

New York State Department of Environmental Conservation

In the Matter of the Application of

ASTORIA GAS TURBINE POWER LLC

Application Number

2-6301-00191/00003

**for a Title V air permit modification for the Astoria Gas
Turbine Power Replacement Project in Astoria, New York**

PETITION FOR FULL PARTY STATUS

By

**Sierra Club, THE POINT Community Development Corporation, UPROSE, and the
New York City Environmental Justice Alliance**

/s/ Rachel Spector

Rachel Spector
Mandy DeRoche
Meagan Burton
Hillary Aidun
Earthjustice
48 Wall Street, 15th Floor
New York, NY 10025
212-845-7387
rspector@earthjustice.org

Josh Berman
Sierra Club
50 F. St. NW, 8th Floor
Washington, D.C. 20001
202-650-6062
Josh.berman@sierraclub.org

Counsel for Sierra Club

Sonya Chung
Hayley Gorenberg
New York Lawyers for the Public Interest
151 West 30th St., 11th Floor
New York, NY 10001
212-244-4664
sochung@nylpi.org

Counsel for Petitioners

TABLE OF CONTENTS

INTRODUCTION 1

BACKGROUND 2

PETITIONERS’ IDENTITIES AND ENVIRONMENTAL AND STATUTORY INTERESTS . 4

 I. IDENTIFICATION OF THE PARTIES5

 A. Sierra Club5

 B. THE POINT Community Development Corporation5

 C. UPROSE7

 D. New York City Environmental Justice Alliance.....8

 II. PETITIONERS’ ENVIRONMENTAL INTEREST8

 A. Sierra Club’s Environmental Interest.....10

 B. THE POINT’s Environmental Interest 11

 C. UPROSE’s Environmental Interest.....12

 D. NYC-EJA’s Environmental Interest13

 III. PETITIONER’S STATUTORY INTEREST16

 GROUNDS FOR OPPOSITION TO PROJECT AND SUPPORT OF DEC’S DECISION17

 ISSUES FOR ADJUDICATION AND OFFERS OF PROOF18

 DEC’S PERMIT DENIAL UNDER THE CLCPA WAS PROPER.....20

 1. Issue 1: Section 7(2) Empowers DEC to Deny Permits20

 2. Issue 2: Because AGTP’s Proposed Project Would be a Major Source of GHGs, Issuing a Title V Permit for the Proposed Project Would Be Inconsistent with the Attainment of the Statewide GHG Emission Limits.....23

 i. New Major Sources of GHG Emissions are Inconsistent with the CLCPA.....23

 ii. The Astoria Project Is a Major New Source of GHG Emissions and Is Therefore Inconsistent with the CLCPA25

 iii. In Assessing Consistency, DEC Appropriately Focused on Emissions Directly Associated with the Proposed Facility27

iv.	AGTP’s Modeled Emissions Displacement from the Proposed Project Fails to Demonstrate the Project’s Consistency with the CLCPA	28
v.	AGTP’s Emissions Displacement Modeling Finds, at Best, Minimal Near-Term GHG Reduction Far Less Than Is Required to Achieve Consistency with the CLCPA.....	29
vi.	AGTP’s Modeling Grossly Overstated the Claimed GHG Emissions Benefits of the Proposed Project	31
3.	Issue 3: The Astoria Plant Would Prolong New York’s Reliance on Fossil Fuel Resources Through 2040 and Thus Interfere with Achievement of the CLCPA Mandates	36
4.	Issue 4: AGTP Cannot Rely on Potential Conversion to Alternative Sources to Demonstrate Compliance with the CLCPA’s 2040 Objectives	40
i.	Neither “Green” Hydrogen nor RNG Is a Zero-Emissions Fuel	41
ii.	Neither “Green” Hydrogen nor RNG Is a Feasible Alternative Fuel	44
a.	The Combustion of Green Hydrogen Is Not Currently Technically Feasible at the Proposed Project	45
iii.	Sufficient Renewable Energy Is Not Available to Produce Green Hydrogen, nor Are There Sufficient Sources for RNG for Commercial Operations in Queens, New York.....	46
iv.	AGTP Lacks Specific Plans to Safely Transport or Store Green Hydrogen or RNG to/at the Site	47
5.	Issue 5: Because There is No Reliability Need for Any Generation at the Project Site, Consideration of Maintenance of Grid Reliability Cannot Justify the Project	49
i.	Relying on NYISO’s Determinations of Reliability, Rather than the Company’s Self-Serving Conclusions, Was Prudent and Proper.....	50
ii.	Additional Near-Term Transmission Improvements Eliminate Any Purported Reliability Justification for the Proposed Astoria Plan.....	51
a.	ConEdison’s Transmission Reliability and Clean Energy (“TRACE”) Projects	51
b.	Tier 4 Transmission	52
c.	Offshore Wind and Transmission	53
iii.	AGTP’s Claims About Black Start Capability Do Not Justify the Project.....	54
6.	Issue 6: The Project is Not Justified by Claimed Ratepayer Savings	56

7. Issue 7: AGTP Has Not Offered Adequate Alternatives or GHG Mitigation Measures,
Providing an Alternative Basis for DEC’s Permit Denial61

8. Issue 8: The Project Will Disproportionately Burden Disadvantaged Communities,
Providing an Alternative Basis for DEC’s Permit Denial62

CONCLUSION.....67

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SIERRA CLUB,
THE POINT CDC,
UPROSE, and
NYC-EJA**

INTRODUCTION

Pursuant to 6 NYCRR § 624.5(b), Sierra Club, THE POINT Community Development Corporation (“THE POINT”), UPROSE, and the New York City Environmental Justice Alliance (“NYC-EJA”) (collectively, “Petitioners”) hereby petition for full party status in the above-captioned proceeding regarding Astoria Gas Turbine Power, LLC’s (“AGTP”) application for a Title V air permit. *See* 6 NYCRR §§ 624.5(b)(1)(i), (iv). The New York State Department of Environmental Conservation (“DEC” or “the Department”) denied AGTP’s application on October 27, 2021.¹ Thereafter, on November 26, 2021, AGTP submitted a request seeking an adjudicatory hearing on that denial.²

¹ DEC, Notice of Denial of Title V Permit to Astoria Gas Turbine Power, LLC (Oct. 27, 2021), https://www.dec.ny.gov/docs/administration_pdf/nrgastoriadecision10272021.pdf, (“Astoria Denial”).

² AGTP, *Request for an Adjudicatory Hearing on Notice of Denial* (Nov. 26, 2021), <https://www.politico.com/states/f/?id=0000017d-5d2d-dee4-a5ff-ff3d85390000&source=email>, (“AGTP Request for Adjudicatory Hearing”).

Petitioners seek full party status in this proceeding to combat the threats posed by AGTP’s proposed fossil gas plant (the “Proposed Project” or the “Astoria plant”) to the health and environment of the communities surrounding the Astoria plant site. If granted full party status, Petitioners will submit documentary evidence and expert testimony in support of DEC’s decision to deny AGTP’s air permit for both the reasons stated by DEC in its Notice of Denial as well as additional grounds separately necessitating DEC’s denial of the permit.

BACKGROUND

Recognizing that “[c]limate change is adversely affecting economic well-being, public health, natural resources, and the environment of New York,” the state legislature enacted the Climate Leadership and Community Protection Act (“CLCPA”) in 2019 to strengthen New York’s statewide mandates for both emissions reductions and the adoption of renewable energy, setting some of the country’s most ambitious targets to date. CLCPA § 1(1), S.B. 6599, 242d Sess. (N.Y. 2019). Across all sectors of the economy, the CLCPA limits greenhouse gas emissions to 60 percent of 1990 levels by 2030 and 15 percent of 1990 emissions by 2050, with net zero-emissions achieved through offsets to projects outside the electric sector. ECL §§ 75-0107(1)(a)–(b), 75-0109(4)(a)–(b), (f). As required by the CLCPA, DEC has already promulgated the necessary regulations to convert the CLCPA’s percentage mandates into numerical limits on statewide emissions. *See* 6 NYCRR § 496.4.³ The CLCPA further mandates transformative change in the currently fossil fuel-dominated electric sector in furtherance of the CLCPA’s broader climate mandates. New York must dramatically scale up renewable energy to achieve 70 percent renewable energy by 2030. Public Service Law § 66-p(2). And New York

³ Limiting statewide greenhouse gas emissions in 2030 and 2050 to 245.87 and 61.47 million metric tons of carbon dioxide equivalent, respectively.

must achieve 100 percent zero-emissions electricity by 2040, *id.*, a critical milestone given that decarbonization strategies for other key sectors rely heavily on electrification. In support of these requirements, the law establishes specific benchmarks for the adoption of renewables, including nine gigawatts (“GW”) of offshore wind by 2035, six GW of solar by 2025, and three GW of energy storage by 2030. *Id.* § 66-p(5).

To achieve these requirements, the state legislature further mandated that all state agencies—including DEC—evaluate each permit, license, or other administrative decision through the lens of the CLCPA. Specifically, CLCPA Section 7(2) directs that “[i]n considering and issuing permits, . . . all state agencies . . . shall consider whether such decisions are inconsistent with or will interfere with the attainment of the statewide greenhouse gas emissions limits.” For each inconsistent or interfering permit and decision, each agency must further provide “a detailed statement of justification as to why such limits/criteria may not be met, and identify alternatives or greenhouse gas mitigation measures to be required where such project is located.” CLCPA § 7(2). Agencies must also ensure that their decisions “shall not disproportionately burden disadvantaged communities. . . .” *Id.* § 7(3). Indeed, agencies must affirmatively “prioritize reductions of greenhouse gas emissions and co-pollutants” in such communities. *Id.*

With the sole exception of N.Y. Environmental Conservation Law (“ECL”) § 75-0115, which mandates a community air monitoring program, each provision of the CLCPA—including Section 7—went into effect more than two years ago on January 1, 2020. *Id.* § 14.⁴ Thus, in

⁴ “This act shall take effect on the same date and in the same manner as a chapter of the laws of 2019, amending the environmental conservation law, relating to establishing a permanent environmental justice advisory group and an environmental justice interagency coordinating council, as proposed in legislative bills number S. 2385 and A. 1564, takes effect; provided further, the provisions of section 75-0115 of the environmental conservation law as added by section two of this act shall take effect October 1, 2022.” S. 2385 / A. 1564 was signed into law on December 23,

evaluating AGTP’s request for a Title V air permit, DEC was required to conduct the necessary analyses under CLCPA Sections 7(2) and 7(3). *See* 6 NYCRR § 621.10(f).⁵

PETITIONERS’ IDENTITIES AND ENVIRONMENTAL AND STATUTORY INTERESTS

Sierra Club, THE POINT, UPROSE, and NYC-EJA jointly petition for full party status in this proceeding. DEC’s regulations grant full party status to petitioners who demonstrate, among other things, an “adequate environmental interest.” 6 NYCRR § 624.5(d)(1)(iii).

Petitioners easily meet this requirement. As discussed below, each of the groups has advocated to protect their members and the communities they serve from potential air emissions and other environmental impacts associated with the Astoria plant. Together, the groups submitted comments urging the Department to deny the Title V permit at the heart of this proceeding. More broadly, Petitioners have campaigned to transition New York’s electric system from fossil fuel resources that cause climate change and localized air pollution impacts—like the Astoria plant—toward non-emitting renewable and equitable climate solutions, and have advocated for a robust implementation of New York’s nation-leading climate law, the CLCPA.

Petitioners are represented by Earthjustice and New York Lawyers for the Public Interest, with Rachel Spector, Mandy DeRoche, Meagan Burton, Hillary Aidun, Sonya Chung, and Hayley Gorenberg as counsel, with Sierra Club also represented by Josh Berman. If Petitioners are granted full party status, at the issues conference and the adjudicatory hearing, Josh Berman

2019 and entered into effect on January 1, 2020. *Senate Bill S2385*, The New York State Senate, <https://www.nysenate.gov/legislation/bills/2019/S2385> (last visited Mar. 16, 2022); S2385 § 2 (“This act shall take effect on the first of January next succeeding the date on which it shall have become a law.”).

⁵ “An application for a permit may be denied for failure to meet any of the standards or criteria applicable under any statute or regulation pursuant to which the permit is sought, including applicable findings required by article 8 of the ECL and its implementing regulations at Part 617 of this Title, or for any of the reasons set forth in section 621.13(a)(1)-(6) of this Part.”

will represent the Sierra Club, Victor Davila will represent THE POINT, Summer Sandoval will represent UPROSE, and Daniel Chu will represent NYC-EJA.

I. IDENTIFICATION OF THE PARTIES

A. Sierra Club

Sierra Club is a grassroots non-profit membership organization with approximately 800,000 members nationally, 50,000 members in New York State, 4,251 members living within 8 kilometers (5 miles) of the proposed plant, and 11 members living within three kilometers (1.8 miles) of the proposed plant site. Sierra Club is working to promote a cleaner, healthier, and more sustainable natural environment in its members' communities by replacing fossil fuel-burning electric generation with zero-emission energy. Sierra Club and its members have long advocated to mitigate the causes and impacts of climate change, and to support robust implementation of state policies—like the CLCPA—that enable a just and equitable transition to 100 percent clean energy in New York State. As described below, Sierra Club and its members have spent the past two years advocating against the Astoria plant's adverse impact on the local community and on New York's ability to achieve its climate mandates.

B. THE POINT Community Development Corporation

THE POINT is a nonprofit organization dedicated to youth development and the cultural and economic revitalization of Hunts Point in the South Bronx. Founded in 1994, THE POINT works with its neighbors to celebrate the life and art of the area, which has historically been impacted by disinvestment and poverty, a high crime rate, poor schools, and substandard housing. THE POINT operates on the belief that the area's residents, and their talents and aspirations, are its greatest assets. THE POINT offers programming within three primary

categories: Youth Development, Arts and Culture, and Community Development. These programs are aimed at the comprehensive revitalization of Hunts Point.

THE POINT has worked to expand community solar projects, parks and green space, and access to the waterfront in the Hunts Point area. THE POINT played a critical role in securing commitments to building solar and battery storage at two public schools in the South Bronx through the Hunts Point Resiliency Initiative. THE POINT aims to utilize the neighborhood's industrial waterfronts as a hub for clean and renewable energy; build community, climate, and energy resiliency for Hunts Point; and operationalize CLCPA implementation in the community.

Among other programs, THE POINT facilitates Activists Coming to Inform our Neighborhood (A.C.T.I.O.N.), a youth activist program that fights against social and environmental injustice in the South Bronx. The youth who participate in A.C.T.I.O.N. participate in community-based campaigns addressing issues such as waterfront justice, community pollutants, asthma, food sovereignty, and rehabilitation of the prison system. For example, through A.C.T.I.O.N., youth who live in Hunts Point lobbied for the Climate Community and Investment Act, a bill that would raise public funding for clean energy investments by levying a fee on greenhouse gas polluters.

In partnership with New York City, THE POINT also runs a program called Be A Buddy, designed to prepare Hunts Point for climate change impacts. Through the Be A Buddy program, during extreme weather events such as heat waves, volunteers check on community members who have registered as vulnerable due to their age, underlying health conditions, or lack of cooling or heating equipment at home. THE POINT has partnered with local high schools to train students to become "Buddies" through the program.

In addition to its work in Hunts Point, THE POINT collaborates with other Bronx-based and citywide organizations and coordinates efforts to promote climate policy on the city and state level.

C. UPROSE

Founded in 1996, UPROSE is Brooklyn’s oldest Latino community-based organization. Today, UPROSE is an intergenerational, multi-racial, nationally recognized, Black and indigenous women of color-led, grassroots organization working at the intersection of racial justice and climate change. UPROSE promotes environmental and climate justice and a Just Transition through community organizing, education, youth leadership development, and cultural and artistic expression. Central to UPROSE’s work is advocacy to ensure meaningful community engagement, participatory community planning practices, and community-led development grounded in racial justice and governmental accountability. As part of its intergenerational work, UPROSE convenes a biannual Climate Justice Youth Summit (CJYS), bringing together hundreds of youth of color from across New York City and the nation to engage in—and learn about—climate justice. UPROSE’s CJYS is the country’s largest convening of youth of color on climate change.

