

**THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

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COALITION FOR COMPETITIVE	:	
ELECTRICITY, DYNEGY INC., EASTERN	:	
GENERATION, LLC, ELECTRIC POWER	:	
SUPPLY ASSOCIATION, NRG ENERGY,	:	
INC., ROSETON GENERATING, LLC, and	:	
SELKIRK COGEN PARTNERS, L.P.,	:	
	:	Case No. 1:16-cv-8164 (VEC)
<i>Plaintiffs,</i>	;	
	:	MEMORANDUM OF LAW
v.	:	OF THE AMICI
	:	
AUDRY ZIBELMAN, in her official	:	
Capacity as Chair of the New York Public	:	
Service Commission; and PATRICIA L.	:	
ACAMPORA, GREGG C. SAYRE, and	:	
DIANE X. BURMAN, in their official	:	
Capacities as Commissioners of the New	:	
York Public Service Commission,	:	
	:	
<i>Defendants.</i>	:	
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MEMORANDUM OF LAW

The proposed *Amici* submit this brief, Amicus Curiae, in the above-referenced proceeding to assist the Court regarding critical issues of fact and law relating to the underlying challenge to the Clean Energy Standard Order of the New York State Public Service Commission. There is no evidence, in the record or otherwise, supporting the critical assertion in the Order that nuclear power produces zero emissions when generating electricity. In support of this brief, the *Amici* submit an expert affidavit by nuclear engineer David A. Lochbaum, Director of the Nuclear Safety Project at the Union of Concerned Scientists refuting the Public Service

Commission's assertion.¹ Tier 3 of the Order subsidizes economically unviable nuclear generators ostensibly to ensure that their "zero emissions" electricity remains a part of New York's states energy mix. As will be clear, nuclear generation is not a zero emission source and everything that relies upon that conclusion is an error of fact, and ultimately of law. The environmental review for Tier 3 is similarly plagued by errors of fact and law due to the Commission's failure to take notice of sister agencies conclusions that the electric generating capacity of two of the four nuclear reactors subject to the Tier 3 subsidy are unnecessary. The premise regarding the amount of electricity that would have to be replaced by alternative sources if the four reactors were to go offline is unsupported by evidence and is based on an artificially high replacement amount underpinning the government's Order. Thus, the replacement analysis and its concomitant environmental impacts are incorrect as a matter of fact and law. The Amici, based upon their expertise and role in environmental and energy matters, and particularly in this proceeding, submit these points for the Court's consideration.

THE AMICI

NEW YORK PUBLIC INTEREST RESEARCH GROUP FUND, INC. ("NYPIRG") is a not-for-profit corporation formed under the laws of New York State with corporate headquarters located at 9 Murray Street, Lower Level, New York, New York. NYPIRG works to inform and educate New Yorkers about and engage them in New York's Reforming the Energy Vision

¹ See Affidavit of David A. Lochbaum, Director, Nuclear Safety Project, Union of Concerned Scientists, ("Lochbaum Aff."), attached to the *Declaration of Rosanne Fulicello* as Exhibit 1. Expert Lochbaum originally prepared the affidavit for the State proceeding challenging Tier 3 of the Clean Energy Standard Order. See *Hudson River Sloop Clearwater, Inc. v New York State Public Service Commission, et al*, Supreme Court, Albany County, New York, Index No. 07242-16.

initiative and related proceedings to press for a stronger emphasis on reducing greenhouse gas emissions, efficiency and rapid transition to renewable energy.

GREEN EDUCATION AND LEGAL FUND, INC. (“GELF”) is a New York State corporation doing business at 315 Greene Ave. 2B, Brooklyn NY 11238. GELF coordinates a statewide campaign to have all of New York State’s energy needs to be met by renewable energy by 2030. The *August Order* undercuts such campaign and is discriminatory as it provides far more funding for nuclear subsidies than it does for renewable energy. GELF is also concerned with the Commission public record in this case that identifies nuclear energy as being emission free.

SAFE ENERGY RIGHTS GROUP, INC. (“SEnRG”) is a New York State nonprofit corporation doing business at 201 Union Avenue, Peekskill, New York. SEnRG is working with citizens to protect communities in the Northeast from unsafe energy development and infrastructure. SEnRG seeks and provides information and support to the public, communities, and other organizations regarding safe and healthy energy rights, resources, activities and options.

