

# 17-2654-cv

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE SECOND CIRCUIT**

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COALITION FOR COMPETITIVE ELEC., DYNEGY INC., EASTERN  
GENERATION, LLC, ELECTRIC POWER SUPPLY ASS'N, NRG ENERGY,  
INC., ROSETON GENERATING LLC, SELKIRK COGEN PARTNERS, L.P.,  
*Plaintiffs-Appellants,*

v.

AUDREY ZIBELMAN, in her official capacity as Chair of the New York Public  
Service Commission, PATRICIA L. ACAMPORA, GREGG C. SAYRE, and  
DIANE X. BURMAN in their official capacities as Commissioners of the  
New York Public Service Commission,  
*Defendants-Appellees,*

and

EXELON CORP., R.E. GINNA NUCLEAR POWER PLANT LLC,  
CONSTELLATION ENERGY NUCLEAR GROUP, LLC,  
NINE MILE POINT NUCLEAR STATION LLC,  
*Intervening Defendants-Appellees.*

*On Appeal from the United States District Court for the Southern District of  
New York, No. 1:16-cv-08164, Hon. Valerie Caproni, District Judge*

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**BRIEF OF THE NUCLEAR ENERGY INSTITUTE AS *AMICUS CURIAE*  
IN SUPPORT OF DEFENDANTS-APPELLEES**

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## **CORPORATE DISCLOSURE STATEMENT**

The Nuclear Energy Institute, Inc. (NEI) submits this corporate disclosure statement as required by Fed. R. App. P. 26.1. NEI is a non-profit corporation registered under section 501(c)(6) of the Internal Revenue Code. NEI has no parent companies. No publicly held company has a 10 percent or greater ownership interest in NEI. NEI functions as a trade association representing the nuclear energy industry. Its objective is to ensure the development of policies that promote the beneficial uses of nuclear energy and technologies in the United States and around the world.

Respectfully submitted,

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Dated: November 24, 2017

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## **INTRODUCTION AND STATEMENT OF INTEREST**

The Nuclear Energy Institute (NEI) submits this brief in support of Defendants-Appellees.<sup>1</sup> NEI is the Washington, D.C.-based policy organization of the nuclear technologies industry. NEI's mission is to foster the beneficial uses of nuclear technology and to communicate accurate information about the importance of nuclear energy and technology. NEI is responsible for developing industry positions and advocating on legal, regulatory, and policy matters affecting the nuclear energy industry. NEI has more than 300 members, including all the companies licensed to operate commercial nuclear power plants in the United States, as well as nuclear plant designers, major architectural and engineering firms, entities that process nuclear fuel, and other organizations involved in the nuclear industry.

NEI is uniquely positioned to provide insight into the industry-wide and global impacts of the New York zero-emissions credit (ZEC) program, as well as the role nuclear power plays in preventing air pollution. NEI has been directly involved in efforts to compensate nuclear power for its environmental benefits

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<sup>1</sup> In accordance with Second Circuit Local Rule 29.1(b), no party's counsel authored this brief in whole or in part; neither a party nor a party's counsel contributed money that was intended to fund preparing or submitting the brief; and other than amicus curiae, its members, and its counsel, no person contributed money that was intended to fund preparing or submitting this brief. All parties have consented to NEI filing this brief.

across the country, including in New York and other states considering similar programs. NEI, as the representative of the nuclear industry, is also uniquely positioned to respond to assertions made by other industry groups that have submitted amicus briefs in this proceeding.

### **SUMMARY OF ARGUMENT**

Nuclear generation provides approximately 60 percent of the nation's emission-free electricity. In New York, for example, nuclear power provides 31 percent of the state's electricity and 58 percent of the state's carbon-free electricity. New York and other states are increasingly recognizing the critical role nuclear power plays in greenhouse gas reductions, and are updating their climate policies to incorporate nuclear power. ZEC programs represent one means by which states can support nuclear power's beneficial climate attributes. These programs are extensions of widely-accepted state renewable energy credit (REC) programs. As with RECs, states have implemented ZEC and other environmental programs by exercising the authority reserved to them under the Federal Power Act, as amended (16 U.S.C. § 791(a) *et seq.*).

The "cooperative federalism" framework that defines the entire process of generating and ultimately delivering electricity allows states to support environmentally-preferred generation. Under this framework, the federal government regulates wholesale markets to optimize prices, within the constraints

of complementary state environmental policies and programs. States in turn may institute programs, like the New York ZEC program, to satisfy their environmental policy goals even if those programs affect market prices and participation.

This Court should affirm the District Court’s determination that New York’s ZEC program does not infringe on the Federal Energy Regulatory Commission’s (FERC) jurisdiction over wholesale markets. To find otherwise not only infringes on states’ rights, it risks the premature, permanent retirement of thousands of megawatts of zero-emissions capacity, significantly increasing greenhouse gas and other emissions. Nothing in the Federal Power Act precludes a state from adopting a ZEC program to avoid backsliding on its carbon-reduction goals.