In 2019 UPROSE published the Green Resilient Industrial District (“GRID”) report—the culmination of over a decade’s worth of community-based planning. The GRID is a comprehensive frontline community-led plan to utilize New York City’s largest industrial waterfront to address climate adaptation, mitigation, and resilience. The GRID was the community alternative to a proposal by private developer Industry City to rezone 3.3 million square feet of Sunset Park’s industrial waterfront for luxury commercial, hotel, and office use. The GRID is a holistic plan to address existing and anticipated climate impacts, promote the use

of renewable energy and clean multimodal transportation, and support offshore wind development to create thousands of well-paying local green jobs.

UPROSE also played a leadership role in the successful movement to oppose the Gowanus Repowering Project in Sunset Park. The organization intervened in the Article 10 siting process and urged the applicant to develop clean energy and energy storage alternatives that are consistent with both the community-led GRID plan and CLCPA implementation. UPROSE is also developing New York's first community-led and owned solar cooperative and working with partners and NYSERDA to create an equitable solar market in New York State.

D. New York City Environmental Justice Alliance

Founded in 1991, NYC-EJA is a non-profit citywide membership network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental justice. NYC-EJA empowers its member organizations to advocate for improved environmental conditions and against inequitable environmental burdens through the coordination of campaigns designed to inform city and state policies. Among NYC-EJA's current campaigns are Climate Justice and Community Resiliency, the Waterfront Justice Project, and Just Transitions and Energy. NYC-EJA is led by the community-based organizations that it serves. Its board is elected by its member groups, who set policy and guides program development. Member organizations include THE POINT and UPROSE, among others.

II. PETITIONERS' ENVIRONMENTAL INTEREST

Through their longstanding advocacy, Petitioners have demonstrated a shared environmental interest in protecting New Yorkers from the potential impacts of the Astoria plant. In September 2021 Petitioners submitted joint comments urging the Department to deny the applicant a Title V permit. As organizations that have worked for years to combat climate

change, Petitioners share an environmental interest in preventing the greenhouse gases associated with the Astoria plant and the project's potential to interfere with New York's transition to a renewable energy economy. Petitioners are also concerned about the significant impacts of co-pollutants from the Astoria plant, including particulate matter and nitrogen oxides, which will disproportionately burden environmental justice communities in the area contrary to the CLCPA's mandate to prioritize reductions of both greenhouse gases and co-pollutants in environmental justice communities.

Additionally, Petitioners are all members of NY Renew, a statewide coalition of over 300 environmental, justice, faith, labor, and community groups that championed the passage of the CLCPA and continues to advocate for climate policies that will meet the CLCPA's greenhouse gas reduction and equity mandates. THE POINT, UPROSE, and NYC-EJA are also members of the PEAK Coalition, which came together in 2019 to end the long-standing pollution burden from power plants on New York City's most climate-vulnerable people. The PEAK coalition brings technical, legal, public health, and planning expertise to support organizing and advocacy led by communities harmed by emissions from peaker plants such as the Astoria plant. Together with impacted communities, the PEAK Coalition advocates for a system of localized renewable energy generation and battery storage to replace peaker plants, reduce greenhouse gas emissions, lower energy bills, and make the electricity system more resilient in the face of increased storms and climate impacts. As members of a coalition seeking to address pollution from peaker plants, THE POINT, UPROSE, and NYC-EJA have a strong environmental interest in protecting New Yorkers from the threats posed by the Astoria plant. Additionally, UPROSE and NYC-EJA have been working to oppose peaker plants in New York City since long before the PEAK coalition was formed, dating back to their efforts to block NYPA's Power Now

program that built 11 new peaker plants, nearly all in environmental justice communities, in 2001.

Petitioners' environmental interest is also demonstrated through their individual activities, detailed below.

A. Sierra Club's Environmental Interest

On its own behalf and as part of broader coalition efforts, Sierra Club has been actively engaged since 2019 in trying to protect local air quality and the climate by enabling the retirement of the existing Astoria fossil fuel units without the construction of a new gas plant.

In 2019, DEC released for public comment proposed regulations of nitrogen oxides ("NOx") from peaker plants, including the existing Astoria turbines. Sierra Club, together with a coalition of groups, engaged on the substance of those regulations, submitting two sets of comments to DEC, highlighting the health and climate burdens imposed by these facilities, and making recommendations regarding the substantive requirements of the regulations.

Since July 2020, when AGTP released its draft State Environmental Quality Review Act ("SEQRA") scoping plan for the proposed Astoria gas plant, Sierra Club has submitted multiple sets of written comments to DEC regarding its SEQRA review and review of AGTP's Title V air permit application. Sierra Club has worked with local partners on marches and rallies against the proposed plant, organized a bike ride to view the Astoria and nearby Gowanus power plants, co-organized a teach-in regarding the proposed Astoria plant and turned out members to the event, and organized a press conference regarding the proposed plant. Sierra Club also helped turn out members and allies to a number of events and hearings including public meetings hosted by AGTP, hearings of the Power Generation Advisory Panel to the Climate Action Council to talk

about the need to stop new fossil fuel plant construction, and virtual hearings hosted by DEC regarding the Proposed Project in August 2021.

Sierra Club also engaged with its members to turn out more than a thousand written comments to DEC urging a rejection of the Astoria plant based on its adverse impacts and the lack of any reliability need for the facility. And Sierra Club has been an active proponent of legislation that would categorically prohibit the construction of newly proposed fossil fuel power plants except in limited exigent reliability-related circumstances not applicable to the Astoria facility to obviate the need and burden of evaluating and adjudicating applications on a plant-by-plant basis.

B. THE POINT's Environmental Interest

THE POINT has an environmental interest in protecting the health of its members and community. THE POINT's members, volunteers, and staff live, work, and recreate near the plant and would be harmed by emissions of air pollutants and other environmental impacts from the plant. The Hunts Point community that THE POINT serves lies at the southern tip of the Bronx and much of the neighborhood is within three kilometers of the Astoria plant. Many of the youth who utilize THE POINT's programming recreate in Barreto Point Park, which is approximately three kilometers from the Astoria plant.

Hunts Point is exposed to multiple pollution sources and suffers from poor health outcomes as a result of the cumulative impact of these environmental burdens. The neighborhood is close to the heavily trafficked Cross Bronx and Sheridan Expressways. Additionally, the Hunts Point Distribution Center, one of the largest wholesale distribution facilities in the world, brings about 15,000 trucks traveling in and out of the community each day. Further, Hunts Point has a

New York City Heat Vulnerability Index (HVI)⁶ of 5/5, the highest index possible. Hunts Point shares this HVI mostly with other neighborhoods in the Bronx, which exacerbates the cumulative environmental burden of fossil fuel peaker generators and related emissions. The Hell Gate power plant in the South Bronx further contributes to high levels of air pollution in the neighborhood. THE POINT's members, volunteers, and staff have high rates of asthma, cardiovascular conditions, and diabetes—ailments associated with precursors to ozone and other pollutants emitted by motor vehicles and power plants. A startling one in three children and one in four adults have asthma in Hunts Point. The COVID-19 pandemic has made these conditions even more dangerous: diabetes and respiratory illnesses have been linked to high COVID mortality rates. THE POINT has an environmental interest in preventing the installation of yet another pollution source near Hunts Point.

Apart from its location and work in Hunts Point, THE POINT has a broader environmental interest in the Astoria plant due to its advocacy to protect South Bronx residents from climate change and other environmental impacts of fossil fuels. As discussed, THE POINT runs the Be A Buddy program to help Hunts Point residents prepare for and survive extreme climate events, is a member of the PEAK Coalition and NY Renews, and has trained and supported youth to participate in climate justice advocacy through the A.C.T.I.O.N. program. THE POINT has also engaged in advocacy to reduce the truck pollution associated with the Hunts Point Distribution Center and waste facilities, including organizing truck counts and

⁶ The New York City Heat Vulnerability Index is a measure of how the risk of heat-related illness or death differs across neighborhoods. Neighborhood risk factors that increase heat-vulnerability in New York City are: less home air conditioning, less green space, hotter surface temperatures, and more residents who are low-income or non-Latinx Black. *Environment & Health Data Portal: Heat Vulnerability Index*, NYC.gov, <https://a816-dohbsp.nyc.gov/IndicatorPublic/VisualizationData.aspx?id=2191,4466a0,100,Summarize> (last visited Mar. 16, 2022).

citizen science efforts to gauge local air pollution and advocating for city policies to ensure a more equitable commercial waste system. THE POINT is also a member of the Last Mile Coalition, a city-wide coalition of environmental justice and public health advocates that advocates for New York City to mitigate the environmental impacts of last-mile trucking facilities.

C. UPROSE'S Environmental Interest

As an organization dedicated to combating environmental injustices and advocating for a just transition in New York City, UPROSE has an environmental interest in protecting and supporting the health and environment of the frontline communities that would be impacted by the Astoria plant. UPROSE has taken a leadership role in advocating for the passage and implementation of the CLCPA, and UPROSE Executive Director Elizabeth Yeampierre sits on the state's Climate Justice Working Group, the body tasked with enforcing the CLCPA's equity requirements.

Additionally, as the host and convenor of the biannual CJYS, UPROSE works directly with youth from environmental justice communities near the Astoria plant, many of whom are participants in other NYC-EJA member groups and longtime attendees of UPROSE's CJYS.

UPROSE is also concerned that a decision by DEC that is inconsistent with and fails to enforce the CLCPA's climate and equity mandates would create dangerous precedent, increasing the risks that fossil fuel burning peaker plants located in Sunset Park will continue to operate and pollute the neighborhood.

D. NYC-EJA's Environmental Interest

NYC-EJA is a coalition of multiple organizations throughout New York City, including UPROSE and THE POINT, and shares those groups' environmental interests discussed above.

Other NYC-EJA members include organizations whose members live, work, or recreate near the Astoria plant and therefore have an interest in preventing the plant's environmental impacts, such as Chhaya Community Development Corporation and WE STAY/Nos Quedamos. Based in Queens, Chhaya works to address housing and economic needs for low-income South Asian and Indo-Caribbean New Yorkers. Nos Quedamos is a community development corporation that promotes sustainable development in the South Bronx.

NYC-EJA has also demonstrated an environmental interest through its advocacy to combat climate change and environmental inequities throughout New York City. As a member of the NY Renews steering committee, NYC-EJA has taken a leadership role in ensuring full implementation and enforcement of the CLCPA. NYC-EJA is engaged in policy advocacy, regulatory processes, and legislative work to ensure that the path toward reaching the CLCPA-required emissions reduction is implemented equitably to provide low-income communities of color with guaranteed new investments in renewable energy and energy resiliency, new job opportunities with local workforce development, and improved air quality. In addition, NYC-EJA is a partner organization in REVitalize, alongside PUSH Buffalo, UPROSE, and THE POINT CDC. REVitalize is a cross-sectoral, community-led partnership that works with local communities and the state government to advance community and energy plans, support community-led solar projects, and ensure compliance of the CLCPA. REVitalize also participated in NYSERDA's Energy Equity Collaborative and has submitted public comments regarding CLCPA implementation and renewable advancement in New York State.

NYC-EJA has engaged in strategic policy advocacy to improve air quality in overburdened communities such as those surrounding the Astoria plant and advance the equitable implementation of the CLCPA. NYC-EJA participated in the NOx rulemaking process

discussed above, including by submitting public comments, and also commented on DEC's Draft State Implementation Plan Revision for the 2008 Ozone National Ambient Air Quality Standards. NYC-EJA is a member of Electrify NY, a coalition that advocates for electrifying heavy-duty vehicles to address motor vehicle pollution. NYC-EJA has also been a leader in a decades-long effort to reduce air pollution from heavy duty vehicles such as waste trucks in communities surrounding the Astoria plant. With respect to the CLCPA, NYC-EJA staff actively participated in the development of recommendations across the majority of the Climate Action Council Advisory Panels, including the Power Generation Panel, Transportation Panel, Energy Intensive and Trade-exposed Industries Panel, Waste Panel, and Land-Use and Local Government Panel. NYC-EJA's Executive Director Eddie Bautista and Board Member Elizabeth Yeampierre sit on the Climate Justice Working Group, tasked with ensuring that the CLCPA meets its equity mandates.

In May 2021, NYC-EJA staff testified at a New York State Assembly oversight hearing to examine the implementation of the CLCPA, including steps being taken by the Climate Action Council to develop a scoping plan of recommendations to meet CLCPA targets, the Climate Justice Working Group's development of disadvantaged community definitions, and the progress of the State in achieving renewable energy goals. Over the past year, NYC-EJA has also participated in various Climate Action Council advisory panel engagement processes including specific advisory panel meetings, Climate Action Council meetings and hearings, and Climate Justice Working Group meetings and presentations. In February 2022, NYC-EJA staff members were invited to participate as Energy Technical Working Group members of New York City's Long Term Energy Plan (Local Law 248).

Through its Just Transitions and Energy Campaign, NYC-EJA has collaborated with partners to advocate for equitable energy planning and economic development in New York City—including power plant and other energy infrastructure siting—and to ensure that low-income communities and communities of color do not continue to bear the burden of that development. As an alliance dedicated to addressing the disproportionate environmental harms to low-income communities and communities of color, NYC-EJA has a strong environmental interest in preventing the impacts that the Astoria plant would have on such communities.

III. PETITIONERS' STATUTORY INTEREST

Through their longstanding advocacy, Petitioners have demonstrated environmental and public health interests related to the statutes implemented by DEC here. *See* 6 NYCRR § 624.5(b)(1)(iii). They have an interest in protecting New York City residents from harmful pollution from the Astoria plant and ensuring implementation of the state policy declared in the Environmental Conservation Law, “to prevent, abate and control water, land and air pollution in order to enhance the health, safety and welfare of the people of the state....” ECL § 1-0101(1). They have an interest in protecting air quality under Title V of the federal Clean Air Act and Title 19 of the ECL. Petitioners also have an interest in the proper administration and implementation of SEQRA, and AGTP’s flawed draft supplemental environmental impact statement fails to accurately assess the disproportionate and adverse impacts the Proposed Project would have on surrounding communities—especially environmental justice communities.

Petitioners also share an interest in combating climate change and environmental injustice, and ensuring DEC’s robust and equitable implementation of the CLCPA. If granted full party status, Petitioners would provide expert testimony to support DEC’s conclusion that the

project—if built—will emit significant quantities of climate change-causing greenhouse gas (“GHG”) emissions without justification in contravention of Section 7(2) of the CLCPA and disproportionately burden disadvantaged communities in contravention of Section 7(3) of the statute.

As members of NY Renews who campaigned for passage of the CLCPA, and now advocate for the law’s implementation and enforcement, Petitioners have a strong statutory interest in ensuring that Section 7(2)—the statutory provision on which DEC’s decision rests—is properly construed and implemented. Additionally, as organizations that represent and serve New Yorkers living in disadvantaged communities, Petitioners also have a strong interest in ensuring that Section 7(3)’s requirements are properly understood and fully implemented.

GROUNDINGS FOR OPPOSITION TO PROJECT AND SUPPORT OF DEC’S DECISION

Petitioners oppose the Proposed Project and support DEC’s permit denial because 1) the Proposed Project would be a major new source of GHGs and is therefore inconsistent with the CLCPA’s GHG reduction requirements; 2) the Proposed Project would interfere with New York’s attainment of the CLCPA’s GHG reduction requirements by prolonging reliance on fossil fuels and frustrating efforts to reduce the State and City’s current overdependence on greenhouse gas-intensive fossil fuel-fired power generation; 3) AGTP has failed to offer sufficient justification, mitigation measures, or alternatives, notwithstanding the project’s inconsistency and interference with statewide GHG limits; and 4) a decision granting the permit would violate the CLCPA’s prohibition on agency decisions that disproportionately burden disadvantaged communities.