PROMOTING HEALTH AND SUSTAINABLE ENERGY, INC. (“PHASE”) is a New York State nonprofit corporation. PHASE is a public interest group, which promotes and advocates for public health and sustainable energy, primarily through research and documentation, with offices located at 75 North Middletown Road, Nanuet, New York 10954. PHASE, submitted numerous comments during the proceedings that led to the Orders, and raised many objections, including designation of nuclear power as “zero-carbon” or “zero-emissions” inasmuch as nuclear generates greenhouse gas emissions, radioactivity emissions, radioactive leak emissions, waste emissions, and heat emissions.

Background

In mid-2015 the New York State Public Service Commission (the “Commission”) initiated the Clean Energy Standard proceeding, to among other things, ensure the state meets the goal of 50 percent of its electrical energy from renewable sources by 2030, commonly referred to as the “50 by 30” goal. *See* Case 15-E-0302, Public Service Commission

Months into the proceeding, in December 2015, the Commission was directed by the Governor to establish a support mechanism to ensure that “emissions free” sources of energy, specifically, the upstate nuclear reactors, are profitable and remain in operation. Thus, the Tier 3 program, or nuclear subsidy program was born.

In a January 2016 Order, the Commission expanded the Clean Energy Standard proceeding referring to the upstate “nuclear facilities” as “zero emissions resources” and “non-emitting generation.” In the February 2016 Order expediting the proceeding, the Commission asserted that the nuclear power plants provide power that is “free of carbon emissions.” In its July 2016 Responsive Proposal, the Commission, defines the term “nuclear facilities” to mean Zero Carbon Electric Generating Facilities. The proceeding concluded with the August 1, 2016 Order, that promulgated a 12 year nuclear subsidy based upon the U.S. Interagency Working Group’s projected social cost of carbon when there is a public necessity for zero-emissions attribute nuclear power generation.

The Commission promulgated Tier 3 to subsidize the continued operation of the four nuclear reactors – James A. Fitzpatrick, R.E. Ginna, and the Nine Mile Point Unit 1 and Unit 2 nuclear facilities in upstate New York through 2029.² These Tier 3 subsidy provisions are

² In only two years, Indian Point nuclear plant in Westchester County may be a beneficiary of the Tier 3 subsidy. The recently announced closure of Indian Point Unit 2 and Unit 3 in 2020-2021, respectively, (3 to 4 more years) or in 2024-2025 (7-8 more years) depends on how the Commission applies the criteria of “necessity” set forth in this Order. Thus, consideration of the environmental impacts resulting from continued operation of the Indian Point facilities under

challenged in this proceeding. The terms “Zero Emission Credits” and “Zero Emissions” served little more than to confuse public perception of the reasons justifying the Tier 3 subsidy proposal.

ARGUMENT

I. NUCLEAR ENERGY GENERATION PRODUCES EMISSIONS, INCLUDING GREENHOUSE GASES SUCH AS CARBON DIOXIDE; THE RECORDS OF THE NUCLEAR POWER PLANTS AND OTHER ANALYSES CLEARLY DEMONSTRATE THAT THIS IS NOT A ZERO EMISSIONS SOURCE OF ELECTRICITY.

Nuclear power is neither emissions free nor “zero-emissions.” Nuclear power plants emissions include radiation, waste heat, and greenhouse gases.

In this case, the Commission’s use of zero-emissions credit terminology in the public proceeding for nuclear power generation subsidy is deceptive and directly and adversely affects ratepayers. Under normal operating conditions, nuclear reactors routinely emit radiation, heat and greenhouse gases, which are climate change catalysts and carcinogens. The Commission’s use of the terminology zero-emissions for nuclear power generation both misleads the public and is patently false. Petitioners and members of the public presented evidence, on the record, that nuclear power produces regular and accidental greenhouse gas, (including newly produced atoms of Carbon-14 as radioactive CO₂ and methane) heat and radiation emissions. There is no record evidence that the Commission fully considered these significant and substantive comments. Instead, the August Order adopts terminology used by the nuclear industry without any independent confirmation of its veracity and without consideration of the administrative record and public comments that contained the following:

The Council on Intelligent Energy & Conservation Policy does not support nuclear power as a zero-carbon form of energy because it is a highly polluting form of power, producing

Tier 3 is particularly relevant to the Courts analysis.

prodigious amounts of long-lived radioactive waste, heat and greenhouse gases throughout its entire full fuel cycle...from an energy generation standpoint.³

Petitioners provided authoritative evidence in reports by the International Atomic Energy Agency and Electric Power Research Institute regarding fission carbon emissions.⁴

These reports identify one of the by-products of fission from all nuclear reactors is newly created greenhouse gases, in highly radioactive form of carbon.

Green Education and Legal Fund, Inc., commented that nuclear power is not renewable or clean because the entire fuel cycle poisons mining communities, contributes greenhouse gas emissions, releases radiation into the environment, and creates high-level radioactive waste.⁵

Indian Point Safe Energy Coalition (“IPSEC”) and Promoting Health and Sustainable Energy (“PHASE”) request that any and all misleading and scientifically incorrect statements regarding nuclear as being “emission free”, a “zero-emission source”, or “renewable energy” be removed from the Order and that any and all preferential treatment or subsidies to nuclear energy production in New York State be eliminated

³ New York State Department of Public Service, Matter Number 15-01168/Case No. 15-E-0302, Comments of Council on Intelligent Energy & Conservation Policy, Promoting Health and Sustainable Energy. Matter Master #189, 4/25/2016; Matter Master #174 5/4/2016; Matter Master #142 6/6/2016; Matter Master #123, #124, 6/6/2016, *respectively*.

⁴ New York State Department of Public Service, Matter Number 15-01168/Case No. 15-E-0302, Matter Master #7929, 5/31/2016, Susan Shapiro on behalf of Indian Point 2016; Safe Energy Coalition (IPSEC), Radiation and Public Health Project (RPHP), Public Health and Sustainable Energy (PHASE) *See Attached* Statement from 3 PM Manhattan Public Statement Hearing, Speaker #5 Part 1, Part 2, Part 3, Exhibit A: IAEA, Management of Waste Containing lithium and Carbon-14, Technical Series No. 421. 2004, Exhibit B: Electric Power Research Institute (EPRI): *Estimation of Carbon -14 (C-14) in Nuclear Power Plant Gaseous Effluents*, Electric Power Research Institute Technical Report, Dec 2010. <http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=00000000001021106>.

⁵ New York State Department of Public Service, Matter Number 15-01168/Case No. 15-E-0302, Matter Master # 185, Comments of Green Education and Legal Fund, 4/28/15; Matter Master # 335, 4/28/15; and Matter Master # 500 8/12/2015, *respectively*.

because nuclear reactor production of electricity is not emission free, it is not carbon free, nor is it renewable.⁶

IPSEC and PHASE submitted comments indicating that greenhouse gases are emitted in all stages of the lifecycle of a nuclear reactor: construction, operation, fuel production, dismantling and waste disposal.

Thus, there was ample record evidence regarding the true nature of the emissions of nuclear generation. The Commission arbitrarily concluded that nuclear energy generation is zero emissions. Instead, the Commission considered data from the Nuclear Regulatory Commission (“NRC”), specifically:

TABLE 1. URANIUM FUEL-CYCLE ENVIRONMENTAL DATA(A), 2, 3 (TAKEN FROM 10 CFR 51.51F), (Environmental Considerations for Maximum Effect Per Annual Fuel Requirement or Reference Reactor Year of Model 1,000 MWE Light Water Reactor (assessing the environmental impact of continued storage of spent nuclear fuel); and,

TABLE 2. THE ENVIRONMENTAL IMPACT OF TRANSPORTING OF FUEL AND WASTE TO AND FROM ONE LIGHT-WATER-COOLED NUCLEAR POWER REACTOR, NORMAL CONDITIONS OF TRANSPORT.

Appendix G, 13-16. Commission Order August 1, 2016 15-E-0302/16-E-0270. These tables are inapposite, incomplete, and not supportive of the zero emissions claim of the Commission. The *Tables* do not indicate whether a site-specific analysis of each of the upstate Nuclear Reactors concluded that they operate emissions-free. The Commission failed to take a look at the foundational assumption that each reactor is emissions free at the point of electricity generation.