## **ARGUMENT**

### **I. INITIATIVES SUCH AS NEW YORK’S ZEC PROGRAM REPRESENT THE FUTURE OF STATE CLIMATE POLICIES.**

States are increasingly turning to nuclear power to support their environmental policies, recognizing that nuclear power is by far the largest source of zero-emissions power generation in the country. Unlike traditional fossil-fueled power sources, which provide roughly 65 percent of the nation’s power generation,<sup>2</sup> nuclear power does not produce carbon emissions, or other harmful air

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<sup>2</sup> *Electricity Explained: Electricity in the United States; Generation, Capacity, and Sales*, U.S. Energy Info. Admin., [https://www.eia.gov/energyexplained/index.cfm?page=electricity\\_in\\_the\\_united\\_states#tab2](https://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states#tab2) (last updated May 10, 2017).

pollutants (such as sulfur oxides, nitrogen oxides, and mercury) that pose a risk to the environment and public health. Many—including the New York Public Service Commission (PSC)—have acknowledged that it is unrealistic to expect renewable generation to replace the thousands of megawatt-hours of baseload power that nuclear energy provides.<sup>3</sup> This is particularly true in states like New York, where nuclear power provides the majority of its clean energy. Nuclear power thus must be preserved to successfully address climate change.

States are exploring multiple means to support nuclear generation and its environmental benefits. One route is through ZEC programs, which essentially apply state REC program concepts to nuclear generation. ZECs, like RECs, are commodities sold separately and independently from energy and capacity. To determine the environmental harms avoided through the use of zero-emissions generation, ZECs rely on the Social Cost of Carbon, an economic tool that quantifies the societal costs of carbon emissions (and conversely the benefits of reducing emissions).

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<sup>3</sup> See Order Adopting a Clean Energy Standard 127, Case Nos. 15-E-0302 & 16-E-0270 (N.Y. Pub. Serv. Comm'n Aug. 1, 2016), *available at* <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={1A8C4DCA-E2CC-449C-AA0D-7F9C3125F8A5}>.

## **A. Nuclear Power is the Largest Source of Zero-Emissions Generation in New York and the United States.**

Nuclear power generates 60 percent of the nation's zero-carbon electricity, making it by far the largest source of clean energy in the country.<sup>4</sup> A typical 1,000 megawatt nuclear reactor prevents the emissions of 4.1 to 6.7 million tons of carbon per year.<sup>5</sup> Nationwide, in 2016 nuclear power plants prevented the emission of 553 million metric tons of carbon, which equals the amount released in a year by 117 million passenger cars.<sup>6</sup> In 2016, the nation's nuclear power plants also generated well over twice the amount of zero-carbon electricity than that produced by solar, wind, biomass, and geothermal power sources combined.<sup>7</sup>

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<sup>4</sup> *Environment: Emissions Prevented*, NEI, <https://www.nei.org/Knowledge-Center/Nuclear-Statistics/Environment-Emissions-Prevented> (last visited Nov. 21, 2017).

<sup>5</sup> Metin Celebi et al., The Brattle Group, *Nuclear Retirement Effects on CO<sub>2</sub> Emissions: Preserving a Critical Clean Resource* 1 (Dec. 2016), [http://brattle.com/system/news/pdfs/000/001/158/original/Brattle\\_Nuclear-Carbon\\_Whitepaper\\_-\\_Dec2016.pdf](http://brattle.com/system/news/pdfs/000/001/158/original/Brattle_Nuclear-Carbon_Whitepaper_-_Dec2016.pdf).

<sup>6</sup> *Fact Sheet, New York and Nuclear Energy*, NEI, <https://www.nei.org/CorporateSite/media/filefolder/Backgrounders/Fact-Sheets/State%20Fact%20Sheets/New-York-State-Fact-Sheet.pdf?ext=.pdf> (last visited Nov. 21, 2017).

<sup>7</sup> *Frequently Asked Questions: What is U.S. Electricity Generation by Energy Source?*, U.S. Energy Info. Admin., <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3> (last updated Apr. 18, 2017) (Nuclear power produced 19.7% of all electric energy in 2016, while solar, wind, biomass, and geothermal power combined produced 8.4%).

Nuclear power is unique among generation sources. As “baseload” generation, nuclear power essentially operates reliably around-the-clock, providing a minimum amount of electricity at all times. The U.S. Department of Energy (DOE) has stated that “today’s electricity system is highly dependent on baseload generation.”<sup>8</sup> Critically, nuclear power is the *only* source of baseload generation that does not emit greenhouse gases and other air pollutants.<sup>9</sup>

In comparison, renewable generation sources such as wind and solar cannot serve as baseload generators because they cannot operate when the wind does not blow or the sun does not shine. In 2016, while nuclear power plants operated with a capacity factor of 92.5% (*i.e.*, they produced 92.5% of their potential maximum power over the year), solar plants operated with capacity factors around 25%, and wind power plants at less than 35%.<sup>10</sup> This means that, on average, three to four megawatts of wind and solar capacity has to be constructed to generate the same

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<sup>8</sup> U.S. Dept. of Energy, *Quadrennial Energy Review – Transforming the Nation’s Electricity System 1-20* (Jan. 2017), <https://energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20%28Full%20Report%29.pdf>.