ISSUES FOR ADJUDICATION AND OFFERS OF PROOF

Petitioners propose eight issues for adjudication regarding AGTP's Request for an Adjudicatory Hearing in response to DEC's Notice of Denial of Title V Air Permit. Each issue is both substantive and significant and therefore satisfies the regulatory standard for adjudication.

An issue is substantive "if there is sufficient doubt about the applicant's ability to meet statutory or regulatory criteria applicable to the project, such that a reasonable person would require further inquiry." 6 NYCRR § 624.4(c)(2). An issue is significant if it "has the potential to result in the denial of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit." *Id.* § 624.4(c)(3).

Petitioners are prepared to submit evidence, including expert testimony, demonstrating: (1) DEC properly implemented Section 7(2) of the CLCPA; (2) the Proposed Project is inconsistent with the CLCPA; (3) the Proposed Project would interfere with attainment of the CLCPA's GHG limits; (4) the hypothetical future conversion of the plant to renewable natural gas ("RNG") and/or hydrogen does not render the project CLCPA-consistent; (5) there is no reliability need that justifies the project; (6) purported ratepayer savings do not justify the project; (7) even assuming the Proposed Project were justified, AGTP has failed to identify adequate mitigation measures sufficient to fulfill the third prong of the CLCPA Section 7(2) analysis; and (8) CLCPA Section 7(3) provides an independent basis for denial of the Title V permit.

As described in further detail below, Petitioners will offer the expert testimony of Bryndis Woods, Ph.D.⁷ of the Applied Economics Clinic in Arlington, Massachusetts ("AEC").

⁷ Dr. Woods is a Senior Researcher at AEC. She has more than eight years of experience in research and analysis, with a focus on energy and climate issues. She has authored more than 65 journal articles, book chapters, reports, and blog posts on topics related to renewable energy, energy efficiency, climate policy, international climate

Dr. Woods' extensive experience in environmental economics, gas and electric sector planning, and climate policy amply qualifies her to submit testimony in this matter. Petitioners will also offer the expert testimony of Stephen Metts, M.A.,⁸ founding principal geographical information systems (GIS) consultant at Geospex, LLC, a consultancy specializing in cartographic design, spatial analysis, and mapping applications. Mr. Metts's professional experience in GIS analysis related to energy infrastructure development, urban planning, and environmental analysis qualifies him to submit testimony in this matter. Finally, Petitioners will offer the testimony of Devi Glick of Synapse Energy Economics, Inc. Ms. Glick's expertise on power plant economics and resource planning practices qualifies her to submit testimony in this matter.⁹ Petitioners attach the reports that these experts prepared when Petitioners submitted public comments on AGTP's permit application. The attached reports are representative of the issues on which

negotiations, climate adaptation, and climate risk. Dr. Woods' recent work includes climate and equity analyses of state climate policies, economic analyses of future gas power plants and proposed gas system expansion, testimony and comments on proposed electric system expansion, and cost assessments of energy efficiency programs. She currently provides assistance to the International Institute for Sustainable Development's Earth Negotiations Bulletin, reporting on international sustainable development conference processes including the Intergovernmental Panel on Climate Change, the Global Platform for Disaster Risk Reduction, the Montreal Protocol, and the United Nations Framework Convention on Climate Change. Dr. Woods earned her Ph.D. in environment and natural resources at the University of Iceland and has presented her work at international conferences around the world, including the European Climate Change Adaptation Conference and the Annual Conference of the European Association of Environmental and Resource Economists.

⁸ Mr. Metts is the founding principal of Geospex, LLC, and works as a GIS consultant for urban and regional planning initiatives, community-based planning projects, and site-specific environmental investigations. Mr. Metts is also an adjunct faculty member at the University of Massachusetts's Center for Rebuilding Sustainable Communities After Disaster, and at the New School for Public Engagement's Conflict and Security Concentrations, where Mr. Metts's academic research interests concern energy infrastructure development. In addition to his ongoing work as a faculty member of multiple academic institutions teaching the latest GIS theory and applications, his planning experience has featured in numerous city and state agency projects featuring environmental analysis and GIS services. Mr. Metts's work has included extensive review of the City Environmental Quality Review Procedure ("CEQR"), the State Environmental Quality Review ("SEQR"), Environmental Assessments Procedure ("EA") and the Uniform Land Use Review Procedure ("ULURP") in New York. Mr. Metts earned a Master of Arts in Community Planning and Development from Clark University, a GIS Certificate from California State University-Los Angeles, and a Bachelor of Fine Arts from University of California-Santa Barbara.

⁹ Ms. Glick is a Principal Associate at Synapse Energy Economics. She holds Master of Science and Master of Public Policy degrees from the University of Michigan and has worked as a technical consultant for the past 4 years at Synapse and, prior to that, at the Rocky Mountain Institute. Ms. Glick has provided expert testimony in public service commissions in twelve states and two Canadian provinces. As part of her work, she develops in-house electricity system models and performs analyses using industry-standard electricity system models including PLEXOS and EnCompass utility planning software.

Petitioners would offer testimony if granted full party status. However, the precise details to which experts testify is subject to change based on the issues identified for adjudication.

DEC’S PERMIT DENIAL UNDER THE CLCPA WAS PROPER

Section 7 of the CLCPA governs agency decisions on individual permits and DEC properly applied the statute here.

1. Issue 1: Section 7(2) Empowers DEC to Deny Permits

Section 7(2) of the CLCPA governs agency decisions on individual permits and DEC properly applied the statute here. DEC correctly determined that it has the authority to deny permits under Section 7(2). This issue is “substantive” because “there is sufficient doubt about the applicant’s ability to meet” the statutory criteria laid out in CLCPA Section 7(2). 6 NYCRR § 624.4(c)(2). This issue is also “significant” because “it has the potential to result in the denial of the permit,” *id.* § 624.4(c)(3), as explained below: it is also a threshold matter raised by AGTP in its request for a hearing.

Pursuant to Section 7(2), state agencies must follow a three-step process in deciding whether to grant permit applications:

In considering and issuing permits, licenses, and other administrative approvals and decisions, including but not limited to the execution of grants, loans, and contracts, all state agencies, offices, authorities, and divisions shall consider whether such decisions are inconsistent with or will interfere with the attainment of the statewide greenhouse gas emissions limits established in article 75 of the environmental conservation law. Where such decisions are deemed to be inconsistent with or will interfere with the attainment of the statewide greenhouse gas emissions limits, each agency, office, authority, or division shall provide a detailed statement of justification as to why such limits/criteria may not be met, and identify alternatives or greenhouse gas mitigation measures to be required where such project is located.

CLCPA § 7(2).

Section 7(2)'s use of the word "shall" makes plain that, before permitting a project that would be inconsistent with or would interfere with the CLCPA's greenhouse gas reduction mandates, a state agency is required to provide a justification *and* identify alternatives or mitigation measures. *See McMillian v. Krygier*, 153 N.Y.S.3d 198, 201 (App. Div. 2021) ("[U]se of the word 'shall' generally denotes a mandatory requirement.") (quoting *Haynie v. Mahoney*, 48 N.Y.2d 718, 719 (Ct. App. 1979)). As DEC recognized, if a sufficient justification does not exist then the inquiry ends and no permit can issue.¹⁰

AGTP asserts that DEC lacks the authority to deny permits under Section 7(2). AGTP offers no support for this position, but points out that DEC has not yet promulgated regulations to reduce greenhouse gas emissions as required by the CLCPA.¹¹ To the extent that AGTP suggests that Section 7(2) is therefore not yet in effect, that argument is baseless. The CLCPA provides that "[t]his act shall take effect on the same date and in the same manner" as New York's 2019 environmental justice statute. CLCPA § 14. The environmental justice statute took effect on January 1, 2020. *See* ECL Art. 48. Section 7(2) has been in effect since that date. It is of no moment that DEC has not yet promulgated regulations under a separate section of the CLCPA.¹²

DEC must "give the statute a sensible and practical over-all construction, which is consistent with and furthers its scheme and purpose and which harmonizes all its interlocking

¹⁰ *See* Astoria Denial at 17; *see also* DEC, *Draft Commissioner Policy-49 7* (Dec. 1, 2021), https://www.dec.ny.gov/docs/administration_pdf/cp49revised.pdf.

¹¹ *See* AGTP Request for Adjudicatory Hearing at 8; ECL § 75-0107(1).

¹² NRG Energy, Inc., AGTP's parent company, has recognized elsewhere that permits are not entitlements and that "NYSDEC has the authority to deny a permit application if it does not meet the requirements of the applicable permitting program . . ." *See Amicus Curiae* NRG Energy, Inc.'s Memorandum of Law in Support of Petitioner-Plaintiff at 19 n.7, *Danskammer Energy, LLC v. NYSDEC*, (Sup. Ct., Orange Cnty. No. 008396-2021) (Index No. EF008396-2021, NYSCEF Doc. No. 34). DEC correctly denied the permit application here precisely because it "does not meet the requirements of the applicable permitting program," which includes Section 7(2) of the CLCPA.

provisions.” *People v. Iverson*, 37 N.Y.3d 98, 103–04 (Ct. App. 2021) (quoting *Long v. Adirondack Park Agency*, 76 N.Y.2d 416, 420 (Ct. App. 1990)). The CLCPA’s unambiguous purpose is to address climate change, including by reducing greenhouse gas emissions. See CLCPA § 1(4) (declaring the “goal of the state of New York to reduce greenhouse gas emissions from all anthropogenic sources 100% over 1990 levels by the year 2050, with an incremental target of at least a 40 percent reduction in climate pollution by the year 2030”). DEC must “interpret [the] statute so as to avoid an unreasonable or absurd application of the law.” *Lubonty v. U.S. Bank Nat’l Assoc.*, 116 N.Y.S.3d 642, 645 (Ct. App. 2019) (citation omitted). If DEC lacked the authority to deny permits under Section 7(2), the Department would be compelled to manufacture a justification for and allow a project that will unjustifiably impede the state from meeting statutorily required emissions limits, rather than exercising its discretion to deny a permit as inconsistent with state law. Such a reading would render the provision nonsensical. Moreover, a permit denial is functionally equivalent to mandating the “no action” (*i.e.*, no build) alternative and Section 7(2) by its plain terms authorizes state agencies to require alternatives to the project.

“Between a rational, sensible and practical construction of a statute and one which is unreasonable, absurd or impractical, we should prefer the former over the latter.” *Braunstein v. Swartz*, 189 Misc. 791, 795 (N.Y. Sup. Ct. 1947). Section 7(2) vests DEC with the authority to deny permits; any other reading would produce an absurd result and run afoul of the CLCPA’s clear legislative purpose.

Offer of Proof: This is a purely legal question for which no offer of proof is necessary other than the arguments set forth above.

2. Issue 2: Because AGTP’s Proposed Project Would be a Major Source of GHGs, Issuing a Title V Permit for the Proposed Project Would Be Inconsistent with the Attainment of the Statewide GHG Emission Limits

DEC correctly determined that because the proposed project would be a major source of GHGs, a decision granting a Title V permit would be inconsistent with the CLCPA’s GHG reduction requirements. This issue is “substantive” because “there is sufficient doubt about the applicant’s ability to meet” the statutory criteria laid out in CLCPA Section 7(2). 6 NYCRR § 624.4(c)(2). This issue is “significant” as well, because “it has the potential to result in the denial of the permit,” *id.* § 624.4(c)(3), in combination with a finding that the Proposed Project is not justified.¹³

i. New Major Sources of GHG Emissions are Inconsistent with the CLCPA

DEC reasonably and correctly concluded that new sources of substantial GHG emissions are inconsistent with the CLCPA. This commonsense conclusion flows directly from the mandates of the CLCPA and compliance timeframes provided in the statute. Moreover, DEC reasonably concluded, based on AGTP’s own modeling, that the emissions from the Astoria facility would be significant and are inconsistent with the CLCPA’s emission mandates.

According to the recently released GHG emissions inventory for New York, based on the most currently available (2019) data, GHG emissions in New York have declined only 6 percent from 1990 levels.¹⁴ Yet the CLCPA mandates that in less than 10 years, the State must achieve emission reductions that are 40 percent below 1990 levels. ECL § 75-0107(1)(a). Further, in less than 30 years, statewide GHG emissions must be at least 85 percent below 1990 levels. ECL § 75-0107(1)(b). Plainly, the emissions trajectory set forth in the CLCPA requires a large and

¹³ See Issues 5 and 6, below.

¹⁴ DEC, *2021 NYS Statewide GHG Emissions Report: Summary Report 8* (2021), https://www.dec.ny.gov/docs/administration_pdf/ghgsumrpt21.pdf.

persistent decrease in emissions commencing immediately and a sharp change from the status quo. Achieving emission reductions of the magnitude required by the Act and on the Act's time scale necessitates that New York eliminate rather than add new sources of GHG emissions, precisely as DEC concluded.¹⁵

The incompatibility of new major GHG emission sources with the CLCPA is particularly clear in the power sector. The CLCPA mandates that, by 2040, “the statewide electrical demand system will be zero-emissions.” Public Service Law § 66-p(2). This requires emission reductions from the electric sector even steeper than those required for the State as a whole. The CLCPA also makes clear that offsetting of emissions to achieve CLCPA climate mandates is not permitted in the electric sector, expressly proscribing sources in the electric generation sector from participation in any alternative compliance mechanism developed by DEC. ECL § 75-0109(4)(f). Thus, in less than 20 years—well within the economic life of a proposed peaker plant like the Astoria facility—all power generation in New York State must be zero-emissions. New fossil fuel electric generation, which produces huge quantities of GHG emissions, is inconsistent with the electric sector mandates of the CLCPA.

While AGTP highlights language in Public Service Law §§ 66-p(2) and (4) that authorizes the Public Service Commission (“PSC”) to modify the 2040 zero-emissions target based on impacts to the provision of safe and adequate electric service as a basis for disregarding the law's 2040 requirements, this tribunal should decline AGTP's self-serving invitation to (re)move the goalposts before the State has attempted to comply. As discussed further below, DEC prudently and correctly recognized that adding new gas plants would further entrench the New York grid's problematic reliance on emissions-heavy fossil fuel generation and make

¹⁵ Astoria Denial at 11.

achievement of the CLCPA’s 2040 clean electricity mandates more difficult. Hence, DEC took the responsible step of beginning to alleviate the State’s reliance on gas-fired generation now, rather than years in the future when it will be too late. While AGTP may prefer to precipitate a reliability crisis in 2040 by keeping New York dependent on fossil fuel generation for the next two decades, this does not make proposed new major sources of greenhouse gas emissions consistent with the CLCPA.

ii. *The Astoria Project Is a Major New Source of GHG Emissions and Is Therefore Inconsistent with the CLCPA*

DEC reasonably concluded that the Astoria project’s direct GHG emissions were substantial and inconsistent with the CLCPA. The Astoria project has a potential to directly emit more than 700,000 short tons of CO₂e annually,¹⁶ which as DEC observes is “[b]y any metric” a “substantial amount of potential GHG emissions from a new source in the State.”¹⁷ Moreover, even based on AGTP’s projections of actual dispatch, the facility would increase direct GHG emissions on average by over 90,000 short tons of CO₂e per year through 2035¹⁸ and would add nearly 1.3 million short tons of CO₂e cumulatively through 2039.¹⁹ DEC appropriately characterizes this emissions increase as “a substantial amount of new GHG emissions that would make the Statewide GHG emissions limits more difficult to achieve.”²⁰

Consideration of upstream emissions only further reinforces the reasonableness of DEC’s conclusion. AGTP’s modeling identifies an upstream potential to emit of nearly 300,000 short tons per year of CO₂e and—based on the Astoria plant’s projected average capacity factor for

¹⁶ AECOM, *Draft Supplemental Environmental Impact Statement: Astoria Replacement Project* 3-59 tbl.3.2-7 (June 2021), https://www.nrg.com/assets/documents/legal/astoria/00_2021/astoria-draft-dseis-06-30-2021.pdf, (“DSEIS”).