⁶ New York State Department of Public Service, Matter Number 15-01168/Case No. 15-E-0302, Master Matter # 7929, Susan Shapiro on behalf of Indian Point 2016, Safe Energy Coalition (IPSEC), Radiation and Public Health Project (RPHP), Public Health and Sustainable Energy(PHASE); 5/31/2016, 6/6/2016, *respectively*; Matter Master # 122; 6/6/2016, Matter Master # 123, 6/6/2016, Matter Master # 124, #174, 5/4/2016, 4/25/2016, *respectively*, Matter Master # 189, 5/4/2016; Matter Master # 318, 4/25/2106; Matter Master #341, Reply Comments, 5/16/2016; Matter Master #284; Matter Master #104, Petition for Rehearing, 9/1/2016; Matter Master #318, Joint Comments of CIECP and PHASE, 5/2/2016.

For example, the above referenced *Tables* address Light-Water-Cooled nuclear reactors.

According to the administrative record, only Ginna is designated a Light-Water nuclear reactor, but the three remaining reactors were of a different design known as boiling-water reactors (FitzPatrick and the Nine Mile Point Nuclear Station Unit 1 and Unit 2).

Finally, the Commission's administrative record contains the Brattle Group Report which states that "the Upstate nuclear power plants prevent substantial emissions of CO₂, SO₂, and NO_x," compared to the alternative of natural gas and coal-fired generation" without challenging or considering if renewable sources of energy should have been considered as an alternative to natural gas and coal-fired power.⁷

There is substantial information about the emissions impacts of nuclear power generation.

Nuclear energy production involves mining, milling, fabrication, transportation, and use and storage that all produce extensive carbon and other greenhouse gas emissions. Nuclear plants routinely emit known carcinogens and climate change catalysts, radioactive and greenhouse gases, and thermal emissions into the air, water and ground through planned and unplanned releases. Under normal operating conditions, nuclear reactors routinely and daily emit tritium, cesium, strontium; greenhouse gases including newly produced atoms of Carbon-14, as radioactive CO₂ and methane. Since radioactive emissions are cumulative, adding additional years to the operation of otherwise financially unviable nuclear reactors increases the emission impacts. Also, as reactors age, spills, leaks, and accidents greatly increase emissions. Further, in a greenhouse gas emissions by types of electricity producers, from the lowest – wind, to the most

⁷ New York State Department of Public Service, Matter Number 15-01168/Case No. 15-E-0302, Matter Master #350, Exhibit A – Brattle Upstate New York New York Nuclear Report (12-2-15), Constellation Energy Nuclear Group, 4/22/16.

– Coal, nuclear power generation falls mid-pack in terms of greenhouse gas emissions. *See* Lochbaum Aff. ¶¶ 26, 27, Figure 4, *Greenhouse Gases Emitted by Electricity Producers*.

The August Order directly contradicts facts and information submitted by the New York State Attorney General in the proceedings before the U.S. Nuclear Regulatory Commission (the “NRC”) to contest license renewals for Indian Point. The State’s chief legal officer have made clear that nuclear emissions result from nuclear power plants that are currently leaking and emitting radioactive tritium into groundwater. New York State government, including the Commission has repeatedly received reports that New York State’s nuclear fleet regularly produces and emits radioactive, greenhouse gas and thermal pollution.

It is not just a matter of semantics, it is a mistake of fact that has been relied upon by the Commission underling the promise of the Tier 3 nuclear subsidy. Black’s Law defines *emissions* as, “the production or sending out of heat, light, gas, radiation, carbon smoke, etc.” *See* Black’s Law Dictionary, 10th Edition at 638. The Oxford English Dictionary defines *emissions* as “The production and discharge of something, especially gas or radiation.” The Cambridge Dictionary defines *emissions* as “the act of sending out gas, heat, light, etc.” Thus, the three authorities on meanings of words agrees, that heat, gas and radiation, all qualify as emissions.