<sup>9</sup> According to DOE, baseload generation sources consist of “coal, nuclear, and natural gas combined-cycle plants.” *Id.* at 1-21.

<sup>10</sup> U.S. Energy Info. Admin, *Electric Power Monthly, with Data or August 2017*, at tbl. 6.7.B (Oct. 2017), [https://www.eia.gov/electricity/monthly/current\\_month/epm.pdf](https://www.eia.gov/electricity/monthly/current_month/epm.pdf). Nuclear power plants also operated at a much higher capacity factor than even coal and natural gas combined-cycle plants, which in 2016 operated with capacity factors just above 50 percent. *Id.* at tbl. 6.7.A.

amount of net electricity as one megawatt of nuclear power capacity. And in periods of low solar and wind potential, a carbon-emitting generation source such as coal or natural gas has to operate to make up the difference. Nuclear power also has arguably the lowest overall life-cycle carbon emissions of *any* generation source.<sup>11</sup> At a time when the world’s attention is focused on mitigating the serious effects of climate change,<sup>12</sup> the baseload emissions-free power produced by nuclear energy is the reason why leading climate change scientists have stated, including in comments to the New York PSC, that “[s]wift action” is needed to keep nuclear power plants operating “and prevent the damage to the climate that would result from their closure.”<sup>13</sup>

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<sup>11</sup> See Int’l Atomic Energy Agency, *Nuclear Power and Sustainable Development*, at 50-51 (2016), <http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1754web-26894285.pdf>. Life-cycle assessments consider impacts related to operation, and the generation source’s “construction and decommissioning as well as the fuel cycle”—*i.e.*, from “cradle to grave.” See *id.* at 5, 38.

<sup>12</sup> The Paris Agreement on Climate Change, which 168 countries signed and the United States is a member of until at least 2020, states on its first page that the parties recognize “the need for an effective and progressive response to the urgent threat of climate change.” Paris Agreement pmbl., *adopted* Dec. 12, 2015, [https://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf); Brad Plumer, *The U.S. Won’t Actually Leave the Paris Climate Deal Anytime Soon*, N.Y. Times (June 7, 2017), <https://www.nytimes.com/2017/06/07/climate/trump-paris-climate-timeline.html>.

<sup>13</sup> Letter from Env’tl. Progress to N.Y. Pub. Serv. Comm’n, at 2 (July 22, 2016), <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={812F8B7B-1FF8-4DA1-AE07-13B99E85ABCB}>.

In addition to nuclear power’s carbon-free attributes, no other form of generation—even renewable generation—so fully accounts for its broader environmental impacts. Nuclear power not only avoids carbon emissions, but also avoids emissions of sulfur oxides, nitrogen oxides, mercury, and other dangerous pollutants associated with fossil-fuel generation.<sup>14</sup> Nuclear power is also the only power generation source that provides financial assurance up front for its environmental impacts, unlike all other generation sources.<sup>15</sup> It also operates under one of the most stringent regulatory regimes in the world, which regulates every part of the nuclear life cycle, from construction and operation to decommissioning and final disposition of spent fuel.

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<sup>14</sup> See Philip J. Landrigan et al., *The Lancet Commission on Pollution and Health*, *The Lancet*, at 1, 12 (Oct. 19, 2017), <http://www.thelancet.com/commissions/pollution-and-health> (estimating millions of deaths are caused by air pollution a year). “[N]uclear power avoids air emissions of over one million tons of sulfur dioxide and 650,000 tons of nitrogen oxides each year, as well as significant particulate emissions.” The Brattle Group, *supra* note 5, at 2-3.

<sup>15</sup> See, e.g., 42 U.S.C. § 10222(a)(2), (a)(4) (assessing a fee on nuclear plants to cover the costs of final disposition of spent nuclear fuel); *Backgrounder on Decommissioning Nuclear Power Plants*, U.S. Nuclear Regulatory Comm’n, <https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/decommissioning.html> (last updated May 14, 2015) (explaining the U.S. Nuclear Regulatory Commission’s (NRC’s) strict oversight of nuclear power plant decommissioning, which must be fully funded by plant owners).

## **B. It is Sound Public Policy to Extend Existing State Support for Renewable Energy to Nuclear Energy.**

It is not surprising then that New York has turned to nuclear power to meet its increasingly stringent climate goals.<sup>16</sup> Nuclear power supplies roughly 58 percent of the state's zero-emissions electricity.<sup>17</sup> The state's six reactors offset an astounding 20 million metric tons of carbon dioxide in 2016,<sup>18</sup> equal to the carbon output of five coal-fired power plants.<sup>19</sup> The preservation of nuclear units also provides the cheapest way for the state to meet its carbon reduction goals.<sup>20</sup> To put things in perspective, the 20 million metric tons of carbon avoided by nuclear power in New York is equivalent to the electricity generated by more than

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<sup>16</sup> New York has aggressive greenhouse-gas emission reduction targets, seeking to reduce statewide emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. New York PSC, *supra* note 3 at 2.