¹⁷ Astoria Denial at 8.

¹⁸ DSEIS at 3-59 tbl.3.2-7.

¹⁹ Astoria Denial at 8.

²⁰ Astoria Denial at 8.

2023–2025—expected actual upstream GHG emissions of more than 40,000 short tons per year of CO₂e.²¹ In total, through 2039, AGTP projects upstream GHG emissions of nearly 600,000 short tons of CO₂e,²² an amount that DEC reasonably characterized as “substantial” and impeding efforts to achieve the Statewide GHG emissions limits.²³ Moreover, DEC reasonably concluded that “the upstream GHG emissions associated with the Project are substantial, regardless of where within these ranges the actual upstream GHG emissions ultimately fall.”²⁴

In evaluating the emissions impacts of the Astoria project, DEC appropriately treated the project as a new facility. Although AGTP has attempted to style its proposed 437 MW gas peaker as a “replacement project” by tethering the development of the facility to the retirement of 22 of the 24 existing gas turbines at the site, AGTP has effectively conceded that it would be uneconomical to do anything other than retire the existing units to comply with the NO_x peaker regulation regardless of whether the new facility is built.²⁵ On February 22, 2022, AGTP submitted a notice to the PSC requesting deactivation of the existing units effective May 1, 2023 to comply with the NO_x peaker regulation *despite* the denial of the air permit for the new proposed gas unit.²⁶ Consequently, the appropriate emissions analysis would compare the Proposed Project’s emissions to an onsite baseline of zero, as DEC did in its review of AGTP’s air permit application.

²¹ DSEIS at 3-61 tbl.3.2-10.

²² Astoria Denial at 10.

²³ Astoria Denial at 10.

²⁴ Astoria Denial at 10.

²⁵ *See* DSEIS at 4-5–4-6 (acknowledging that so-called “no action” alternatives other than simple retirement of the existing units would be economically unviable).

²⁶ *Notice of Intent to Retire Astoria Gas Turbine Power LLC Turbine Units, Astoria, New York, NYISO Zone J* at 1, Letter from Judith Lagano, President, AGTP Inc., to Michelle L. Phillips, Sec’y to the Comm’n, N.Y. P.S.C. (Feb. 22, 2022), Case No. 05-E-0889 (Docket No. 197) (affirming that AGTP “intends to cease operation and retire” 12 dual fuel, twin-pack simple cycle combustion turbines on May 1, 2023, and that the “Astoria units are being retired pursuant to the New York State Department of Environmental Conservation Peaker Rule.”).

Even if the Astoria plant were treated as a replacement project, DEC’s conclusions of inconsistency with the CLCPA are still confirmed by AGTP’s emission projections. While, as explained above, the proper baseline for the emissions analysis is retirement of the existing units to comply with New York’s NOx peaker regulations (and therefore zero onsite emissions beyond 2023), even allowing for the possibility that the existing facility would continue to operate, AGTP’s own modeling makes clear that the proposed facility would significantly increase both direct and upstream GHG emissions. The project was modeled to *increase* on-site direct GHG emissions by nearly 50,000 short tons of CO₂e per year based on the plant’s projected use²⁷ and increase upstream emissions by more than 20,000 short tons of CO₂e per year.²⁸ DEC reasonably characterized these emissions increases as significant.

In sum, when direct and upstream emissions are considered together, DEC reasonably found the total emissions increase to be substantial and inconsistent with the CLCPA. Based on AGTP’s own modeling, the project would result in cumulative emissions of 1.85 million short tons of CO₂e through 2039 and a net increase of over 70,000 tons per year of CO₂e over the existing facility.²⁹ Again, DEC was reasonable in concluding that, “[b]y any metric, but particularly under the [CLCPA], this range of estimated GHG emissions from the Project as provided by Astoria represent a substantial amount of GHG emissions.”³⁰

iii. In Assessing Consistency, DEC Appropriately Focused on Emissions Directly Associated with the Proposed Facility

DEC’s reliance on direct emissions from the facility rather than speculative modeling of emissions impacts beyond the proposed facility was reasonable.³¹ As DEC explained in its denial

²⁷ Astoria Denial at 9.

²⁸ Astoria Denial at 10.

²⁹ Astoria Denial at 11.

³⁰ Astoria Denial at 11.

³¹ Astoria Denial at 13–14.

letter, “[t]he extent to which the Project might displace other EGUs [electric generating units] is uncertain and dependent on a number of factors that are not fully controlled by Astoria” including “the relative dispatch of the Project and other EGUs, as well as future market conditions.”³² In addition, DEC observed that Section 7(2) of the CLCPA “requires the Department to make a determination in the context of a permitting action for an individual facility.”³³ As DEC explained: “As part of this review, because the Department is taking action with respect to one particular source—in this case, the Project—the Department does not specifically take into account actions that may or may not occur at other GHG emission sources.”³⁴

DEC’s interpretation is defensible as a matter of law. “Where the interpretation of a statute or its application involves knowledge and understanding of underlying operational practices or entails an evaluation of factual data and inferences to be drawn therefrom, the courts regularly defer to the governmental agency charged with the responsibility for administration of the statute.” *Peyton v. N.Y.C. Bd. of Standards & Appeals*, 36 N.Y.3d 271, 280 (Ct. App. 2020) (citation omitted). Here, DEC’s interpretation “is not irrational or unreasonable,” *id.*, and must therefore be upheld.

DEC’s approach is also reasonable on the record in this appeal. As discussed in greater detail in the following sections, AGTP provided two sets of emissions modeling that reached conflicting conclusions about the emissions impacts of the facility, casting significant doubt on the validity of AGTP’s modeling results. However, both sets of modeling confirm the facility would have, at best, de minimis impacts on direct GHG emissions and that adding the facility

³² Astoria Denial at 14.

³³ Astoria Denial at 14.

³⁴ Astoria Denial at 14.

would be far less effective in reducing GHG emissions than adding a comparably sized renewable generator.

iv. *AGTP's Modeled Emissions Displacement from the Proposed Project Fails to Demonstrate the Project's Consistency with the CLCPA*

As discussed above, it was appropriate for DEC to rely on the permit applicant's own forecasts of the direct and upstream emissions from the Astoria facility to conclude that these impacts would be significant and inconsistent with the CLCPA's climate mandates. Consequently, the Hearings Office need not consider AGTP's displacement modeling in affirming the Department's determination. However, even if it were permissible to consider modeled emission impacts of generation displacement to evaluate consistency with the CLCPA, AGTP's modeling fails to establish the project's consistency with the CLCPA for multiple reasons.

If granted party status, first, Petitioners will show that purported direct GHG benefits are small and short-lived, fail to put New York on a trajectory to achieve CLCPA emissions mandates, and are dwarfed by the emission reductions that would result from development of zero-emissions renewable resources. Second, Petitioners will show that AGTP's modeling is flawed and that even the company's claimed benefits are overstated. In particular, AGTP's so-called "indirect" benefits are entirely unjustified and must be rejected as they are the result of the addition of a hypothetical offshore wind facility and not attributable to the proposed gas peaking plant.

v. *AGTP's Emissions Displacement Modeling Finds, at Best, Minimal Near-Term GHG Reduction Far Less Than Is Required to Achieve Consistency with the CLCPA*

Petitioners will offer testimony by Synapse that AGTP's GHG displacement modeling, even on its face, fails to demonstrate that the Proposed Project's emissions impacts are consistent

with the CLCPA. AGTP provided two sets of GHG modeling accompanying its DSEIS. The initial modeling, conducted in April 2020 (Appendix E.1), projected 1.2 million tons of direct GHG reductions from the Proposed Project over AGTP’s study period of 2023 to 2035.³⁵ The revised modeling, conducted in February 2021 with updated assumptions about other resource additions (Appendix E.2), reduced projected direct GHG emissions by nearly two thirds to just 421,000 tons.³⁶ Nearly all of the purported direct GHG emission benefits under the updated modeling occur between 2023 and 2027. Between 2028 and 2035, the facility is modeled to result in a mere 125,000 ton GHG reduction, or only about 15,000 tons per year. For a facility that would emit over 611,000 tons per year of CO₂e operating at a 30 percent capacity factor, achieving a 15,000 ton/year reduction—equating to a 2.4 percent reduction in GHG emissions—is insufficient to demonstrate consistency with the CLCPA.

The Proposed Project does not meaningfully reduce GHGs because the Project’s carbon dioxide emission rate is only modestly lower than that of the current marginal unit (*i.e.*, the last dispatched unit that is setting the clearing price in the energy market; today, generally another gas unit). Consequently, the Project does far less to reduce GHG emissions when it operates than would a CLCPA-consistent zero-emission resource. Moreover, Petitioners will offer testimony demonstrating that the emission rate of the marginal unit will continue to decrease as additional zero-emissions resources are added to New York’s grid to comply with the Clean Energy Standard and other CLCPA requirements. Each new resource will displace higher emitting resources, further diminishing and ultimately fully erasing any limited near-term emission benefit.

³⁵ Guidehouse/Navigant, *DSEIS Appendix E.1: GHG Impacts of Astoria Replacement Project* 17 tbl.2 (2020), https://www.nrg.com/assets/documents/legal/astoria/00_2021/appendices-e-m-06-30-21.pdf.

³⁶ Guidehouse/Navigant, *DSEIS Appendix E.2: Supplement to GHG Impacts of Astoria Replacement Project* 12 tbl.3 (2021), https://www.nrg.com/assets/documents/legal/astoria/00_2021/appendices-e-m-06-30-21.pdf.

Synapse’s testimony will also show how AGTP’s own emissions analysis confirms the ineffectiveness of the Proposed Project as a greenhouse gas reduction strategy. Based on AGTP’s own numbers, building a zero-emission renewable generation resource rather than the Proposed Project would be up to 25 times as effective at reducing greenhouse gas emissions on a per-MW basis. At the same time, the Proposed Project would further entrench New York’s reliance on GHG-intensive fossil fuels and, as discussed further below, interfere with New York’s ability to achieve a 100 percent zero-emissions electric system by 2040. The Proposed Project simply cannot be reconciled with the CLCPA’s GHG limits.

vi. AGTP’s Modeling Grossly Overstates the Claimed GHG Emissions Benefits of the Proposed Project

Not only does AGTP’s modeling fail to establish the Project’s consistency with the CLCPA, but Petitioners will also show that AGTP’s modeling suffers from multiple flaws that further undermine the credibility of the results. Specifically, Petitioners will demonstrate two flaws in AGTP’s direct emissions modeling and further demonstrate that AGTP’s reliance on so-called indirect emissions from a hypothetical offshore wind farm was wholly inappropriate.

With regard to direct emissions impacts, Petitioners will offer testimony from Synapse to show that AGTP’s consultant Guidehouse used a simplified approach to evaluating which resources would be displaced by the Proposed Project when it operates that tends to overstate emission benefits. Guidehouse developed a forecast of locational marginal prices (LMPs) using an electric system dispatch (production cost) model called PROMOD IV and then used a proprietary Electric Value Model to dispatch the Proposed Project against forecasted LMPs. The model assumed that the Proposed Project would operate during hours in which its variable operating costs were below the LMP. To evaluate emission impacts, Guidehouse attempted to identify which units would come offline during hours in which the Proposed Project was

projected to operate. To accomplish this, Guidehouse used a simplified supply stack that ordered generators in New York City according to their variable operating costs and then presumed that the Proposed Project would displace the highest marginal cost unit. The GHG emissions from the Proposed Project were subtracted from the GHG emissions the Proposed Project was assumed to displace when it operates to provide the direct emissions reduction estimate.

First, Synapse will show that Guidehouse's estimates are unreliable because Guidehouse's simplified approach to the dispatch stack ignores transmission constraints that will affect which facilities are actually dispatched. This inaccuracy will overstate the emission benefits of the facility by assuming that the highest variable cost (and likely highest emission) unit is always displaced. In reality, due to transmission constraints, other more efficient units are likely to be displaced some of the time, rendering Guidehouse's estimate too high.

Second, and likely even more consequential, Synapse will show that the Guidehouse modeling ignores the potential for Tier 4 resources to contribute to new capacity additions in New York City. Given the potentially very large quantities of zero-emissions generation that may be entering the New York City area as a result of Tier 4, this is a significant omission. In response to its initial Tier 4 request for proposals, NYSERDA received proposals from seven sets of bidders totaling over 38 million MWh of renewable or zero-emissions energy per year and nearly 6,500 MW of new renewable transmission capacity.³⁷ NYSERDA has petitioned the PSC to approve contracts for more than *18 million MWh* of deliverable zero-emissions generation per year.³⁸ Operating at a 30 percent capacity factor, the Proposed Project would

³⁷ Petition Regarding Agreements for Procurement of Tier 4 Renewable Energy Certificates at 7, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, Case No. 15-E-0302 (N.Y. PSC Nov. 30, 2021) (Docket 108).

³⁸ *Id.* at 20 tbl.2 & 24 tbl.4 (7,870,865 MWh/year + 10,402,500 MWh/year = 18,273,365 MWh/year).

generate only slightly over 1 million MWh per year³⁹ so its generation would be dwarfed by the potential zero-emissions Tier 4 resources entering the New York City market in the same general time frame as the Proposed Project. As discussed below, the addition of zero-emissions resources, such as those that will be brought into New York City via Tier 4 transmission lines, reduces power sector emissions far more than adding a new gas-fired combustion turbine like the Proposed Project.

In addition, it is noteworthy that AGTP offers no principled basis for truncating its GHG analysis in 2035 rather than extending it through the full economic life of the facility or at least through 2040. AGTP's failure to model GHG emission impacts beyond 2035 is concerning because it appears, based on the emission reduction trajectory in Table 3 of Attachment E.2 to the DSEIS, that even under AGTP's flawed modeling the plant might be projected to *add* GHG emissions in those later years. Based on AGTP's modeling, annual direct emission reductions decline from a high of 88,000 tons in 2024 to a mere 5,000 tons in 2035. If the declining trend from the 2023-2035 period were to continue beyond 2035, AGTP's table provides every indication that claimed cumulative reductions would begin to be erased.

Nearly all of AGTP's claimed emission benefits associated with the Proposed Project stem from so-called "indirect" emissions. However, the company's "indirect" emissions analysis lacks any credible basis and, if anything, shows that building zero-emissions renewable resources is a far superior strategy for mitigating climate emissions than building a new fossil gas plant. Moreover, even assuming the approach to evaluating indirect emissions had any credibility, the analysis itself is flawed in ways that greatly overstate the impacts.

³⁹ 437 MW * 8,760 hrs/year * 30% capacity factor = 1,148,438 MWh.

AGTP’s projected “indirect” emissions benefits rely on a Rube Goldberg-like chain of events that strays far from the Proposed Project and does not represent a credible modeling or analytical approach. AGTP’s consultant, Guidehouse, begins its “indirect” emissions analysis by attributing “savings” to the Proposed Project based on poorly supported claims regarding how much incremental battery storage resources would need to be installed if the Project were not constructed. Guidehouse then assumes that these “savings” are used to accelerate the deployment of an additional 543 MW of offshore wind, which, Guidehouse assumes, generates zero-emission electricity at a 50 percent capacity factor and displaces 2,400 GWh of fossil generation. Guidehouse then credits the emission reductions resulting from this hypothetical wind facility displacing hypothetical fossil fuel generation to the Proposed Project, claiming up to approximately one million tons per year of carbon dioxide reductions.⁴⁰

As Synapse’s testimony will demonstrate, this is a non-standard and “unorthodox” approach that lacks any limiting principle and is therefore meaningless. Under AGTP and Guidehouse’s theory, simply because money is fungible, any action that can be monetized can be converted into any other action of equal cost, no matter how disconnected, and that latter action used to assert an emissions benefit. But Guidehouse’s choices are entirely arbitrary. Why assume that the purported savings from the project are used to build an offshore wind farm? Why not an airplane or an office building (which would have adverse rather than beneficial impacts on greenhouse gas emissions)? It is simply not analytically valid to attribute to a gas plant the emission reductions from a hypothetical offshore wind farm that AGTP is not itself committed to building, and where there is no evidence the Proposed Project will induce its development.