Zero is an absolute term. Nuclear power plant operators cannot assert that their facilities produce zero emissions in their numerous regulatory filings. All of the nuclear reactors subject to Tier 3 reported releases of emissions into the environment establishing with their own business records that they are not zero emissions facilities. As sample of these reports are provided below:

Radioactive Emissions

James A. Fitzpatrick Nuclear Plant Radioactive Emission Violations

On July 18, 1991, the NRC announced it proposed a \$137,500 fine on the owner of the FitzPatrick nuclear plant for unplanned and unmonitored releases of radioactive gases to the

atmosphere from the liquid waste concentrator. According to the NRC's press release about the fine, "the NRC staff alleges that the levels released to Lake Ontario were as high as 65 times the maximum permissible concentration," clear evidence that nuclear power is neither emissions free nor "zero-emissions." *See* Lochbaum Aff. ¶ 21.

A Nuclear Regulatory Commission inspection report found that workers at Fitzpatrick were being subjected to high amounts of radiation since radioactive emissions have been leaking for over the past four years.

Greenhouse Gas Emissions

R.E. Ginna Nuclear Plant ("Ginna") Emission Reports

In 2015, reports submitted to the Nuclear Regulatory Commission by the owner of Ginna in New York indicate there have been gaseous emissions of fission & activation products, including tritium, and the greenhouse gas, Carbon-14. *See* Lochbaum Aff. ¶¶ 17-20.

The greenhouse gas Carbon-14 is a radioactive nuclide that is formed and emitted in all nuclear reactors due to the absorption of neutrons by carbon, nitrogen or oxygen.

Indian Point 2 and Indian Point 3 Nuclear Plants ("Indian Point") Emission Reports

Since September 2005, when radioactive emissions were accidentally discovered to be leaking from an exterior wall of the Indian Point Unit 2 spent fuel pool it has continuously leaked. In fact, Indian Point provided information about the greenhouse gas emissions from its operation between the year 2009 – 2013, conclusive showing it is not a zero emissions facility. *See* Lochbaum Aff. ¶¶ 28 -29, Figure 5: *Estimated Greenhouse Gas Emissions From Indian Point 2009 – 2013*.

The 2013 reports submitted to the NRC by the Indian Point nuclear plant owners and operators indicate there are gaseous and liquid emissions of fission and activation products, including tritium, and the greenhouse gas, Carbon-14. *See* Lochbaum Aff. ¶¶ 11-16.

In February 5, 2016, in the vicinity where the 2005 leaks were found, samples showed the tritium-laced water at Indian Point had a radioactive emission levels of more than eight million (8,000,000) picocuries per liter. The federal Environmental Protection Agency's standard limit for tritium in drinking water, established in 1976, is 20,000 picocuries per liter.

In addition to the radioactively contaminated water emissions from the Indian Point via monitored and controlled pathways, radioactively contaminated water has leaked into the soil and migrated to the groundwater and Hudson River. The maps clearly illustrate the radioactive emissions entering from Indian Point entering the ground and groundwater. *See* Lochbaum Aff. ¶¶ 13, 14, Figure 1 and 2.

Thermal Emissions Fitzpatrick Emission Reports

A September 2006 report submitted to the New York State Department of Environmental Conservation by the owner of the FitzPatrick nuclear plant indicated thermal emissions with the maximum difference between the water taken in and discharged back was 28.9°F. *See* Lochbaum Aff. ¶ 24.

Nine Mile 1 and Nine Mile 2 Nuclear Plants Emission Reports

In September 2001, Nine Mile Point submitted thermal emissions with the maximum difference between the water taken in by Unit 1 and discharged back from Unit 1 was 31°F. *See* Lochbaum Aff. ¶ 23.

Indian Point Emission Reports

There is ample public record evidence of previous New York State governmental analyses of emissions from nuclear generation. For example, Indian Point requires permitting under the Clean Water Act and New York's implementing rules and regulations. The cooling intake systems alone annually take in and discharges 2.5 billion gallons of water per day. As part

of that permitting process, the Final Environmental Impact Statement prepared by the New York State Department of Environmental Conservation (“DEC”), addressed renewal of the State Pollutant Discharge Elimination System permits for the power plants along the Hudson River, examining the effects of warmed water discharged by Indian Point Unit 3. The Indian Point thermal emissions are clear. *See* Lochbaum Aff. ¶ 25, Figure 3, *Thermal Discharge Plumes from Indian Point Unit 3 and the Downstream Lovett Generating Station*.