<sup>17</sup> NEI, *supra* note 6 at 1.

<sup>18</sup> *Id.* at 2.

<sup>19</sup> See *Greenhouse Gas Equivalencies Calculator – Calculations and References*, U.S. Env'tl. Prot. Agency, <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#coalplant> (last visited Nov. 21, 2017) (using the emissions data from an average U.S. coal plant).

<sup>20</sup> New York PSC, *supra* note 3 at 127 (“The marginal cost of additional increments of renewable resources is expected to always be significantly higher than ZEC prices.”). While other options, such as energy efficiency, may be closer in cost, the PSC found “it is simply unrealistic to assume that sufficient additional energy efficiency measures could be identified and implemented in time to offset the 27.6 million MWh of zero-emissions nuclear power that would need to be replaced per year.” *Id.* at 126-27.

5,000 wind turbines operating for a year.<sup>21</sup> To replace the electricity generated from New York’s six reactors with wind power (and ignoring reliability and intermittency concerns) would require between 1,400 and 1,940 square miles of wind turbines.<sup>22</sup> For reference, the *entire* land area of Long Island (including all of Brooklyn, Queens, Nassau, and Suffolk) is 1,401 square miles.<sup>23</sup> And while New York is embarking on an “ambitious” deployment of renewable resources, the PSC correctly realized that “[i]t is virtually impossible to deploy this magnitude of resources in the short-term.”<sup>24</sup>

Based on these facts, the PSC reached the “undeniable conclusion that preservation of the zero-emissions attributes of New York State’s existing upstate nuclear facilities in the near future is crucial in the strategy to fight climate change

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<sup>21</sup> *Greenhouse Gas Equivalencies Calculator*, U.S. Env’tl. Prot. Agency, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> (last updated Sept. 2017) (entering 20 million metric tons under “If You Have Emissions Data”).

<sup>22</sup> New York’s six nuclear reactors have a capacity of about 5,400 megawatts. NEI, *supra* note 6. To generate the equivalent of 1,000 megawatts of nuclear power through wind energy requires between 260 and 360 square miles. *Land Requirements for Carbon-Free Technologies*, NEI (June 2015), [https://www.nei.org/CorporateSite/media/filefolder/Policy/Papers/Land\\_Use\\_Carbon\\_Free\\_Technologies.pdf?ext=.pdf](https://www.nei.org/CorporateSite/media/filefolder/Policy/Papers/Land_Use_Carbon_Free_Technologies.pdf?ext=.pdf).

<sup>23</sup> *Long Island*, Encyclopedia Britannica, <https://www.britannica.com/place/Long-Island-New-York> (last updated Sept. 12, 2017).

<sup>24</sup> New York PSC, *supra* note 3 at 127.

and to achieve New York State’s commitment to reduce carbon emissions.”<sup>25</sup> It found that benefits of the ZEC program “clearly outweigh the costs”: the carbon-reduction benefits alone are worth \$1.4 billion during just the first two years of the program.<sup>26</sup> As the PSC explained, retaining the upstate nuclear plants would avoid approximately 15 million tons of carbon per year while the premature closure of these plants “would undoubtedly result . . . in significantly increased air emissions due to heavier utilization of existing fossil-fueled plants or the construction of new gas plants.”<sup>27</sup> That is why New York implemented the ZEC program, which supports clean power by paying generators for each megawatt-hour of electricity produced based on the Social Cost of Carbon (*i.e.*, the dollar value of carbon pollution avoided).<sup>28</sup>

Leading environmentalists, climate scientists, and scholars—including James Hansen, the former Director of NASA’s Goddard Institute for Space Studies

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<sup>25</sup> *Id.* at 150.

<sup>26</sup> *Id.* at 126.

<sup>27</sup> *Id.* at 128.

<sup>28</sup> As many states do with RECs, New York established generic criteria to determine facilities eligible for ZECs. *E.g.*, N.J. Stat. Ann. §48:3-87.1; Md. Code Ann., Pub. Util. §7-704.1. Any nuclear plant making a “verifiable historic contribution . . . to the clean energy resource mix consumed by retail consumers in New York State regardless of the location of the facility” was eligible. New York PSC, *supra* note 3 at 50.

and considered to be the father of climate change science<sup>29</sup>—vocally advocated for New York to take action to save its zero-emissions sources. In comments to the PSC, the scientists declared the ZEC program “critical to safeguarding New York’s low-carbon nuclear power, ensuring the security of the electricity supply, and meeting the state’s decarbonization goals.”<sup>30</sup> They also explained:

If retired, these upstate reactors would be replaced by fossil-fueled plants—mainly natural gas-fired—emitting 15.5 million tons of extra carbon dioxide every year, according to the NYSDPS White Paper on the Clean Energy Standard. That would raise greenhouse emissions from the state’s power sector by 50 percent. Emissions of nitrogen oxide, particulates and other air pollutants would also rise.<sup>31</sup>

In those comments, the scientists reminded the PSC that closing “New York’s nuclear plants would undo all the progress the state has made towards its greenhouse targets.”<sup>32</sup> They also emphasized that by “recognizing the value of all zero-emissions energy sources,” the PSC would be treating all sources “fairly and

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<sup>29</sup> John Abraham, *What’s Climate Scientist James Hansen’s Legacy?*, The Guardian (Apr. 29, 2013), <https://www.theguardian.com/environment/climate-consensus-97-per-cent/2013/apr/29/climate-scientist-james-hansen-legacy>.

<sup>30</sup> Env’tl. Progress, *supra* note 13, at 2.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 4

supporting them efficiently,” allowing New York to “go forward decisively in cleaning up its electricity sector and become a global leader in energy policy.”<sup>33</sup>

New York is not alone in moving to incorporate nuclear power into state climate policies. The challenged ZEC program is part of a broader movement among states to better incorporate nuclear power into the fight against climate change. Like New York, Illinois has decided to compensate nuclear power for its contributions to the state’s greenhouse gas reduction goals through a ZEC mechanism similar to New York’s program. The U.S. District Court for the Northern District of Illinois recently upheld the Illinois program against a similar challenge, and for similar reasons as the present decision on appeal. *See Village of Old Mill Creek v. Star*, Nos. 17 CV 1163, 17 CV 1164, 2017 WL 3008289, at \*2-3 (N.D. Ill. July 14, 2017), *appeals docketed*, Nos. 17-2433, 17-2445 (7th Cir. July 17, 2017). New York and Illinois are not alone: other states are beginning to recognize the benefit of compensating nuclear power for its environmental benefits. For example, Connecticut’s governor recently signed legislation that would compensate the state’s nuclear power plant for its zero-carbon emissions.<sup>34</sup>

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<sup>33</sup> *Id.*

<sup>34</sup> S.B. 1501, Gen. Assemb., Special Sess. (Conn. 2017). *See also* H.B. 381, 132d Gen. Assemb., Reg. Sess. (Ohio 2017); H.B. 178, 132d Gen. Assemb., Reg. Sess. (Ohio 2017) and S.B. 128, 132d Gen. Assemb., Reg. Sess. (Ohio 2017) (Ohio bills seeking to implement a statewide ZEC-type program); S. 3061, 217th Leg. (N.J.

Given the increasing recognition of nuclear power as a key component of any future climate strategy, this Court is in a position to significantly boost—or chill—meaningful state efforts to address climate change. States have started to acknowledge that meeting climate goals necessitates the preservation, if not the expansion, of nuclear power. This is why, in creating the ZEC program, the PSC emphasized that preserving existing nuclear generation facilities serves to prevent “backsliding” on the state’s carbon reduction goals.<sup>35</sup> The Illinois General Assembly likewise stated that “[p]reserving existing zero emission energy generation . . . is vital to placing the State on a glide path to achieving its environmental goals.”<sup>36</sup> A decision by this Court undermining the New York ZEC program risks handicapping states in their efforts to preserve their largest sources of zero-carbon generation.

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2017) (a New Jersey bill to require the state Board of Public Utilities to evaluate creating a ZEC program in the state); Daniel Shea & Kristy Hartman, *State Mechanisms Supporting Existing Nuclear Generation*, Nat’l Conference of State Legislatures, [http://www.ncsl.org/Portals/1/HTML\\_LargeReports/Nuclear\\_Report\\_Update.htm](http://www.ncsl.org/Portals/1/HTML_LargeReports/Nuclear_Report_Update.htm) (last visited Nov. 21, 2017) (Pennsylvania forming a bipartisan “Nuclear Energy Caucus” that is expected to propose a bill to support in-state nuclear generation).

<sup>35</sup> New York PSC, *supra* note 3 at 145.

<sup>36</sup> Pub. Act 099-0906, S.B. 2814, 99th Gen. Assemb. § 1.5(4) (Ill. 2016).

More than 11,000 megawatts of nuclear capacity have or plan to shut down prematurely, with additional facilities at risk.<sup>37</sup> Unlike coal and gas units, which can be mothballed and repowered, once nuclear units retire they cannot come back. Scaling back output at a nuclear plant does not scale-back costs. Staffing and other operations and maintenance costs, which are largely driven by regulatory requirements, can only be significantly trimmed when a reactor operator makes key certifications to the NRC—and those same certifications are tied to the licensee’s ability to operate the plant. *See* 10 C.F.R. § 50.82(a). Once these certifications are made, the plant may no longer be operated. The NRC has no regulatory process for restoring this operating authority once it is terminated, and no reactor licensee has ever sought to restore its operating authority after this point. With mothballing not an option, and faced instead with permanent shutdowns, states instead are taking action through ZEC and other programs to keep these zero-emission sources operating.

