

# SUMMARY FOR DECISION-MAKERS: A HEALTH IMPACT ASSESSMENT OF THE PROPOSED NATURAL GAS PLANT IN NEW ORLEANS EAST

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AND THE ALLIANCE FOR AFFORDABLE ENERGY (AAE)



## Background

Entergy New Orleans (ENO) has proposed to build a new natural gas combustion turbine (CT) plant in New Orleans East at the same site as the Michoud Power Plant, which was decommissioned in June 2016. According to ENO's proposal, the CT plant would fill a gap in the energy services needed to supply power to New Orleans over the next 20 years, principally during the hot summer months when energy demand is the highest.

The Louisiana Public Health Institute (LPHI) and the Alliance for Affordable Energy (AAE) conducted a health impact assessment (HIA) on the plan to build the proposed CT plant in New Orleans East. This project was supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts.<sup>1</sup> The New Orleans City Council wrote a letter of support for the HIA project.

The purpose of the HIA was three-fold. First, the HIA sought to determine the potential health impacts, both positive and negative, of the proposed CT plant. Second, the HIA aimed to formulate recommendations on how to maximize benefits and minimize harms of the potential health impacts of the proposed CT plant. Third, the HIA intended to create a model for how the City Council may incorporate health costs into the long-term energy planning process, called Integrated Resource Planning (IRP), in order to properly account for ongoing externalized costs related to energy generation.

## HIA Process

An HIA is a "combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population and the distribution of effects within the population" (European Centre for Health Policy, 1999, p. 4). Each step of the HIA process (screening, scoping, assessment, recommendations, and evaluation and monitoring) includes stakeholder engagement, data collection, analysis, and report back. Through stakeholder meetings, LPHI and AAE involved a diverse group of individuals and interests including: community-based non-profit organizations, impacted neighborhood associations, Dillard University, ENO, and the City Council. A complete list of the stakeholder meetings is included in the final report.

## Community Voices

During meetings with community members it became clear that the public was unaware that Michoud would be decommissioned nor that another power plant decision was forthcoming. Residents noted that the disproportionate siting of industrial activities and their related environmental hazards have an inequitable impact on their community's health and well-being. This assertion is strongly supported by evidence.

New Orleans East, compared to New Orleans overall, faces a number of socioeconomic, physical, and mental health disparities. Research has found that minority and low-income populations are often disproportionately exposed to environmental hazards, as these communities are excluded from policy decisions that impact environmental health (Freudenberg, Pastor, & Israel, 2011). This is certainly the case with regard to Michoud and the proposed CT plant, as community members emphasized the need for more knowledge and education about energy decisions.

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<sup>1</sup>The views expressed in this HIA are those of the authors and do not necessarily reflect the views of the Health Impact Project, The Pew Charitable Trusts, or the Robert Wood Johnson Foundation.

# Key Findings

In response to community stakeholders' greatest areas of concern, LPHI and AAE focused their assessment on health impacts associated with household expenses, energy resilience, energy reliability, air quality, climate change, subsidence, noise, and traffic. The full HIA report includes a more thorough analysis of each of the findings below, including associated health data and impact to New Orleans.

## **Household Expenses ↑**

The CT plant will raise energy rates and bills; higher electric bills limit available household income for food, medicine, and housing, leading to higher stress, emergency room visits, food insecurity, and loss of housing.

## **Energy Reliability ↑**

Any local generation inside the transmission island, including the CT plant, will increase energy reliability when transmission lines go down for whatever reason. Higher reliability decreases blackout events and associated accidents, hospital admissions, and food and water-borne illnesses.

## **Energy Resilience →**

The CT plant will not increase energy resilience because the plant itself will be vulnerable to storms and flooding. In extreme weather events, blackout-related emergencies are equally likely with the plant as without it.

## **Air Quality ↓**

The CT plant will emit toxic pollution to the air that would likely increase the risk of respiratory illness and asthma, cardiovascular disease, and cancer.

## **Climate Change Risk ↑**

The CT plant will emit greenhouse gas emissions that contribute to climate change, which collectively is likely to increase exposure to extreme weather events, severe stress, widespread financial losses, and geographic displacement.

## **Sinking/Subsidence ↑**

The CT plant will use groundwater and will likely continue to cause sinking in New Orleans East. Sinking increases risk to flooding, levee failure, mold-related respiratory illness, accidents, and geographic displacement.

## **Noise ↑**

The CT plant is likely to add noise but only during the construction phase (12-18 months). The noise could increase annoyance/irritability, insomnia, and blood pressure.

## **Traffic ↑**

The CT plant is likely to add traffic but only during the construction phase (12-18 months). Depending on construction traffic routes, increased traffic may increase air pollution, asthma and respiratory illness, and accidents.

## Recommendations

Based on a thorough review of data and literature, the HIA makes the following recommendations in order to maximize benefits and minimize harms of the proposed CT plant.

The three central recommendations of this HIA are:

1. The City Council and ENO should ensure maximum transparency, offer outreach and education, and create more opportunities for New Orleans East community members to be included and engaged in decisions that will directly affect them.
2. The City Council should direct ENO to include externalized costs in the IRP process.
3. ENO must immediately cease groundwater withdrawals at Michoud and must use surface water for any future projects until the full scope of the impact on sinking is understood.

## Community Participation and Transparency

- The City Council could hold public hearings where community members may speak directly to the City Council members.
- The City Council should direct the Council Utility Regulatory Office (CURO) to be forthcoming with public documents and to post public documents to the City Council website.
- The City Council should require ENO to host a series of listening sessions with New Orleans East communities. Community engagement regarding the proposed CT plant should happen early in the process before the decisions are made in order to keep community members informed.
- The City Council Utility Committee public hearings should be added to the City Council website calendar and filmed.
- The City Council members could include updates on utility matters in the City Council email communications if not already doing so.
- The City Council could commission an environmental justice study to look at the placement of industrial facilities within vulnerable and minority communities in New Orleans.