The Idea of Communicating to the Public that Nuclear Power produces “Zero Emissions” has been Rejected as Misleading and Deceptive.

On December 3, 1998, the National Advertising Division of the Council of Better Business Bureaus, Inc. announced the conclusions from its investigation of a complaint filed by the Natural Resources Defense Council (the “NRDC”) against ads placed in the New York Times, Washington Post, New Republic, and other publications by the Nuclear Energy Institute, the nuclear industry’s trade group. NRDC contended that the ads deceive consumers about the actual environmental impact of nuclear power. *See* Lochbaum Aff. ¶ 30. The National Advertising Division concluded:

- “that it is inaccurate to make an unqualified claim that nuclear electricity does not “pollute the air”;
- “consumers can reasonably interpret the claim to mean that electricity generated by nuclear power is produced without any negative impact on the environment. The record however does not support this interpretation of the claim.”; and,
- just because nuclear power plants comply with federal and state regulations regarding acceptable levels for thermal discharge, that nuclear power plants can make an unqualified claim that ‘nuclear energy generates electricity without polluting the water.’”

Id. The National Advertising Division investigation conclusively shows that labeling nuclear energy as emission free or “zero-emissions” is not supported by evidence and is clearly misleading and deceptive to the public who would logically conclude that zero emissions means no emissions. *See* Lochbaum Aff. ¶ 31.

Reliance on the misleading use of the label “zero-emissions” for Tier 3 is a fatal misuse of common words, and is an error of fact and law. It is nothing but an arbitrary and baseless conclusion by the Commission not supported by science or the administrative record.

II. THE COMMISSION FAILED TO TAKE A HARD LOOK AT THE SO-CALLED ZERO-EMISSIONS ASSUMPTION OF NUCLEAR POWER ELECTRICITY GENERATION AS REQUIRED BY THE STATE ENVIRONMENTAL QUALITY REVIEW ACT.

The Commission’s August 1 Order states that

New York’s upstate nuclear plants avoid the emission of over 15 million tons of carbon dioxide per year. Based on current market conditions, losing the carbon-free attributes of this generation before the development of new renewable resources between now and 2029, would undoubtedly result in significantly increased air emissions due to heavier reliance on existing fossil-fueled plants or the construction of new gas plants to replace the supplanted energy,⁸

resulting in “backsliding”⁹ or missing of the State’s greenhouse gas emissions reduction achievements and goals under the State Energy Plan. Among other documents cited by the Commission was the New York State Independent Systems Operator (“NYISO”) *Generator Deactivation Assessment for James A. FitzPatrick Nuclear Generating Facility*, February 11, 2016.¹⁰

In reaching its purported emissions replacement conclusions in the Clean Energy Standard proceeding to make sure that the State did not backslide on its efforts to meet ambitious

⁸ Case 15-E-0302, Order Adopting a Clean Energy Standard (August 1, 2016) at 19.

⁹ Case 15-E-0302, Order Adopting a Clean Energy Standard (August 1, 2016) at 119.

¹⁰ Case 15-E-0302, Order Further Expanding Scope of Proceeding and Seeking Comments (February 24, 2016) at 3 – 4, *citing* Generator Deactivation Assessment, James A. FitzPatrick Nuclear Generating Facility, February 11, 2016, *attached* to the *Declaration of Rosanne Felicello* as Exhibit 2.

greenhouse gas reduction goals, the Commission failed to consider the revised NYISO Generator Deactivation Assessment¹¹ in its administrative record, which was revised less than two months after it was issued (and during the proceeding.)¹² Specifically, the subsequent revisions concluded that the closure of Fitzpatrick would create no fuel replacement needs in the “near term” (defined as 2016 – 2020), let alone by April 1, 2017 the start date of the Tier 3 program. *The fact is profound and critical to the case.* The NYISO revision contradicts and refutes the basis for Tier 3 – avoiding significant fossil fuel greenhouse gas emissions from fossil fuel derived electricity that would replace the four commercially unviable nuclear reactors.