⁴⁰ DSEIS Appendices E.1 and E.2.

Moreover, not only is AGTP’s approach to indirect emissions bankrupt in theory, it is also flawed in practice. As Synapse will demonstrate, the Guidehouse analysis dramatically overstates the cost of building storage as an alternative to the Proposed Project and therefore massively inflates the size of the hypothetical wind farm—and the attendant GHG impacts—that could be constructed in lieu of this battery storage. For example, Guidehouse fails to use the most current battery cost projections or adequately account for the rapidly falling costs of battery energy storage resources or expected technological improvements. Indeed, the battery cost figures used by Guidehouse are 30 percent higher than those from the Energy Information Administration, more than quadruple those projected by Bloomberg New Energy Finance, and nearly 12 times higher than some of the promising technology in development. In addition, the Guidehouse analysis ignores significant costs associated with the Proposed Project, including both fuel and emission costs, as well as important benefits associated with storage resources, including their ability to defer or avoid transmission investments. If Guidehouse had used more realistic cost projections for energy storage and fully accounted for the costs of the Proposed Project and full range of benefits of storage, the purported “indirect” GHG benefit of the project would have been largely, if not completely, eliminated.

In sum, AGTP’s own application materials demonstrate the project is inconsistent with the CLCPA’s GHG emission limits. AGTP’s primary argument on consistency is dependent on unreliable modeling and speculation as to the actions of other owners/operators regarding other facilities—none of which DEC can properly rely on. AGTP therefore failed to meet its burden under 6 NYCRR § 624.9(b)(1) to demonstrate consistency with the CLCPA GHG emission limits and DEC correctly determined the Proposed Project is inconsistent with those limits.

* * * *

Offer of Proof

If granted full party status, Petitioners would submit expert testimony showing that AGTP's emissions modeling fails to demonstrate that the project is consistent with the CLCPA's GHG limits. Synapse will provide testimony to support the facts provided in this section, including:

1. AGTP's consultant Guidehouse used an unreliable, simplified approach to evaluating which resources would be displaced by the Proposed Project that overstates emission benefits.
 2. The Guidehouse modeling appears to ignore the potential for Tier 4 resources to contribute to displacing fossil generation with zero-emissions power in New York City.
 3. Guidehouse's indirect emissions analysis is both inappropriately constructed and flawed in implementation.
- 3. Issue 3: The Astoria Plant Would Prolong New York's Reliance on Fossil Fuel Resources Through 2040 and Thus Interfere with Achievement of the CLCPA Mandates**

Ensuring reliable compliance with the CLCPA's zero-emissions electricity by 2040 mandate requires proactive planning to phase down reliance on existing fossil generation. DEC reasonably concluded that, as "a new and fossil fuel-fired electric generation facility," the Astoria Project "would make meeting the Statewide GHG emission limits established in ECL Article 75 substantially more difficult."⁴¹

This issue is "substantive" because "there is sufficient doubt about the applicant's ability to meet" the statutory criteria laid out in CLCPA Section 7(2): specifically, a requirement that

⁴¹ Astoria Denial at 11.

the project not interfere with the state’s attainment of the CLCPA’s GHG reduction requirements. 6 NYCRR § 624.4(c)(2). This issue is “significant” because “it has the potential to result in the denial of the permit,” *id.* § 624.4(c)(3), in combination with a finding that the Project is not justified.⁴²

New York State presently relies heavily on fossil-fueled power plants for both energy and electric capacity. This reliance percentage is greater in the New York City area. In 2020, a mere 27.4 percent of statewide electric generation came from renewables, while 43.4 percent of generation came from fossil plants.⁴³ On a capacity basis, the situation is even worse, with the State relying on gas plants for more than half its electric capacity.⁴⁴ The State therefore must substantially decrease—not increase—reliance on fossil fuels in order to decrease greenhouse gas emissions and achieve 70 percent renewable generation by 2030 and zero-emissions electricity by 2040.

To operate a zero-emissions grid in 2040, as mandated by the CLCPA, New York must not only increase zero-emissions generation to meet projected demand, but must also ensure that the reliable functioning of the power grid does not depend on the continued operation of GHG-emitting fossil fuel-fired facilities. Consistent with Governor Hochul’s recognition of the need for a blueprint to wean the State off its reliance on the dirtiest peaker plants by 2030,⁴⁵ New

⁴² See Issues 5 and 6, below.

⁴³ See New York Independent System Operator (“NYISO”), *Gold Book: 2021 Load & Capacity Data Report 73* (2021), <https://www.nyiso.com/documents/20142/2226333/2021-Gold-Book-Final-Public.pdf/b08606d7-db88-c04b-b260-ab35c300ed64>.

⁴⁴ See *New York State Profile and Energy Estimates*, U.S. Energy Info. Admin., <https://www.eia.gov/state/analysis.php?sid=NY#20> (last updated Sept. 17, 2020).

⁴⁵ Earlier this year, Governor Hochul announced that she will direct NYSERDA, DPS, and DEC “to develop a blueprint to guide the retirement and redevelopment of New York’s oldest and most-polluting fossil fuel facilities and their sites by 2030.” N.Y. Governor’s Off., *New York State of the State 2022: A New Era for New York* 150 (2022), <https://www.governor.ny.gov/sites/default/files/2022-01/2022StateoftheStateBook.pdf>.

York must take affirmative steps to wean itself off its reliance on the rest of the fossil fuel powered fleet by 2040.

DEC reasonably concluded that the addition of new fossil fuel generation interferes with compliance with the CLCPA's mandates. As DEC observed:

To achieve the State's climate change and clean energy policies as outlined in the CLCPA, the State needs to continue to accelerate its ongoing transition away from natural gas and other fossil fuels. Constructing and operating a new fossil fuel-fired power plant accomplishes the exact opposite and perpetuates a reliance on fossil fuels.⁴⁶

Because maintenance of a reliable electric grid requires robust planning, commitments to eliminate emission sources abruptly in 2040 are insufficient to demonstrate CLCPA consistency. A commitment to simply retire a fossil fuel-fired facility in 2040 is insufficient to render new gas generation consistent with the CLCPA. Building a gas plant that must retire just as the State's zero-emissions energy needs become most acute would neither ensure reliability nor facilitate renewable integration. Such a plant would make it more—not less—difficult to achieve the 2040 zero-emissions electricity mandate. New fossil fuel generation is particularly problematic because it perpetuates an electric grid where local reliability is dependent on fossil fuel capacity resources and jeopardizes the economics of zero-emissions alternatives. Building a fossil fuel peaker entrenches the grid's local reliance on that resource and dampens market signals for storage or other non-emitting capacity resources to site in that load pocket. Thus, adding new gas resources will make it even more challenging for New York to extricate itself from its present over-reliance on fossil fuel generation.

The Climate Action Council recognized this in its Draft Scoping Plan, narrowly limiting the context in which new fossil fuel generation could ever be considered:

⁴⁶ Astoria Denial at 11.

If a reliability need or risk is identified, emissions-free solutions should be fully explored, such as storage, transmission upgrades or construction, energy efficiency, demand response, or another zero-emissions resource. Only after these alternatives are fully analyzed and determined to not be able to reasonably solve the identified grid reliability need shall new or repowered fossil fuel-fired generation facilities be considered. These should only be considered if the NYISO and local transmission operators confirm that the fossil fuel fired facility is required to maintain system reliability and that need cannot reasonably be met with the alternatives listed above.⁴⁷

As discussed below with respect to Issue 5, no such reliability need is present here.

Consequently, DEC reasonably concluded that prolonging New York's reliance on fossil fuel generation by approving the Astoria project would interfere with the achievement of New York's CLCPA mandates. Moreover, as explained above, AGTP's efforts to discount the CLCPA's 2040 zero-emissions electricity mandate based on the PSC's authority to modify the obligation if it concludes (after a hearing) that the obligation will impede the provision of safe and adequate electric service are unpersuasive. First, AGTP's approach would cripple DEC's ability to take action while there is still time to effectively extricate the New York grid from its current heavy reliance on fossil fuels, creating a self-fulfilling prophecy that New York cannot manage without fossil fuels by stymieing efforts to reduce that reliance today. Second, achievement of the 100 percent zero-emissions electric grid by 2040 is core to achievement of the CLCPA's broader 2050 climate mandates, as electrification is the primary emission reduction strategy for sectors such as transportation and buildings.⁴⁸ The full emission benefit of electrifying vehicles and

⁴⁷ N.Y. St. Climate Action Council, *Draft Scoping Plan* 155 (Dec. 30, 2021), <https://climate.ny.gov/-/media/Project/Climate/Files/Draft-Scoping-Plan.ashx>.

⁴⁸ The Draft Scoping Plan identifies "key strategies that are fundamental to achieving the GHG emission limits and net zero GHG emissions" including "[t]ransition[ing] from fossil gas to electrification in buildings" and "[t]ransportation electrification." *Draft Scoping Plan* at 31.

building heating systems will only be achieved if the electricity itself comes free of its own emissions.

* * * *

Offer of Proof

With respect to Petitioners' third issue for adjudication, Synapse will testify to the following:

1. Drawing from U.S. Energy Information Administration ("EIA") data, Synapse will show that substantial amounts of renewable energy and energy efficiency resources are needed to meet CLCPA mandates, including the requirement for 70 percent renewable generation by 2030, because the grid is currently too reliant on gas generation.
2. Synapse will also testify that building a gas plant that would retire in 2040 just as New York's renewable integration needs become most acute with the zero-emissions mandate will not enhance reliability or facilitate renewable penetration.

4. Issue 4: AGTP Cannot Rely on Potential Conversion to Alternative Sources to Demonstrate Compliance with the CLCPA's 2040 Objectives

The CLCPA requires that electricity sources in the state be "zero emissions" by 2040. Public Service Law § 66-p(2). AGTP has specifically stated that it is "not relying on a transition to renewable fuel to demonstrate consistency with the CLCPA."⁴⁹ Consequently, any argument regarding the consistency of the proposed project with the CLCPA based on a theoretical future fuel switch should be disregarded. However, even if AGTP were so relying, any proposed plant combusting either hydrogen and/or RNG would not be emissions-free, and in fact would generate substantial GHG emissions and localized air pollutants in violation of the CLCPA.

⁴⁹ Astoria Denial at 12 (citing DSEIS at 3-49)

Furthermore, the proposed plant cannot feasibly transport, store, or combust either hydrogen or RNG at this time. AGTP has not met its burden of proof, nor could it, for CLCPA consistency.

This issue is “substantive” because “there is sufficient doubt about the applicant’s ability to meet” the statutory criteria laid out in CLCPA Section 7(2). 6 NYCRR § 624.4(c)(2). This issue is “significant” as well, because among the many other reasons in the denial letter⁵⁰—“it has the potential to result in the denial of the permit.” *Id.* § 624.4(c)(3). If granted party status, Petitioners will submit expert testimony and documentary evidence supporting DEC’s rejection of AGTP’s entirely theoretical proposal to convert to green hydrogen or RNG at some unknown date in the future in order to meet the 2040 emissions free requirement, as follows: (1) Petitioners will submit expert testimony and documentary evidence that neither “green” hydrogen nor RNG is a zero-emissions fuel; (2) Petitioners will submit expert testimony and documentary evidence that neither “green” hydrogen nor RNG is a feasible alternative fuel such that AGTP has not and cannot “rely[] on a transition to renewable fuel to demonstrate consistency with the CLCPA.”⁵¹

i. Neither “Green” Hydrogen nor RNG Is a Zero-Emissions Fuel

The combustion of hydrogen, whether 100% hydrogen or some smaller percentage blend of hydrogen and gas, is not and will not be emissions-free. Indeed, AGTP’s theoretical proposal is nowhere close to fueling its plant with 100 percent hydrogen or 100 percent RNG. The proposed Astoria gas plant could only accomplish a 10 percent hydrogen blend without major modifications. This would result in just a 3 percent CO2 emissions savings.⁵² A 50 percent

⁵⁰ See Astoria Denial at Sections III(A–D), (F); IV(A–B).

⁵¹ Astoria Denial at 12 (citing DSEIS at 3-49)

⁵² Bryndis Woods & Elizabeth A. Stanton, Applied Econs. Clinic, *Comments on Astoria Gas Turbine Power LLC’s Proposed Gas-Fired Combustion Turbine 5* (Sept. 2021) (“AEC Report”) (citing Jeffrey Goldmeer, Gen. Elec. Power, *Power to Gas: Hydrogen for Power Generation* (Feb. 2019),

hydrogen blend would only achieve a 20 to 25 percent CO₂ reduction, while at the same time increasing problematic NO_x emissions, as described further below.

Even 100 percent hydrogen has GHG emissions, particularly when the gas leaks, as it is prone to do.⁵³ Unburned, leaked hydrogen is a potent GHG, “100 times more potent than CO₂ emissions over a 10-year period (for equal emissions annually during this time).”⁵⁴

In addition to GHG emissions, hydrogen combustion (whether a blend or 100 percent green hydrogen) can produce up to six times the level of NO_x emissions as methane combustion, and these emissions can in turn cause adverse health effects.⁵⁵ NO_x emissions are of special concern because:

NO_x does significant damage to the respiratory system over time. In areas affected by smog resulting from NO_x emissions, symptoms including coughing, increased rates of asthma, and comorbidities with other respiratory illness develop. This impact is readily apparent in many frontline communities dealing with heavy NO_x emissions emitted by nearby high-polluting peaker power plants and other sources. These communities have developed stark health disparities as a result of elevated NO_x exposure.⁵⁶

https://www.ge.com/content/dam/gepower/global/en_US/documents/fuel-flexibility/GEA33861%20Power%20to%20Gas%20-%20Hydrogen%20for%20Power%20Generation.pdf)

Attached hereto as Exhibit 1. *See also* Sasan Saadat & Sara Gersen, Earthjustice, *Reclaiming Hydrogen for a Renewable Future: Distinguishing Oil & Gas Industry Spin from Zero-Emission Solutions* 25 fig.7 (2021), https://earthjustice.org/sites/default/files/files/hydrogen_earthjustice.pdf, (“Reclaiming Hydrogen Report”).

⁵³ Justin Mikulka, *Decoding the Hype Behind the Natural Gas Industry’s Hydrogen Push*, Desmog Blog (Jan. 14, 2021), <https://www.desmogblog.com/2021/01/14/decoding-hype-behind-natural-gas-industry-hydrogen-push>. (citing Zahreddine Hafsi et al., *Hydrogen Embrittlement of Steel Pipelines During Transients*, 13 *Procedia Structural Integrity* 210 (2018)).

⁵⁴ Mark Brownstein & Beth Track, *Opinion: Houston Can Deliver Clean Hydrogen Energy but Must Manage the Climate Risks*, *Hous. Chron.* (Mar. 4, 2022), <https://www.houstonchronicle.com/opinion/outlook/article/Opinion-Houston-can-deliver-clean-hydrogen-16977639.php>; Ilissa Ocko & Steven Hamburg, *Climate Consequences of Hydrogen Leakage*, *Atmospheric Chemistry & Physics* (forthcoming, accepted for review Feb. 2022), <https://acp.copernicus.org/preprints/acp-2022-91/acp-2022-91.pdf>.

⁵⁵ AEC Report at 10.

⁵⁶ AEC Report at 11 (quoting Response of Clean Energy Group to DOE Hydrogen Program Request for Information #DE-FOA-0002529 at 3 (July 7, 2021), <https://www.cleanegroup.org/wp-content/uploads/CEG-Response-to-DOE-Hydrogen-RFI.pdf>).