The situation in other states highlights the threat that state climate programs face from premature nuclear retirements, and exemplifies New York’s and Illinois’s concerns that renewables alone are not enough for states to meet

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<sup>37</sup> U.S. Dept. of Energy, Staff Report to the Secretary on Electricity Markets and Reliability 31, tbl. 3-2 (Aug. 2017), *available at* [https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability\\_0.pdf](https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf).

meaningful climate change goals. California seeks to reduce its greenhouse gas emissions 40 percent from 1990 levels by 2030.<sup>38</sup> After decades of significant state support for renewable energy, all the wind and solar power plants in California generated roughly 33,000 gigawatt-hours of electricity in 2016.<sup>39</sup> Yet this is less than the 37,000 gigawatt-hours of electricity produced by the state's two nuclear plants at the start of the decade.<sup>40</sup> With one of these plants already shut down and the other slated to shut down in 2025, California may find itself in 2025 producing nearly the same amount of zero-carbon electricity as it did in the prior decade despite decades of support for renewables.

Massachusetts also exemplifies how the loss of a nuclear plant can complicate state and regional greenhouse gas reduction goals. By 2020, the state aims to reduce greenhouse gas emissions up to 25 percent below 1990 levels (Mass. Gen. Laws ch. 21N § 4). Despite heavy investment in renewable energy, a single unit nuclear power plant, the Pilgrim nuclear plant, produces approximately

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<sup>38</sup> *The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals*, California Air Res. Bd., <http://www.arb.ca.gov/cc/pillars/pillars.htm> (last updated Sept. 20, 2016).

<sup>39</sup> *Total System Electric Generation*, California Energy Comm'n, [http://www.energy.ca.gov/almanac/electricity\\_data/total\\_system\\_power.html](http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html) (last visited Nov. 21, 2017).

<sup>40</sup> *California Electrical Energy Generation*, California Energy Comm'n, [http://www.energy.ca.gov/almanac/electricity\\_data/electricity\\_generation.html](http://www.energy.ca.gov/almanac/electricity_data/electricity_generation.html) (last visited Nov. 21, 2017) (2011 data).

17 percent of the state’s electricity, and over 80 percent of the state’s emissions-free electricity.<sup>41</sup> The closure of this plant in 2019, along with the closure of the Vermont Yankee nuclear power plant in 2014,<sup>42</sup> will seriously complicate Massachusetts’s and the region’s decarbonization goals. The governor of Massachusetts has stated that “the closure of Pilgrim will be a significant loss of carbon-free electricity generation and will offset progress Massachusetts has made in achieving the 2020 greenhouse gas emission reduction goals, making it more challenging to hit these targets.”<sup>43</sup>

Looking abroad, the experience in Germany with its nuclear phase-out provided the PSC another example of why it should value the zero-emissions attributes from its nuclear plants. In 2006, nuclear power produced approximately

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<sup>41</sup> *Fact Sheet, Massachusetts and Nuclear Energy*, NEI, <https://www.nei.org/CorporateSite/media/filefolder/Backgrounders/Fact-Sheets/State%20Fact%20Sheets/Massachusetts-State-Fact-Sheet.pdf?ext=.pdf> (last visited Nov. 21, 2017).

<sup>42</sup> *Vermont Yankee Closing Will Challenge Region’s Emissions Goals*, NEI (Nov. 19, 2014), <https://www.nei.org/News-Media/News/News-Archives/Vermont-Yankee-Closing-Will-Challenge-Region-s-Emi> (explaining that the loss of nuclear generation in the region will be made up with natural gas).

<sup>43</sup> Press Release, Mass.gov, *Governor Baker Statement on Closing of Pilgrim Nuclear Power Station* (Oct. 13, 2015), <http://www.mass.gov/governor/press-office/press-releases/fy2016/governor-baker-statement-on-closing-of-pilgrim-station.html>. Although Governor Baker discusses options for renewables to help replace loss of Pilgrim, the state has yet to identify the source of replacement power.

a quarter of the country's electricity.<sup>44</sup> However, as Germany has moved to phase out nuclear power and shut down reactors, nuclear power now provides about half what it did before.<sup>45</sup> This decline is roughly equivalent to all the electricity produced by wind in that country last year.<sup>46</sup> The country's nuclear plant shutdowns offset the new solar and wind generation that came online over the same period. Germany, like several U.S. states, will face a tough time meeting its climate goals because it is eliminating its largest single source of zero-emissions energy from the generation mix.<sup>47</sup> In fact, despite aggressive efforts to expand renewable energy sources, Germany saw its carbon emissions *increase* in both

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<sup>44</sup> *Power Reactor Info. Sys. (PRIS): Germany*, Int'l Atomic Energy Agency, <https://www.iaea.org/pris/CountryStatistics/CountryDetails.aspx?current=DE> (last updated Oct. 31, 2017) (click "Trend" button). Since 2006, Germany has had generally flat generation growth, producing approximately 640,000 gigawatt-hours of electricity per year. *Total Gross Electricity Generation*, Eurostat (Aug. 11, 2016), <http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=ten00087&language=en>.