On April 11, 2016 revision was issued before the Commission completed the State Environmental Quality Review Act environmental review. *See* Environmental Conservation Law Article 8; 6 NYCRR Part 617, *et seq.* The revised Assessment found that no statewide resource deficiency would occur if Fitzpatrick and other “mothballed plants,” including Ginna discontinued operations. The revised Deactivation Assessment, finding no fuel replacement need, was based, in part, on updated energy reliability guides showing that solar power would

¹¹ See Generator Deactivation Assessment, James A. FitzPatrick Nuclear Generating Facility, Original February 11, 2016, revised April 22, 2016, *attached* to the *Declaration of Rosanne Fellicello* as Exhibit 3.

¹² The New York Independent System Operator is a non-profit organization, public utility, regulated under the Federal Power Act, charged with administering New York's electricity markets. Among other duties, NYISO enforces rules designed to ensure the reliability of the state's electricity grid...by requiring electricity retailers (referred to as 'load-serving entities') to purchase capacity...(and) actual electricity-from generators in regularly held auctions. The purchase of capacity differs from the purchase of electricity. Like an option contract, the load-serving entity compensates the generator for the *option* of buying a specified quantity of power irrespective of whether it ultimately buys the electricity. *Keyspan-Ravenswood, LLC v. FERC*, 374 U.S. App. D.C. 286, 288, 292 (2007).

provide more energy than had originally been assessed.¹³

The Decision to Commit the FitzPatrick and Ginna Nuclear Plants to a Course of Action Requiring Fuel Replacement by Fossil Fuel Plants is An Environmental Matter.

Even though the FitzPatrick and the Ginna nuclear plants were scheduled to close on April 1, 2017, the decision to keep these nuclear plants operational was discretionary. The Commission's environmental review for Tier 3 specifically considered the environmental effect of fuel replacement in the "near term" arising from the decommissioning of these nuclear reactors; termination of plant operations and cessation of electric power production; and failure to meet (the) need of delivered baseload power to meet electric system needs under the proposed "Zero Emissions" Credit program:

Decommissioning would create a need for replacement power that is likely to be met primarily by fossil fuel fired generation plants. Increased use of fossil fuels for electric generation would adversely impact air emissions through increased production nitrogen dioxide, sulfur dioxide, and carbon dioxide.¹⁴

The Commission's environmental review is necessarily inaccurate – it was considering the amount of carbon intensive energy generation from fossil fuels that would mistakenly replace four nuclear power plants instead of two, and without consideration of non-fossil fuel alternative sources such as increased availability of solar power, efficiency, demand reduction and

¹³ The NYISO operates the State's bulk electric transmission system. A Generator must provide the NYISO with a minimum of 365 days notice before it may be Retired or enter into a Mothball Outage...If the Generator Deactivation Assessment does not identify a Reliability Need, an Initiating Generator that has indicated an interest in an early deactivation in its Generator Deactivation Notice may be Retired or enter into a Mothball Outage. *See generally* http://www.nyiso.com/public/webdocs/markets_operations/documents/Technical_Bulletins/Technical_Bulletins/Technical_Bulletins/tb_185.pdf.

¹⁴ *SEQRA Findings Statement* (August 1, 2016), Appendix G, at 1, 16, Case 15-E-0302, Order Adopting Clean Energy Standard.

transmission upgrades. The Commission’s review relied upon the environmental facts and conclusions in its May 23, 2016 *Final Supplemental Generic Environmental Impact Statement* that specifically assessed the environmental impact of fuel replacement (with fossil fuels) based on the closing of *both* the Fitzpatrick and Ginna nuclear power plants:

Combined, the James A. Fitzpatrick and R.E. Ginna nuclear facilities provide approximately 10,500 GWh of annual energy generation, and 1,400 MW of generating capacity. The plants have announced plans to close in approximately April 2017, after providing only a quarter of their annual electrical generation for that year. Under a ‘no action’ scenario, where these economically stressed facilities retired, discontinuing operations would require that an approximate annual 10,500 GWh of electricity generation be met through alternative sources, possibly including fossil fuels. ...of anticipated GWh energy loss from James A. Fitzpatrick and R.E. Ginna nuclear facilities in the no action alternative scenario.¹⁵