Spiking NOx emissions are especially harmful to local air quality during startup periods. Gas turbine NOx emissions spike significantly before the plant's pollution controls warm up. If this Proposed Project is only to come online during peak periods, the problematic startup NOx emissions will be a regular occurrence, especially in the summer, when the ozone concerns are highest. See Issue 8 below re: Section 7(3) analysis.

As such, DEC correctly noted that combustion of a blend of hydrogen and natural gas:

is expected to cause higher emissions of NOx without the installation of additional NOx controls. An existing combustion turbine facility may be required to modify its fuel feed system, fuel firing system, and/or emission control system to facilitate hydrogen firing in the combustion turbine while maintaining compliance with its permitted emission limits. Further, if a blend of hydrogen and natural gas is combusted, some amount of GHG emissions would still be generated from the natural gas component of the fuel mixture, potentially jeopardizing the facility's compliance with the zero-emissions by 2040 requirement in the CLCPA.⁵⁷

Similarly, RNG as an alternative to fossil gas is still methane, a potent GHG. AGTP admits that RNG is "interchangeable with conventional natural gas" with respect to "onsite GHG emissions."⁵⁸ RNG emits just as much carbon dioxide when burned and leaks just as much methane when transported as the fossil gas produced from non-biological sources like hydraulic fracturing (fracking). Methane's global warming potential is approximately 86 times that of carbon dioxide over a 20-year time horizon and approximately 25 times that of carbon dioxide over a 100-year time horizon.⁵⁹

⁵⁷ Astoria Denial at 12-13.

⁵⁸ DSEIS at 3-51.

⁵⁹ *Overview of Greenhouse Gases: Methane*, EPA, <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane> (last updated July 27, 2021); Gayathri Vaidyanathan, *How Bad of a Greenhouse Gas is Methane?*, Scientific American (Dec. 22, 2015), <https://www.scientificamerican.com/article/how-bad-of-a-greenhouse-gas-is-methane/>.

In addition, “neither the Department nor PSC have yet determined the extent to which RNG combustion may be an acceptable means of meeting the zero-emissions by 2040 requirement of the CLCPA.”⁶⁰ Indeed, most combustion of RNG is climate additional unless it is captured from waste “methane that would otherwise be emitted into the atmosphere” and therefore non-compliant with the CLCPA.⁶¹ While some sources of RNG, such as RNG from wastewater treatment, can potentially have a positive climate impact,⁶² other sources, such as forestry residues, risk *increasing* climate pollution, especially if any gas is leaked during transport.⁶³ Many sources of RNG have other climate-adverse environmental and land use impacts that offset any potential climate benefits during combustion.⁶⁴

Petitioners will offer expert testimony and documentary evidence to demonstrate that neither RNG nor hydrogen are zero-emissions fuel sources. Dr. Woods from AEC will testify to AGTP’s inability to operate the plant with zero emissions by 2040, as required by the CLCPA, based on expertise in environmental economics, gas and electric sector planning, and climate policy, and the review of relevant technical literature.

⁶⁰ Astoria Denial at 13.

⁶¹ Sasan Saadat et al., Earthjustice & Sierra Club, *Rhetoric v Reality: The Myth of “Renewable Natural Gas” for Building Decarbonization* 9 (July 2020), https://earthjustice.org/sites/default/files/feature/2020/report-decarb/Report_Building-Decarbonization-2020.pdf.

⁶² NRDC, *Issue Brief: A Pipe Dream or Climate Solution? The Opportunities and Limits of Biogas and Synthetic Gas to Replace Fossil Fuels* 3 (June 2020), <https://www.nrdc.org/sites/default/files/pipe-dream-climate-solution-bio-synthetic-gas-ib.pdf>; Saadat et al., *Rhetoric v Reality*.

⁶³ NRDC, *Issue Brief* at 2.

⁶⁴ *See id.* at 3.

ii. *Neither “Green” Hydrogen nor RNG Is a Feasible Alternative Fuel*

DEC correctly concluded, consistent with the AGTP’s own assessment, that “Astoria has not established the feasibility of either RNG or hydrogen as a compliance pathway” from a technical or supply perspective.⁶⁵

a. The Combustion of Green Hydrogen Is Not Currently Technically Feasible at the Proposed Project

The proposed plant could only partially run on green hydrogen, even if there were sufficient fuel sources and adequate transportation and storage, which there are not.⁶⁶ No commercially available power plant turbines can burn pure hydrogen, meaning that even power plants with ready access to green hydrogen will continue to burn a mixture of hydrogen and fossil gas. Hydrogen’s “energy density (one-third of fossil gas), molecular size (the smallest of all molecules), flammability, and flame speed (an order of magnitude faster than fossil gas),”⁶⁷ all pose challenges to retrofitting gas plants to run on green hydrogen, and those challenges multiply with increasing concentrations of hydrogen in the power plant’s fuel blend. Running a gas turbine on pure hydrogen also requires different fuel delivery piping and components; different gas turbine controls, ventilation systems, and enclosures; and different selective catalytic reduction systems for NOx removal.⁶⁸ Many of these are also needed for high blends of hydrogen mixed with traditional gas.⁶⁹

⁶⁵ Astoria Denial at 11; DSEIS at 4-21 (stating that the immediate use of green hydrogen or RNG “is not technically feasible because currently there are no commercially available sources of either green hydrogen or RNG on the high pressure natural gas pipeline system.”; *see also id.* (discussing the many contingencies that would need to occur for it to be possible to use green hydrogen to produce power at the site, and noting that the largest landfill in the world (Fresh Kills on Staten Island) would only be able to supply 1.6% of the project’s needs).

⁶⁶ Reclaiming Hydrogen Report at 18–20.

⁶⁷ Reclaiming Hydrogen Report at 24, citing Jeffrey Goldmeer et al., Gen. Elec., *Hydrogen as a Fuel for Gas Turbines* 3 (2021), https://www.ge.com/content/dam/gepower-new/global/en_US/downloads/gas-new-site/future-of-energy/hydrogen-fuel-for-gas-turbines-gea34979.pdf.

⁶⁸ *Id.* at 24–25 (citing Goldmeer et al.).

⁶⁹ *Id.*

In order to burn more than a modest blend of gas and hydrogen, AGTP admits that a “complete replacement of the combustion system in the gas turbine” would be required sometime in the next 15 to 20 years in order to use hydrogen at the higher blends promised.⁷⁰ DEC properly found that “that the use of green hydrogen or renewable natural gas (RNG) is not currently technically feasible”⁷¹

iii. *Sufficient Renewable Energy Is Not Available to Produce Green Hydrogen, nor Are There Sufficient Sources for RNG for Commercial Operations in Queens, New York*

The generation of green hydrogen through electrolysis requires large amounts of surplus renewable energy.⁷² AGTP itself notes the large “quantity of hydrogen required to operate the [Proposed] Project (12.47 MMft³)”⁷³ and that “[b]ased on current electrolysis technology, the amount of renewable energy required to produce the necessary quantity of fuel would be 1,825 MWh.”⁷⁴ This figure is confirmed by the turbine manufacturer, GE, which has created a calculator to estimate renewable capacity required to power its turbines with “green” hydrogen. According to GE, using today’s technology it would take over 1,800 MW of renewables operating at a 100 percent capacity factor to generate the “green” hydrogen necessary to power AGTP’s proposed GE H-Class 7HA.03 turbine at a 30 percent capacity factor.⁷⁵ Because

⁷⁰ *DSEIS Appendix L: Information from General Electric Regarding Use of Green Hydrogen* (2021), https://www.nrg.com/assets/documents/legal/astoria/00_2021/appendices-e-m-06-30-21.pdf.

⁷¹ Astoria Denial at 12 (citing DSEIS Section 4.8.2).

⁷² See, e.g., *Hydrogen in the Northwest European Energy System*, Aurora Energy Research (Aug. 31, 2020), <https://auroraer.com/insight/hydrogen-in-the-northwest-european-energy-system>; Sonal Patel, *Why Power-to-Gas May Flourish in a Renewables-Heavy World*, Power Magazine (Dec. 2, 2019) <https://www.powermag.com/why-power-to-gas-may-flourish-in-a-renewables-heavy-world/>; *High-Volume Hydrogen Gas Turbines Take Shape*, Power Magazine (May 1, 2019), <https://www.powermag.com/high-volume-hydrogen-gas-turbines-take-shape> (“running electrolysis to produce 50 MW for one hour at a CCGT running at 50% efficiency could require 175 MW of renewable power & 3,400 kilograms (more than 14,000 gallons) of hydrogen.”).

⁷³ DSEIS at 3-50.

⁷⁴ *Id.*

⁷⁵ *Hydrogen Fueled Gas Turbines*, General Electric, <https://www.ge.com/power/gas/fuel-capability/hydrogen-fueled-gas-turbines>. These figures were derived from use of the cited calculator and based on AGTP’s proposed GE H-Class 7HA.03 turbine and AGTP’s permitted 30 percent capacity factor. See DSEIS at 3-14.

renewable generation resources typically operate at a lower capacity factor, even greater renewable capacity would be required to fully power the facility with hydrogen. GE’s calculator discloses that “[y]ou will need the equivalent of 2408—1.5 MW wind turbines to create the required energy for your hydrogen infrastructure.”⁷⁶ The Proposed Project is a 437 MW facility, so the capacity of renewable energy that would be required to fully power it with “green” hydrogen is more than four times greater than the capacity of the facility itself. The diversion of New York’s limited supply of wind and solar energy towards the energy-intensive production of green hydrogen for the Proposed Project would make it significantly harder to meet the CLCPA’s 2040 target.⁷⁷

Similarly, existing quantities of RNG are far too small for power plant combustion in New York. AGTP itself estimates the combustion turbine at the Proposed Project would require 3.9 MMcf of natural gas per hour to operate at full load.⁷⁸ On an annualized basis, assuming the facility operates at a 30 percent capacity factor, the gas turbine would require one-sixth of the current total US RNG production.⁷⁹ As such, DEC properly found that:

With respect to RNG, while it may be technically feasible to operate the Project on RNG at some point in the future, this still would require commercial availability of RNG. For this to be realized, additional infrastructure may be necessary to generate and deliver this fuel in sufficient quantities to allow the Project to continue to operate. This approval process – which would likely also be subject

⁷⁶ *Id.* (follow “Try our hydrogen calculator” hyperlink; choose “7HA.03” from question 1 dropdown; choose “simple” from question 2 dropdown; drag to “peaker” on question 3 bar; drag to “100%” on question 4 bar; choose “US New York(RGGI)” from question 5 dropdown; then follow the “See Your Hydrogen Potential” hyperlink; under results, find the “Electricity Required” section.)

⁷⁷ Julie McNamara, *What’s the Role of Hydrogen in the Clean Energy Transition?*, Union of Concerned Scientists (Dec. 9, 2020), <https://blog.ucsusa.org/julie-mcnamara/whats-the-role-of-hydrogen-in-the-clean-energy-transition> (citing M.W. Melaina et al., Nat’l Renewable Energy Lab’y, *Blending Hydrogen into Natural Gas Pipeline Networks: A Review of Key Issues* (Mar. 2013), <https://www.nrel.gov/docs/fy13osti/51995.pdf>); see also E3, *Pathways to Deep Decarbonization in New York State* 29–33 (June 2020), <https://climate.ny.gov/-/media/CLCPA/Files/2020-06-24-NYS-Decarbonization-Pathways-Report.pdf> (describing increased electricity demand as building and transportation electrification expands).

⁷⁸ DSEIS at 4-21.

⁷⁹ *Id.*

to Section 7(2) of the Climate Act by the relevant agency or agencies
– may affect the ability to continue operation of the Project.⁸⁰

iv. *AGTP Lacks Specific Plans to Safely Transport or Store Green Hydrogen or RNG at the Site*

Because of the Proposed Project’s location in a dense urban environment with limited space, AGTP notes that any “green hydrogen fuel will need to be transported to the Site.”⁸¹ AGTP also correctly observes that “[t]here are [no pipelines] currently located in *or proposed for* New York State” for transporting hydrogen to the site.⁸² Even if there were, there are enormous challenges to such a plan. Hydrogen has a propensity for leakage at three times the rate of fossil gas. Furthermore, hydrogen tends to corrode and embrittle pipeline infrastructure.⁸³ There are also safety and flammability issues with hydrogen storage and combustion.⁸⁴ AGTP’s application offered no details on how to store an adequate supply of hydrogen or RNG needed for operations, which DEC rightly found insufficient. DEC properly found that “Astoria has not established the feasibility of either RNG or hydrogen as a compliance pathway, from either a supply or GHG emission perspective.”⁸⁵

DEC’s Uniform Permitting Procedures place the burden of proof on the applicant “to demonstrate that its proposal will be in compliance with all applicable laws and regulations administered by the department.” 6 NYCRR § 624.9(b)(1). AGTP has not met its burden of proof in demonstrating that it will comply with the CLCPA’s 2040 zero-emissions mandate. As such, DEC properly concluded that to the extent AGTP “assumes that the Project will ultimately

⁸⁰ Astoria Denial at 12.

⁸¹ DSEIS at 3-50.

⁸² *Id.* (emphasis added).

⁸³ Mikulka, *Decoding the Hype* (citing Zahreddine Hafsia et al., *Hydrogen embrittlement of steel pipelines during transients*, *Procedia Structural Integrity*, Vol. 13 (2018)).

⁸⁴ AEC Report at 11–12.

⁸⁵ Astoria Denial at 12.

transition to hydrogen or RNG, these are essentially aspirational references, as the Application at issue before the Department here contemplates firing fossil fuels at the Project.”⁸⁶

* * * *

Offer of Proof

With respect to Petitioners’ fourth proposed issue for adjudication, AEC will testify to the following:

1. Neither “green” hydrogen nor RNG are emissions-free, nor are they feasible alternative fuels, such that AGTP cannot rely on a transition to renewable fuel to demonstrate consistency with the CLCPA.
2. As such, AGTP cannot operate the plant on green hydrogen or RNG in accordance with the CLCPA.

5. Issue 5: Because There is No Reliability Need for Any Generation at the Project Site, Consideration of Maintenance of Grid Reliability Cannot Justify the Project

DEC correctly concluded, based on determinations of the New York Independent System Operator, Inc. (NYISO), that there is no reliability need for the Astoria plant. NYISO, the PSC, and other state agencies have conducted comprehensive planning processes for the State’s grid, and those authorities do not project a short-term or long-term reliability need that would justify the construction of the proposed Astoria plant. In fact, the planning projections show that after the Transmission Reliability and Clean Energy (“TRACE”) projects are complete and the Tier 4

⁸⁶ Astoria Denial at 12.

transmissions are complete, over 2,500 MW will interconnect directly into Zone J, much of it in Queens.⁸⁷

This issue is “substantive” because “there is sufficient doubt about the applicant’s ability to meet” the statutory criteria laid out in CLCPA Section 7(2). 6 NYCRR § 624.4(c)(2). This issue is “significant” as well, because “it has the potential to result in the denial of the permit,” *id.* § 624.4(c)(3), in combination with a finding that the Project will interfere with or is inconsistent with the CLCPA GHG limits, discussed above.

i. Relying on NYISO’s Determinations of Reliability, Rather than the Company’s Self-Serving Conclusions, Was Proper

NYISO is an independent organization responsible for managing New York’s electric grid under the auspices of the Federal Energy Regulatory Commission (FERC) and is charged with reliably operating New York’s power grid under strict regulatory oversight.⁸⁸

The DEC properly relied on NYISO’s most up-to-date Reliability Needs Assessments generated through NYISO’s comprehensive Local Transmission Planning Process, Reliability Planning Process, the Congestion Assessment and Resource Integration Study, and Public Policy Transmission Planning Process. NYISO’s biennial Reliability Needs Assessment evaluates the

⁸⁷ Astoria Denial at 17.