<sup>45</sup> *PRIS: Germany*, *supra* note 44 (click "Trend" button).

<sup>46</sup> *Production: Gross Electricity Production in Germany from 2014 to 2016*, Destatis (Aug. 11, 2017), <https://www.destatis.de/EN/FactsFigures/EconomicSectors/Energy/Production/Tables/GrossElectricityProduction.html>.

<sup>47</sup> Energy for Humanity, *European Climate Leadership Report 2017: Measuring the Metrics that Matter* 54-59 (Nov. 2017), [http://energyforhumanity.org/wp-content/uploads/2017/11/European\\_climate\\_leadership\\_report\\_2017\\_WEB.pdf](http://energyforhumanity.org/wp-content/uploads/2017/11/European_climate_leadership_report_2017_WEB.pdf) (explaining, based on its research and that of McKinsey & Company, that "[a]s Germany will lose roughly 100 TWh of annual clean production due to nuclear closures, it will have to lower its emission reduction goals to less ambitious levels.").

2015 and 2016.<sup>48</sup> In promulgating the ZEC program, the PSC understood the lesson of Germany’s nuclear phase out: “Germany’s abrupt closure of all its nuclear plants resulted in a large increase in the use of coal, causing total carbon emissions to rise despite an aggressive increase in solar generation.”<sup>49</sup>

**C. The Social Cost of Carbon is Being Adopted by a Number of States and Incorporated into their Climate Change Policies.**

As the District Court correctly recognized, the New York ZEC program is an extension of widely accepted REC programs. Op. 27, ECF No. 159 (“The Court cannot find any principled basis to hold that the ZEC program is preempted even though its sibling REC program is not.”). The choice by New York to turn to the Social Cost of Carbon does not legally distinguish the ZEC program from REC programs, as appellants suggest. Appellants Br. 40-41, ECF No. 56; *see also* American Wind Energy Association (AWEA) Br. 3, 9-12, ECF No. 94-2. The Social Cost of Carbon metric builds on REC programs by using more advanced economic tools to support state climate policies in a cost-effective manner. Indeed,

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<sup>48</sup> *See Greenhouse Gas Emissions in ESD Sectors*, Eurostat, [http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=0&language=en&pcode=t2020\\_35&tableSelection=1](http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=0&language=en&pcode=t2020_35&tableSelection=1) (last updated Aug. 11, 2016); Guy Chazan, *German Greenhouse Gas Emissions Rise as 2020 Target Looms*, Fin. Times (Mar. 16, 2017), <https://www.ft.com/content/7f2f199a-0a5f-11e7-97d1-5e720a26771b>.

<sup>49</sup> New York PSC, *supra* note 3 at 19.

key economists have realized that this is the “economically correct approach,” and recommended that the PSC consider using this framework to value RECs.<sup>50</sup>

Developed in 2010 by a federal government interagency working group, the Social Cost of Carbon “is meant to be a comprehensive estimate of climate change damages.”<sup>51</sup> The working group was organized in response to a 2008 court of appeals decision, which remanded a federal transportation rulemaking because the agency had failed to try to quantify the benefits of reducing carbon emissions. *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008). The court explained that while there may significant uncertainty or range in the cost of climate change, “the value of carbon emissions reduction is certainly not zero.” *Id.* at 1200.

To determine this value, the Council of Economic Advisers and the Office of Management and Budget convened a working group to model the impact of carbon emissions on the environment, and then to develop estimates of the damages.<sup>52</sup>

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<sup>50</sup> Institute for Policy Integrity, New York University School of Law, Policy Integrity Comments on Staff’s Responsive Proposal for Preserving Zero-Emissions Attributes 2-4 (July 22, 2016), <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0E2948E5-C55C-4D7F-955C-8265C9D40B54}>.

<sup>51</sup> U.S. Env’tl. Protection Agency, *EPA Fact Sheet, Social Cost of Carbon 1* (Dec. 2016), available at [https://archive.epa.gov/epa/sites/production/files/2016-12/documents/social\\_cost\\_of\\_carbon\\_fact\\_sheet.pdf](https://archive.epa.gov/epa/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf).

<sup>52</sup> *Id.* at 1-2.

The members of the working group included a number of scientific and economic experts from throughout the federal government, including the Council on Environmental Quality, the U.S. Environmental Protection Agency, the National Economic Council, and the U.S. Departments of Commerce, Energy, and Treasury.<sup>53</sup> Both New York and Illinois have used this tool developed by the working group for their ZEC programs.<sup>54</sup> And New York also adopted the Social Cost of Carbon as part of the benefit-cost framework for its *Reforming the Energy Vision* program.<sup>55</sup>

The Social Cost of Carbon has a strong history in front of the courts. The U.S. Court of Appeals for the Seventh Circuit, for example, has embraced the tool,

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<sup>53</sup> Interagency Working Grp. on Social Cost of Carbon, U.S. Gov't, *Technical Support Document: - Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866*, at 1 (Feb. 2010), available at <https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf>. Although the new administration has not yet embraced the Social Cost of Carbon as an analytical tool, that does not challenge the strong, independent scientific foundation that undergirds the Social Cost of Carbon framework.