Whether the Commission either refused to consider or ignored the April 2016 NYISO revised conclusion that the Fitzpatrick and Ginna nuclear plant is irrelevant – the record clearly shows that two of the four nuclear plants were not necessary for reliability, and therefore, did not need to be operating to “keep the lights on” between 2017 and 2029. The analysis requiring replacement generation capacity for the Fitzpatrick and Ginna facilities, therefore, is based upon a false factual presumption. Moreover, the reliability consideration to close a nuclear power plant and thereby commit the State to a course of foreclosing nuclear-powered operation as an alternative action which might be more environmentally sound than closure and replacement by fossil fuel plants is an environmental consideration. *Cf. Citizens for an Orderly Energy Policy, Inc. v. Cuomo* *Citizens for an Orderly Energy Policy, Inc. v. Cuomo*, 159 A.D.2d 141, 160-61 (3rd Dep’t 1990) *aff’d* 78 NY2d 398 (1991) *reconsideration den* 79 NY2d 851 (1992). **The**

¹⁵ *Final Supplemental Environmental Impact Statement* (May 23, 2016) at 4-5, Case 15-E-0302, Order Adopting Clean Energy Standard.

Commissions deficient environmental analysis contradicts that findings statement it is required for this Order, that it “avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable.” *Decision-making and findings requirements*, 6 NYCRR § 617.11(d)(5). The legal conclusions of the environmental review fail as a matter of law. Further, the Commission’s actions during the environmental review clearly constitutes an abuse of discretion as a matter of law, are arbitrary and capricious and mandates the nullity of Tier 3.¹⁶

The Administrative Record Specifically Refers to the NYISO Revised Report Indicating No Need for Replacement Electricity Generation in the Event Fitzpatrick and Ginna Closure.

The Commission was informed on the record of the glaring factual inaccuracy regarding the amount of electricity generation that would need to be replaced in the absence of the nuclear plants. Specifically, New York State Assemblymember, Barbara Lifton (125th A.D.) referring to the revised NYISO assessment stated on the record, that it:

“*contrasts* the Staff proposal’s language regarding the effect of nuclear plant closures on CO₂ emissions to a New York Independent System Operator study stating that the certain nuclear plants can be retired *with no impact to electric reliability*.”¹⁷

¹⁶ An agency's determination lacks a rational basis if it “...entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Nat'l Ass'n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 658 (2007) (internal quotations and citations omitted); An agency’s decision is arbitrary and capricious, as here, if the agency (1) “entirely failed to consider an important aspect of the problem,” (2) “offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise,” (3) “failed to base its decision on consideration of the relevant factors,” or (4) made “a clear error of judgment.” *Utah Envtl. Long. v. Troyer*, 479 F.3d 1269, 1280 (10th Cir. 2007).

¹⁷ *Emphasis added. Comment Summaries, Appendix B* (August 1, 2016) at 175-176, Case No. 15-E-0302, Order Adopting Clean Energy Standard.

The fact that the NYISO “study stating that the certain nuclear plants can be retired with no impact to electric reliability” is substantial. As a result, the environmental impact statement process for the Order was substantially skewed - it looked at an inaccurately high estimate of megawatts of energy would need to be replaced. Therefore, the environmental review in the administrative record was based upon an inaccurate assessment of the potentially significant adverse impacts of the proposed Tier 3 or possible alternatives, and as a matter of law, should be rejected by the Court.

CONCLUSION

The Clean Energy Standard Order was promulgated, ostensibly, for the right reasons – to make sure that New York State can enforce and achieve important goals for reductions in greenhouse gases from electricity generation. Unfortunately, Tier 3’s environmental claims in the administrative record - that it is a “Zero Emissions Credit” program - are patently false. Further, the scope of the Tier 3 environmental review incorrectly analyzes a higher amount of electricity than would need to be replaced; it also fails to accurately consider alternatives using renewable resources that are available for the electricity generation needs through 2029. The legal conclusions based upon the environmental review are fatally flawed as a matter of law and fact.

Thus, for all the above state reasons, the *Amici* urge the Court to reject the environmental attributes analysis set forth by the Commission as part of administrative record in support of the Clean Energy Standard Tier 3 program.

Dated: March 16, 2017

Respectfully submitted,

/s/ Rosanne E. Felicello

Rosanne E. Felicello (RF6703)

John L. Parker

Counsel for Amici