⁸⁸ *FAQ: Learn More About the NYISO*, N.Y. Indep. Sys. Operator, <https://www.nyiso.com/faq> (last visited Mar. 8, 2022).

resource adequacy and transmission system security of New York’s transmission facilities.

NYISO updates the conclusions of its Reliability Needs Assessment as needed.⁸⁹

NYISO operates the New York power system to the strictest reliability standards in the nation,⁹⁰ and with respect to reliability needs near the proposed Astoria plant in Zone J, NYISO has concluded twice recently that “all resource adequacy and transmission security Reliability Needs are resolved” without the proposed Astoria gas plant.”⁹¹ AGTP cannot meet the burden of proof necessary to show otherwise,⁹² with only self-serving speculation to the contrary.

ii. *Additional Near-Term Transmission Improvements Eliminate Any Purported Reliability Justification for the Proposed Astoria Plant*

In addition to NYISO determinations of reliability needs in Zone J, the following developments provide further evidence that near-term transmission improvements obviate any purported need for the Astoria plant to ensure reliability.

a. ConEdison’s Transmission Reliability and Clean Energy (“TRACE”) Projects.

In April 2021, the PSC approved Con Edison’s petition to proceed with three TRACE Projects that will unbottle local transmission into key transmission load areas and serve as an offramp for approximately 900 MW of additional power on the transmission system into the

⁸⁹ See, e.g., Laura Popa & Keith Burrell, NYISO, *2020-2021 Reliability Planning Process: Post-RNA Base Case Updates* 13 (2021), https://www.nyiso.com/documents/20142/19415353/07%202020-2021RPP_PostRNABaseCaseUpdates.pdf/b81547bc-0411-7958-de0c-7b74244904a5.

⁹⁰ NYISO, *Power Trends 2021: New York’s Clean Energy Grid of the Future, Annual Grid & Markets Report 7* (2021), <https://www.nyiso.com/documents/20142/2223020/2021-Power-Trends-Report.pdf/471a65f8-4f3a-59f9-4f8c-3d9f2754d7de>

⁹¹ NYISO, *2021-2030 Draft Comprehensive Reliability Plan 5* (2021), https://www.nyiso.com/documents/20142/23873690/02%202021-2030_CRP.pdf/29eb0cce-f689-3b05-4c69-d3fbfae5e0e9. After the October 27, 2021 permit denial, NYISO issued its final Plan, which confirms the assessment in the Draft. NYISO, *2021-2030 Comprehensive Reliability Plan* (2021), <https://www.nyiso.com/documents/20142/2248481/2021-2030-Comprehensive-Reliability-Plan.pdf>.

⁹² The burden of proof on the applicant AGTP is “to demonstrate that its proposal will be in compliance with all applicable laws and regulations administered by the department.” 6 NYCRR § 624.9(b)(1). The burden of proof lies with the applicant to demonstrate that its proposal can pass the three-part test in Section 7(2).

local system in Zone J.⁹³ This additional transmission capacity allows for “[t]he retirement of downstate fossil fuel-fired peaking generation units without the addition of any new fossil-fueled power plants.”⁹⁴ One of the three TRACE Projects is the Rainey-Corona Feeder Line, which will add approximately 300 MW of transfer capability to the immediate area of the Proposed Project,⁹⁵ is slated to be in service by Summer 2023, and “will electrically connect the Company’s 345 kV Rainey substation with its Corona 138 kV substation, increasing transfer capability by approximately 300 MW to solve the reliability need” in that sub load pocket.⁹⁶ Additional off-ramps will be installed to accommodate “new resources such as offshore wind and new upstate renewable generation.”⁹⁷ The PSC provided expedited approval to the TRACE projects so that Con Edison could immediately commence the engineering, design and construction work.⁹⁸ The Petitioners will offer expert testimony and documentary evidence to demonstrate that the TRACE projects help serve the reliability need.⁹⁹

In addition, NYISO analyzed, modeled and approved additional reliability solutions to address bulk system needs. NYISO selected additional Con Edison transmission upgrades and operating procedures as a Short-Term Reliability Solution to address the 2020 Quarter 3 STAR

⁹³ Order Regarding Transmission Investment Petition (“PSC TRACE Order”), *Proceeding on Motion of the Commission as to the Rates, Charges, Rules & Regulations of Consolidated Edison Company of New York, Inc. for Electric Service* (“TRACE Proceeding”), Case No. 19-E-0065 (N.Y. PSC Apr. 15, 2021) (Dkt. No. 300); Petition of Consolidated Edison Company of New York, Inc. for Approval to Recover Costs of Certain Transmission Reliability & Clean Energy Projects at 19 (“ConEd TRACE Petition”), Case No. 19-E-0065 (N.Y. PSC Dec. 30, 2020) (Dkt. No. 268).

⁹⁴ Press Release, N.Y. Pub. Serv. Comm’n (“PSC”), *PSC Approves \$800 Million Investment to Maintain and Improve Reliability, Achieve Climate-Change Goals, Enhance Resiliency of NYC Transmission Grid* (Apr. 15, 2021), (emphasis added)

[https://www3.dps.ny.gov/pscweb/webfileroom.nsf/ArticlesByCategory/8822278FE4329E07852586B80055A831/\\$File/pr21040.pdf?OpenElement](https://www3.dps.ny.gov/pscweb/webfileroom.nsf/ArticlesByCategory/8822278FE4329E07852586B80055A831/$File/pr21040.pdf?OpenElement).

⁹⁵ ConEd TRACE Petition at 14.

⁹⁶ ConEd TRACE Petition at 17 & n.24.

⁹⁷ ConEd TRACE Petition at 15.

⁹⁸ PSC TRACE Order; *see also* ConEd TRACE Petition at 28.

⁹⁹ Rachel Wilson & Erin Camp, Synapse Energy Econs., *The Proposed New Astoria Combustion Turbine generator and New York State’s Clean Energy Future* 12 (Sept. 2021) (“Synapse Report”). Attached hereto as Exhibit 2.

Near-Term Reliability Needs for the bulk power transmission system in Queens.¹⁰⁰ The Petitioners will offer expert testimony and documentary evidence to demonstrate that the TRACE projects and other transmission upgrades help serve the reliability need in Zone J and Sub-load pocket J2.¹⁰¹

b. Tier 4 Transmission

In addition to the transmission upgrades within Zone J described above that have been approved by the PSC and that NYISO has determined address short-term local reliability and longer-term bulk power needs, there are additional transmission projects in the state-approval queue that further address long-term local and bulk reliability needs.

Tier 4 of the Clean Energy Standard sought infrastructure projects to “increase the penetration of renewable energy into New York City (NYISO Zone J).” All four proposed projects, and the two that were selected, each interconnect in Western Queens into Sub-load pocket J2. One of the selected projects, the Clean Path proposal, will deliver 1,300 MW of renewable energy from Delaware County, NY to the Rainey Substation in Queens by June 30, 2026.¹⁰² AGTP itself has noted that the Rainey interconnection point has one of “the most promising performance [features], i.e., fewest adverse system impacts based on reliability security analysis” for up to 1,250 MW.¹⁰³ The other selected project, the Champlain Hudson

¹⁰⁰ See NYISO, *Draft Short-Term Reliability Process Report: 2023 Near-Term Reliability Need 7* (2021), <https://www.nyiso.com/documents/20142/19159155/2020%20Quarter%203%20Short%20Term%20Reliability%20Process%20Report.pdf>; Popa & Burrell, *2020-2021 Reliability Planning Process: Post-RNA Base Case Updates* at 13–14, 18; NYISO, *UPNY-ConEd Voltage Collapse Transfer Limits Report* (2021), <https://www.nyiso.com/documents/20142/3692483/UPNY-ConEd-Voltage-Collapse-FINAL.pdf/774b2e84-4fa3-11ea-33a2-976b4f552429>.

¹⁰¹ Synapse report at 12–13.

¹⁰² See Avangrid Networks, T4RFP21-1, *Purchase of New York Tier 4 Eligible Renewable Energy Certificates* 119–20, 129 (2021), <https://www.nyserda.ny.gov/-/media/Files/Programs/Clean-Energy-Standard/Tier4-Step-2-Bid-Submission-Response/Excelsior-Connect.pdf>.

¹⁰³ DSEIS at 4-27–28 (citing NYSEDA, *2020 Offshore Wind Solicitation Awards* (2020), <https://www.nyserda.ny.gov/-/media/Files/Programs/offshore-wind/LSR-OSW-sol20proj-fs.pdf>).

Power Express would to deliver 1,250 MW of energy from Québec to the Astoria Annex Substation located in Queens by December 2025.¹⁰⁴ The Petitioners will offer expert testimony and documentary evidence to demonstrate that the Tier 4 Transmission Projects interconnecting in Queens will help serve the reliability need.

c. Offshore Wind and Transmission

In addition to approximately 2,500 MW interconnecting in Queens via the Tier 4 projects, additional transmission lines will bring thousands of megawatts of offshore wind generation to Zone J.¹⁰⁵ Under the CLCPA, New York is obligated to develop nine GW of offshore wind by 2035,¹⁰⁶ all or nearly all of which is anticipated to be built offshore near New York City and Long Island. At least one offshore wind project, Equinor Wind US LLC's 1,230 MW Beacon Wind project, plans to interconnect to the Astoria Substation, bringing new renewable generation to the area in 2028.¹⁰⁷ Other points of interconnection from offshore wind transmission lines elsewhere in the City will also help resolve local and bulk Zone J constraints. For example, Con Edison has two proposals for Clean Energy Hubs that can incorporate the new offshore and upstate transmission.¹⁰⁸ The Petitioners will offer expert testimony and documentary evidence to demonstrate that offshore wind interconnecting in Queens and elsewhere will help serve the reliability need.

¹⁰⁴ See Hydro-Québec & Transmission Dev., *Champlain Hudson Power Express Project Proposal* 5-2, 5-14 (2021).

¹⁰⁵ See *Offshore Wind Projects*, NYSERDA, <https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects> (last visited Mar. 8, 2022).

¹⁰⁶ Public Service Law § 66-p(5).

¹⁰⁷ See NYSERDA, *2020 Offshore Wind Solicitation Awards*.

¹⁰⁸ See Consol. Edison Co. of N.Y., Inc., *The Long-Range Transmission Plan 2018-2028* (2018), [coned.com/-/media/files/coned/documents/business-partners/transmission-planning/long-range-transmission-plan-2018.pdf](https://www.coned.com/-/media/files/coned/documents/business-partners/transmission-planning/long-range-transmission-plan-2018.pdf).

iii. *AGTP's Claims About Black Start Capability Do Not Justify the Project*

As part of its argument that the Proposed Project is justified, AGTP argues that the Project will “provide[] critical black start capability.”¹⁰⁹ To the extent that AGTP posits that purported black start capability serves a reliability need, this argument is misplaced. As other sections of AGTP’s Hearing Request make clear, any localized benefit of retaining black start capability at the Proposed Project site stems from the company’s proposal to temporarily retain an *existing* Pratt & Whitney (P&W) Twin Pac (composed of two combustion turbines and an electric generator) until an on-site battery energy storage system can be developed.¹¹⁰ While the existing facility must shut down or upgrade emissions controls for its normal operations under DEC’s NOx peaker regulations, those regulations exempt black start resources from the control requirements of Section 227-3. 6 NYCRR § 227-3.1(c) (“The provisions of this Subpart do not apply to black start resources.”). In other words, the black start capability AGTP claims justifies the construction of the Proposed Project *already exists*, and the company can continue to provide this service and upgrade to battery storage regardless of whether the permit at issue is approved.

If black start capability at this location is deemed sufficiently important, AGTP can—precisely as it proposes—temporarily retain the existing P&W Twin Pac as a black start resource consistent with the NOx peaker regulations until the company is able to replace it with a non-emitting battery energy storage facility *without also building a massive new gas peaking turbine at the site*. In addition, as Synapse will demonstrate (and as AGTP concedes in its DSEIS), batteries can also provide black-start service if they are outfitted with grid-forming inverters that can set their own frequency and voltage signal. Indeed, AGTP itself proposes to replace the final P&W Twin Pack with an approximately 24 MW-equivalent battery energy storage system to

¹⁰⁹ AGTP Request for Adjudicatory Hearing at 15.

¹¹⁰ *Id.* at 4–5.

provide black start capability to the site.¹¹¹ Therefore, black start capability is irrelevant to the Title V permit at issue, should not be adjudicated at a hearing and AGTP should be barred from presenting evidence that black start capability is a justification for building its new gas power plant.

* * * *

Offer of Proof

As described above, the Petitioners will offer evidence to further support DEC's reliance on NYISO for grid system needs and its conclusion that there is no short-term or long-term reliability need that would justify the proposed Astoria plant. With respect to Petitioners' fifth issue for adjudication, Synapse will provide testimony to support the facts asserted above, including:

1. The TRACE projects help serve the reliability need.
2. Tier 4 Transmission Projects interconnecting in Queens will help serve the reliability need.
3. Offshore wind interconnecting in Queens and elsewhere will help serve the reliability need.
4. Black start capability, to the extent that it is necessary, can be provided by resources other than the proposed project.

Issue 6: The Project is Not Justified by Claimed Ratepayer Savings

AGTP erroneously claims that the Proposed Project is also justified because it will reduce costs for New York City electric customers by providing "economic capacity" without a

¹¹¹ DSEIS at ES-3, 1-1, 3-12, 3-44.

ratepayer guaranteed support contract.¹¹² However, the CLCPA makes no provision for purported cost reductions to justify an otherwise CLCPA-inconsistent project and AGTP's application materials provide no assurances that ratepayers will see any cost reductions. Moreover, AGTP's cost claims lack a compelling analytical foundation.

As an initial matter, AGTP's cost "justification" rests on a misinterpretation of CLCPA Section 7(2), which states that DEC must "provide a detailed statement of justification as to why [the statute's GHG emissions] limits/criteria may not be met" by an applicant for a license or permit. Reading the CLCPA as a whole, it is clear that the cost reduction claimed by AGTP is not a permissible justification for the failure of an applicant to meet the statute's emissions targets.

Neither the plain language nor the purpose of Section 7 of the CLCPA supports AGTP's assertions that DEC is required to consider costs in permitting decisions. The New York State legislature passed the CLCPA with a primary objective: "to reduce greenhouse gas emissions from all anthropogenic sources." CLCPA § 1(4). This predominant policy goal is reflected throughout CLCPA Section 7, which states that: "state agencies shall assess and implement strategies to reduce their greenhouse gas emissions... shall consider whether [administrative approvals and decisions] are inconsistent with or will interfere with the attainment of the statewide greenhouse gas emissions limits... [and] prioritize reductions of greenhouse gas emissions... in disadvantaged communities..." *Id.* § 7.

Notably, the legislature did not directly mention electric customer costs in particular or economics in general when writing this section of the statute. That silence is further evidence that the drafters of the CLCPA did not intend for customer cost reductions to excuse

¹¹² DSEIS at 3-64; AGTP Request for Adjudicatory Hearing at 11.

noncompliance with CLCPA emissions limits under Section 7(2). Where, in a statutory provision, “a general statement of policy is qualified by an exception” the presumption should be that the legislature drew up “the exception narrowly in order to preserve the primary operation of the provision.” *Commissioner v. Clark*, 489 U.S. 726, 739 (1989).

Generalized electric customer cost reductions are not listed among the secondary policy objectives of the CLCPA either. Ancillary goals listed in the statutory preamble include the adoption of “complementary adaptation measures” to improve the state’s resiliency against climate impacts, as well as the promotion of the interests of disadvantaged communities and communities that have faced racial and ethnic discrimination. CLCPA §§ 1(5)–(7). The only economic objectives identified by the legislature relate to green job creation, workers’ welfare, and the equitable distribution of economic opportunities across the diverse communities of the state. *Id.* §§ 1(10)–(11). The broad consumer benefits asserted by AGTP fall outside of the narrow scope of these labor-and-equity-oriented policies. Thus, it is apparent that the legislature deliberately excluded the kind of economic benefit described by AGTP from the CLCPA’s series of policy objectives,¹¹³ and therefore AGTP’s justification of its failure to comply with the statute on these grounds would be wholly inappropriate.