## Household Expenses

- The City Council should direct ENO to provide information on the proposed CT plant's potential billing impacts to New Orleans customers as part of the application process to the City Council. Full understanding of bill impacts should be available to the City Council and the community before cost recovery is approved. This would allow for better planning for any potential changes in energy rates.
- The City Council should direct ENO to make data available on the average kilowatt-hour (kWh) usage and average energy bill by neighborhood. Data should be easily accessible and available to the public.
- ENO and CleaResult should connect low-income housing programs (including the Greater New Orleans Housing Alliance) and bill paying programs (including Total Community Action) with energy efficiency programs, coordinating Energy Smart with the Weatherization Assistance Program, currently administered by Quad Area Community Action Agency.
- ENO customer service representatives should be trained to provide energy burdened households with methods to reduce their electricity bills and connect callers to the Energy Smart program.

## Energy Reliability

- The City Council should require ENO to increase data tracking and reporting on power outages by adding the following indices: momentary average interruption frequency, customer average interruption duration index, and customer average interruption frequency index. Reports could be submitted to the City Council and made available to customers on the ENO website.

## Energy Resilience

- The City Council should require ENO to report kWh usage before and after extreme weather outages to understand how blackouts impact usage- i.e. "Does usage increase after blackouts?" "Does usage remain the same as pre-blackout or does usage decline?" This data could help guide energy and resilience policy in New Orleans.
- The New Orleans Health Department could coordinate with health providers, neighborhood associations, and non-profits on emergency preparedness planning for device-dependent individuals (oxygen, dialysis, etc.) and other vulnerable populations.
- The City Council Utility Committee and the Resilient NOLA program in the New Orleans Redevelopment Authority should coordinate resilience planning in the electric grid to identify resilience strategies like smart grids, distributed energy (like solar), storage, and a city-wide energy plan including all generation within the parish. The planning should include state coastal agencies, Levee Boards, and the Army Corps of Engineers as appropriate.

## Air Quality

- If the proposed CT plant is approved, the City Council should require that ENO add on-site air monitoring to improve data tracking of ambient air quality in New Orleans East. The air monitoring site readings should be posted online to ENO's website.
- If the proposed CT plant is approved, the City Council should ensure the plant follows the most stringent emissions controls; for example, Selective Catalytic Reduction and nitrogen oxides reduction measures.
- If the proposed CT plant is approved, community members potentially affected by increased emissions should be notified by the city or ENO when emissions levels are more likely to impact health due to peaking generation startup and shut down cycles.

## Climate Change

- The City Council could pass a resolution instituting a greenhouse gases (GHGs) registry for the city. This would increase transparency and foster dialogue on the impacts of energy production and consumption on climate change and health in New Orleans.
- The City Council could adopt a Carbon Emission Reduction Goal. In partnership with the city's tourism board, the city could offer carbon offsets to travelers. The funding would go to creating community solar projects, prioritizing brownfield sites or other carbon reduction projects.
- If the proposed CT plant is approved, the City Council should ensure the plant has measures in place to reduce methane leaks, a potent source of GHG emissions.
- The State of Louisiana should take steps to consider climate change and GHG emissions when developing and implementing Coastal Master Plans.
- The Louisiana Department of Environmental Quality should develop an equitable Clean Power Plan State Implementation Plan that accounts for realities of climate change and its impacts to coastal Louisiana.

## Subsidence

- The City of New Orleans, through its Resilient NOLA programming, could conduct an analysis of groundwater removal and its impact on subsidence in New Orleans East.
- The City Council and the Mayor's Office should develop equitable and responsible water rights protections for the city. Groundwater use should be reported and regulated, as in the Capital Area Groundwater Conservation Commission in Baton Rouge (see [http://www.cagwcc.com/site2015/laws-regs/title56-part\\_v.pdf](http://www.cagwcc.com/site2015/laws-regs/title56-part_v.pdf)).
- ENO should be engaged in all discussions with regards to subsidence, including with city and state agencies, regional levee boards, the Coastal Protection and Restoration Authority, the Army Corps of Engineers, and the Federal Emergency Management Agency (FEMA).

## Noise

- ENO should consider noise abatement measures for the proposed CT plant, as necessary, to minimize community health impacts from construction and operations. Noise abatement techniques could include: sound barriers, silencers, engine mufflers, and special landscaping. These noise abatement technologies should be considered during the planning stages of the proposed CT plant, as retrofitting noise abatement after the plant is already built can be very difficult and expensive (Saussus, 2012).
- Once the construction traffic routes are selected, ENO should develop noise models associated with the expected traffic, and use these models to analyze the magnitude of impacts on annoyance and sleep disturbance.
- Operating permits should limit the hours of construction and route construction vehicles away from homes, schools, and other community facilities.

## Traffic

- ENO should specifically designate construction and truck routes for the proposed CT plant that will be limited to major roadways and do not pass through residential neighborhoods. Designated routes should also minimize the distance from schools, parks, and pedestrian crossings.
- ENO should consider using more energy efficient trucks and vehicles to reduce emissions.
- ENO should mostly limit construction and truck traffic to low traffic periods of the day in order to reduce risks of motor vehicle accidents and to minimize truck idling.

## Conclusion and Next Steps

This HIA is intended to be a tool for the City Council to make a more informed decision regarding the proposed CT plant. This HIA summary provides a synthesis of data on potential health impacts, as well as a number of recommendations, in order to reduce potential negative health impacts and maximize benefits. For the full explanation of each health impact, please see the full HIA report.

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