally, Dr. Wright demonstrates that ENO has repeatedly overestimated customer need for electricity to justify the proposed gas power plant.

Dr. George D. Thurston is an Associate Professor at the New York University School of Medicine in the Department of Environmental Medicine.

In his testimony, Dr. Thurston addresses the public health impacts of emissions of fine particulate matter (PM2.5) generally and, specifically, the expected public health impacts of PM2.5 emissions from the proposed NOPS. Dr. Thurston notes that recent studies of fine PM associations with adverse health effects support the occurrence of significant adverse health effects at levels below the current U.S. EPA long-term standard. With respect to PM2.5 from power plants, recent studies have also found that long-term exposure to combustion-related fine particulate air pollution is an important environmental risk factor for cardiopulmonary and lung cancer mortality. According to Dr. Thurston, there is no threshold below which incremental effects of PM2.5 will not cause an associated increase in the risk of severe adverse health effects, such as increased emergency room visits by children. Because of their high ultrafine fraction, their composition, and the likely co-presence of acidic vapors, the PM2.5 emissions from NOPS potentially could be more toxic than other forms of particulate matter. Dr. Thurston also reviewed ENO's of the health impacts from NOPS and found this analysis to be inadequate because it makes no attempt to perform a health-risk analysis of PM2.5 emissions from the proposed facility. Dr. Thurston concludes that PM2.5 emissions from this facility can be expected to increase adverse health risks in the surrounding community.

Peter J. Lanzalotta, Principal with Lanzalotta & Associates LLC. Mr. Lanzalotta currently is a Principal of Lanzalotta & Associates LLC, which was formed in January 2001. Prior to that, Mr. Lanzalotta was a partner of Whitfield Russell Associates, with which he had been associated since March 1982. Mr. Lanzalotta is a registered professional engineer, and his areas of expertise include electric system planning and operation. Mr. Lanzalotta has presented expert testimony before the FERC and before regulatory commissions and other judicial and legislative bodies in 25 states, the District of Columbia, and the Provinces of Alberta and Ontario.

In his testimony, Mr. Lanzalotta establishes that a transmission alternative to the proposed projects will address the transmission system deficiencies ENO uses to try to justify the projects and that these transmission upgrades can be achieved at a considerably lower capital cost. Mr. Lanzalotta also demonstrates that the proposed location for project is not suitable for a generation station because the location has flooded under major storm conditions, damaging the generating units that were located there at the time. Mr. Lanzalotta also recommends that if ENO desires more reliability from the transmission alternative, beyond what rebuilding and reinforcing critical transmission lines would provide, ENO should conduct a more thorough evaluation of the underground transmission line alternative to provide more reliability for the supply into the Company's service area.

Philip Henderson, Senior Financial Policy Specialist for the Natural Resources Defense Council. Since 2010, Mr. Henderson has served as a technical expert at NRDC on energy efficiency program design, energy efficiency measures and interventions in buildings, and financing of energy efficiency projects, including utility operated financing programs. He researches policies and practices of utilities and utility regulators related to energy efficiency and works with commercial market participants on new and innovative methods to accomplish and implement energy efficiency measures.

In his testimony, Mr. Henderson describes how a utility could use a competitive all-source solicitation as part of the procurement process to obtain information from the market about the various alternatives and resource options available to solve the utility's resource needs. Mr. Henderson establishes that when facing a substantial procurement decision, such as whether to build a power plant, the Council, the utility, and all stakeholders would benefit from the information an all-source solicitation would provide about the costs and benefits of options and that using this process helps to assure the resource selected for utility procurement is in customers' best interests.

For the reasons set forth here and in detail in the Direct Testimonies and Supplemental Direct Testimonies submitted today, as well as the Direct Testimonies previously submitted, the Public Interest Intervenors respectfully request that the City Council find that ENO's construction of either proposed project does not serve the public convenience and necessity, is not in the public interest, and would have a racially discriminatory effect. Based upon this finding, the City Council should deny ENO's application and its supplemental and amending application.

Public Interest Intervenors will serve copies of this Direct Testimony and Supplemental Direct Testimony on all recipients in the electronic case distribution list for this docket. Public Interest Intervenors also will provide versions of any testimony that references material ENO has designated as confidential to authorized recipients under separate cover.

Respectfully submitted,



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