Second, even if these hypothetical cost reductions were a valid justification for CLCPA inconsistency under the statute—which they are not—AGTP’s cost claims lack a compelling foundation. If granted full party status, Petitioners would provide expert testimony demonstrating that AGTP’s cost analysis by Guidehouse suffers from multiple defects that undermine its credibility. Guidehouse’s analysis is fundamentally incomplete because it does not look at *net* economic impacts. Rather than analyzing the benefits and costs of the Proposed Project and

¹¹³ “[E]xpressing one item of an associated group or series excludes another left unmentioned.” *Johnson v. Guzman Chavez*, 141 S. Ct. 2271, 2291 (2021) (quoting *NLRB v. SW General, Inc.*, 137 S.Ct. 929, 940 (2017)).

comparing them, Guidehouse evaluated only the benefits. Petitioners plan to submit expert testimony explaining that a full analysis would also incorporate the cost components including categories such as displaced generation from the Proposed Project and retired resources as a result of Proposed Project. Compounding this flaw, Petitioners would detail how Guidehouse's analysis also failed to compare the Proposed Project to any alternative resource investment. Guidehouse replicated this latter flaw in its analysis of Zone J wholesale electricity and capacity price impacts of the project, failing to compare the modeled price effects of the Proposed Project to any alternative resource or set of resources. Together, these omissions render the analysis valueless.

Finally, AGTP's contention that DEC must consider the costs and benefits to ratepayers due to CLCPA's inclusion of costs in several places¹¹⁴ is not only misleading but perplexing. Again, assuming economic benefits were a valid justification under the CLCPA, it appears that any economic benefits from the Proposed Project will accrue only to AGTP and not to ratepayers. The fact that AGTP is pressing to construct the facility indicates that AGTP anticipates recovering more money from New York electric customers through its returns in the energy, capacity, and ancillary services markets than it is investing in the Proposed Project, and these costs will ultimately be passed along to ratepayers. Indeed, historically, the Downstate capacity market has been lucrative for peaking resources, which have recovered billions of dollars from local electric customers through capacity payments. According to the *Dirty Energy, Big Money* report by the PEAK Coalition, the existing Astoria Gas Turbines collected

¹¹⁴ AGTP's Request for Adjudicatory Hearing at 11; *see, e.g.*, ECL § 75-0109 ("the [D]epartment shall . . . design and implement all regulations in a manner that seeks to be equitable, to minimize costs and to maximize the total benefits to New York").

approximately \$453 million in capacity payments during the years 2010 through 2019 alone.¹¹⁵ Any private investment in the Proposed Project will be recouped from New York ratepayers, with interest, in the form of capacity and energy payments. This negates any alleged potential economic benefit for New York ratepayers.

* * * *

Offer of Proof

With respect to Petitioners' sixth issue for adjudication, Synapse will provide testimony to support the facts discussed above, including:

1. Guidehouse's analysis assessing the jobs and economic impacts of the AGTP is fundamentally incomplete because it does not look at *net* economic impacts. Rather than analyzing the benefits and costs of the Proposed Project and comparing them, Guidehouse evaluated only the benefits.
2. A full jobs and economic analysis would also incorporate the cost components including categories such as displaced generation from the Proposed Project and retired resources from the Proposed Project.
3. Guidehouse's jobs and economic analysis improperly failed to compare the Proposed Project to any alternative resource investment.
4. Guidehouse improperly failed to compare the modeled price effects of the Proposed Project to any alternative resource or set of resources in its jobs and economic analysis.

¹¹⁵ See PEAK Coalition, *Dirty Energy, Big Money* (2020), <https://www.cleangroup.org/ceg-resources/resource/dirty-energy-big-money/>.

Issue 7: AGTP Has Not Offered Adequate Alternatives or GHG Mitigation Measures, Providing an Alternative Basis for DEC’s Permit Denial

DEC correctly determined that mitigation measures need not be considered because the Proposed Project is inconsistent with and will interfere with the CLCPA GHG reduction requirements and is not justified. However, even if the Proposed Project were justified, AGTP has failed to identify adequate mitigation measures sufficient to fulfill the third prong of the CLCPA Section 7(2) analysis.

DEC correctly rejected AGTP’s proposed mitigation measure of upgrading the starting system for the two P&W combustion turbines being retained for black start capability because the avoided GHGs associated with the measure would be very minimal. More importantly, neither AGTP’s proposal to upgrade the turbines nor the proposal to replace the turbines with battery storage should qualify as mitigation because the measures do not require construction of a new power plant. As discussed above, the turbines are already part of the existing facility and can be upgraded or replaced without proceeding with the project.

The other mitigation proposals put forth by AGTP are also insufficient. The only feasible near-term measure proposed by AGTP to zero out emissions from the Proposed Project involves the use of carbon offsets, which the CLCPA expressly prohibits for electric generating units. ECL § 75-0109(4)(f). The company also proposes the conversion of the Proposed Project from fossil gas to hydrogen or “renewable” natural gas, but, as explained above with respect to Issue 5, these alternative fuels do not zero out emissions and are economically infeasible.

* * * *

Offer of Proof

This issue is primarily a legal issue for which no offer of factual proof is necessary. To the extent AGTP argues that its proposed “compliance options” should also be considered

alternatives or mitigation measures under the third prong of a CLCPA Section 7(2) analysis, AEC and Synapse will offer the following testimony (as discussed in Issues 4 and 5, above):

1. Neither “green” hydrogen nor RNG are emissions-free, nor are they feasible alternative fuels, such that AGTP cannot rely on a transition to renewable fuel as an alternative or to mitigate its emissions.
2. Black start capability, to the extent that it is necessary, can be provided by resources other than the proposed project and existing converting turbines to batteries is insufficient mitigation.

Issue 8: The Project Will Disproportionately Burden Disadvantaged Communities, Providing an Alternative Basis for DEC’s Permit Denial

A parallel provision of the CLCPA, Section 7(3), prohibits agencies from imposing disproportionate impacts on disadvantaged communities¹¹⁶ when considering and issuing permits, licenses and other administrative approvals and decisions pursuant to the CLCPA. As stated above, DEC correctly concluded that DEC could not issue a Title V permit unless the project could also pass muster under Section 7(3), but did not analyze the Proposed Project under 7(3).¹¹⁷ AGTP did not raise issues regarding Section 7(3) in its initial request for an adjudicatory hearing.

This issue is substantive and significant because it raises questions about AGTP’s ability to meet the standard under CLCPA Section 7(3) and is an independent basis for DEC to deny the Title V air permit. 6 NYCRR § 624.4(c)(2), (c)(3). Section 7(3) of the CLCPA states

¹¹⁶ Disadvantaged communities are defined as communities “that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households...” ECL § 75-0101(5).

¹¹⁷ Astoria Denial at 17.

unequivocally that state agencies, “in considering and issuing permits, licenses, and other administrative approvals and decisions . . . shall not disproportionately burden disadvantaged communities....” CLCPA § 7(3). The Petitioners will present evidence at a hearing showing that the Proposed Project will disproportionately harm air quality in disadvantaged communities, and thus DEC cannot approve the permit even if DEC’s denial under Section 7(2) were reversed. The Petitioners will demonstrate that AGTP’s environmental justice analysis in its DSEIS is flawed, and obfuscates the adverse and disproportionate impacts this plant would have on neighboring disadvantaged communities.¹¹⁸ The Petitioners will also demonstrate that air pollution from the Proposed Project would negatively impact these communities of color that have for decades suffered disproportionate impacts of fossil fuel combustion at nearby power plants and numerous other polluting facilities in violation of CLCPA Section 7(3).

It is undisputed that the Project would disproportionately burden disadvantaged communities. Even within the artificially limited 1-mile study areas used by AGTP’s environmental justice analysis in the DSEIS, the entire area directly adjacent to the industrial park where the Proposed Project and AGTP’s existing plant are located is designated as a disadvantaged community under New York’s proposed criteria, and many of the census block groups (CBGs) adjacent to or one block away from the site were disadvantaged communities under the interim definition for disadvantaged communities in place at the time of the DSEIS.¹¹⁹

¹¹⁸ New York recently released a proposed map of disadvantaged communities under the CLCPA. *See Disadvantaged Communities Map*, <https://climate.ny.gov/Our-Climate-Act/Disadvantaged-Communities-Criteria/Disadvantaged-Communities-Map>. The DSEIS as well as the report of Stephen Metts of Geospex attached here pre-date that map and were based on an interim definition. *See Disadvantaged Communities*, NYSERDA, <https://www.nyserda.ny.gov/ny/disadvantaged-communities> (last visited Mar. 16, 2022). The new proposed map shows an even greater concentration of disadvantaged communities proximate to the Proposed Project.

¹¹⁹ DSEIS at 3-47; *see also id.* at 3-48 fig.3.2-5; New York Disadvantaged Communities Map, <https://climate.ny.gov/Our-Climate-Act/Disadvantaged-Communities-Criteria/Disadvantaged-Communities-Map>.

Petitioners' expert Stephen Metts of Geospex, LLC, has analyzed the flawed environmental justice analysis in AGTP's DSEIS and mapped and analyzed the presence of CLCPA disadvantaged communities under New York's interim definition, as well as existing environmental burdens and health outcomes, within a 3-km (1.82-mile) radius from the Project.¹²⁰ The 3-km radius is based on the 3-km radius area AGTP's consultant used to model air impacts for the DSEIS, showing the Astoria plant's emissions affecting much of that area.¹²¹ Within a 3-km radius, more than half of the CBGs were designated as disadvantaged communities under the interim definition and an even higher proportion appear to be disadvantaged communities under the new proposed criteria.¹²²

The area surrounding the Proposed Project is overburdened with polluting facilities including numerous power plants, industrial facilities, highways, and an airport. At the Astoria Industrial Complex alone, where the Astoria plant would be sited, there are three other power plants, with a fourth, Astoria Energy, just outside the Complex.¹²³ Additional power plants nearby include the Hell Gate and Harlem River Yard plants in the South Bronx, approximately one mile from the Astoria plant site, and the Vernon Boulevard and Ravenswood power plants in southern Astoria/Long Island City. Multiple congested highways surround the Astoria plant site—the Grand Central Parkway leading to LaGuardia Airport and the Robert F. Kennedy Bridge, and the Bruckner Expressway leading to the Major Deegan Expressway in the Bronx—as well as the truck-intensive Hunts Point Distribution Center, one of the largest wholesale distribution facilities in the world.

¹²⁰ Stephen Metts, Geospex LLC, *Environmental Justice Findings Statement: AGTP Astoria Replacement Project 4–5* (Sept. 2021) (“Metts Report”). Attached hereto as Exhibit 3.

¹²¹ See AECOM, *DSEIS Appendix K: Modeling Results Concentration Isopleths* (2021), https://www.nrg.com/assets/documents/legal/astoria/00_2021/appendices-e-m-06-30-21.pdf.

¹²² Metts Report at 11 tbl.5; New York Disadvantaged Communities Map, <https://climate.ny.gov/Our-Climature-Act/Disadvantaged-Communities-Criteria/Disadvantaged-Communities-Map>.

¹²³ DSEIS at 3-75; *id.* at 3-77 fig.3.3-4.

The clustering of power plants, industrial facilities and major highways clogged with diesel trucks results in disproportionately high concentrations of air pollutants within the disadvantaged communities surrounding the Astoria plant. Data from the New York City Community Air Survey (NYCCAS) show elevated concentrations of black carbon, nitric oxide, NO_x, and PM 2.5 compared to the rest of the city in many parts of the study area, even within the 1-mile radius, and especially in the disadvantaged communities of the South Bronx encompassed by both the 1-mile and 3-km radii.¹²⁴ The mean concentrations for all these pollutants within the 3-km radius is consistently higher than the New York City mean.¹²⁵

Disadvantaged communities surrounding the Project experience worse health outcomes due to the cumulative impact of environmental pollution. Petitioners' expert will testify to his analysis of data on health burdens from New York City Community Health Profiles for community districts intersecting with the 3-km radius from the Proposed Project.¹²⁶ For nearly all health burdens examined (life expectancy, infant mortality, premature mortality, and colorectal cancer and lung cancer premature deaths), the three community districts within the 3-km radius from the plant in the Bronx and New York County, which were excluded from the analysis in the DSEIS, have definitively worse health outcomes than the city as a whole.¹²⁷

The Proposed Project will add air pollutants on top of the consistently elevated air pollution in neighboring disadvantaged communities, exacerbating the disproportionate air pollution and poor health outcomes in these areas in violation of Section 7(3). There is no

¹²⁴ Metts Report at 14 fig.7, 15 fig.8, 16 fig.9, 17 fig.10. Data drawn from *The New York City Community Air Survey*, City of New York, <https://nyccas.cityofnewyork.us/nyccas2020/web/report> (last visited Mar. 16, 2022). The New York City Community Air Survey (NYCCAS), the largest ongoing air monitoring program of any U.S. city, has a network of 100 air monitors throughout the city and has collected data on concentrations of air pollutants since 2008 which is published in publicly available maps and reports. *Id.*

¹²⁵ Metts Report at 18 tbls.6–9.

¹²⁶ *Id.* at 19–22. Intersecting Community Districts excluded from analysis in the DSEIS are: Mott Haven & Melrose - Bronx CD 201; Hunts Point & Longwood - Bronx CD 202; East Harlem - Manhattan CD 111.

¹²⁷ *Id.* at 21.

question that, even with “state of the art” technology, the proposed new power plant would emit criteria pollutants and other harmful air pollutants. The draft air permit would allow it to emit up to 97.5 tons of nitrogen oxides per year and 52.6 tons of particulate matter per year.¹²⁸ The proposed Title V permit would also allow the plant to run for backup purposes on diesel fuel, which has higher emissions levels for nearly all criteria pollutants.¹²⁹

In sum, additional air pollution from the Proposed Project, particularly NOx and PM 2.5 emissions, will disproportionately harm disadvantaged communities that are already suffering from poor air quality, and thus DEC cannot approve the permit under Section 7(3).

* * * *

Offer of Proof

If granted full party status, Petitioners would provide expert testimony showing that much of the area around the Project is designated as Disadvantaged Communities, and that the Project would impose a disproportionate burden on those communities. Mr. Metts, relying on his expertise with GIS and environmental reviews, will support the facts provided in this section, and will further testify that:

1. Many of the communities near the Proposed Project qualify as Disadvantaged Communities.
2. As reviewed, AGTP’s Environmental Justice Analysis misrepresents the scope of potentially harmful impacts upon vulnerable environmental justice communities proximate to the Proposed Project.

¹²⁸ See DEC, Div. of Air Res., *Air Title V Facility Permit 24–26* (2021), https://www.nrg.com/assets/documents/legal/astoria/00_2021/astoria-draft-title-v-permit-06-30-2021.pdf.

¹²⁹ *Id.* at 18.

3. The Astoria plant is likely to add air pollution in surrounding Disadvantaged Communities that already experience elevated levels of air pollution and relatively poor health outcomes.

CONCLUSION

Based on the foregoing petition and offers of proof, Petitioners request that they be granted full party status in this proceeding on AGTP's request for a Title V air permit.

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Respectfully submitted,

/s/ Rachel Spector

Rachel Spector
Mandy DeRoche
Meagan Burton
Hillary Aidun
Earthjustice
48 Wall Street, 15th Floor
New York, NY 10025
(212)-845-7387
rspector@earthjustice.org

Sonya Chung
Hayley Gorenberg
New York Lawyers for the
Public Interest
151 West 30th St., 11th Floor
New York, NY 10001
212-244-4664
sochung@nylpi.org

Counsel for Petitioners

Josh Berman
Sierra Club
50 F. St. NW, 8th Floor
Washington, D.C. 20001
(202)-650-6062
Josh.berman@sierraclub.org

Counsel for Sierra Club