<sup>54</sup> Order Adopting a Clean Energy Standard, app. E at 11-12, Case Nos. 15-E-0302 & 16-E-0270 (N.Y. Pub. Serv. Comm'n Aug. 1, 2016), available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B3777382-228F-4268-A674-6B5B93B8614B}>; S.B. 2814 at 136.

<sup>55</sup> Order Establishing the Benefit Cost Analysis Framework 21, Case No. 14-M-0101 (N.Y. Pub. Serv. Comm'n Jan. 21, 2016), available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F8C835E1-EDB5-47FF-BD78-73EB5B3B177A}>.

upholding its use to justify energy efficiency standards promulgated by DOE in 2016. *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 677-678 (7th Cir. 2016). Since then, the Social Cost of Carbon has become an established metric for evaluating the costs of climate change and is being increasingly used by states. Indeed, as a sign of its increasing stature, a Montana district court found a National Environmental Policy Act analysis deficient *because* it failed to use the Social Cost of Carbon to quantify costs of greenhouse gas emissions. *See Montana Env'tl. Info. Ctr. v. U.S. Office of Surface Mining*, \_\_\_ F. Supp. 3d \_\_\_, 2017 WL 3480262, at \*13-15 (D. Mont. Aug. 14, 2017) (“Defendants cannot persuasively justify the Enforcement Office’s failure to consider the cost of greenhouse gas emissions from coal combustion,” using the Social Cost of Carbon).

Interest in the Social Cost of Carbon is growing. Earlier this year, the Colorado and Minnesota Public Utilities Commissions required utilities to use the Social Cost of Carbon for resource planning.<sup>56</sup> And legislation passed in

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<sup>56</sup> Phase I Decision (Decision No. C-17-0316) at 25-31, *In re Application of Pub. Serv. Co. of Colo. for Approval of its 2016 Elec. Res. Plan*, Proceeding No. 16A-0396E (Colo. Pub. Utils. Comm’n Mar. 23, 2017), [http://coseia.org/wp2016/wp-content/uploads/2017/05/ERP-Decision-C17-0316\\_16A-0396E-1.pdf](http://coseia.org/wp2016/wp-content/uploads/2017/05/ERP-Decision-C17-0316_16A-0396E-1.pdf); Mike Hughlett, ‘Social Cost’ of Carbon Dioxide Emissions from Power Plants Increased, *Star Trib.* (July 27, 2017), <http://www.startribune.com/minnesota-regulators-increase-social-cost-of-co2-emissions-but-not-as-much-as-asked/437066353/>; Christian Roselund, *Minnesota Ups the Value of Its Social Cost of Carbon*, *PV Mag.* (July 31, 2017), <https://pv-magazine-usa.com/2017/07/31/minnesota-ups-the-value-of-its-social-cost-of-carbon/>.

California in September 2016 requires the California Air Resources Board to consider a Social Cost of Carbon-type metric for its latest set of greenhouse-gas reduction measures.<sup>57</sup>

In sum, New York’s ZEC program is a commitment to clean energy because it targets the largest source of clean energy in the state and country: nuclear power. The ZEC program is an extension of widely-used REC programs, and solidly links itself to New York’s climate goals by relying on the Social Cost of Carbon. The wrong decision here would unnecessarily rob not only New York, but many other states of their best tools in the fight against climate change, just as these zero-carbon sources are most at risk.

## **II. STATES CAN ENCOURAGE ENVIRONMENTAL GOALS THROUGH ZEC PROGRAMS.**

The wholesale market is a segment of the process by which electricity is generated and ultimately delivered—which along the way includes the retail and wholesale energy markets, along with all other aspects of generation and delivery that bring electricity to the end customer. The “cooperative federalism” framework that defines our electric grid encourages, if not requires, states and federal government to complement each other in this endeavor. The federal share of this arrangement covers one specific segment—interstate wholesale sales.

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<sup>57</sup> A.B. 197, 2015-2016 Assemb. (Cal. 2016).

Using their authority over generation and environmental matters, states routinely establish policies within their own domain that may impact the wholesale markets, from environmental permitting to RECs. ZECs, like RECs, nonetheless are separate and distinct from the wholesale markets because they are commodities traded independently from energy and capacity.

**A. Both the Federal Government and the States Have a Role in the Energy Markets.**

Under the principle of “cooperative federalism” in which the broader energy markets operate, both states and the federal government have roles to play in the provision of electricity. Op. 15, ECF No. 159; *see also Hughes v. Talen Energy Mktg., LLC*, 136 S. Ct. 1288, 1300 (2016) (Sotomayor, J., concurring) (“In short, the Federal Power Act, like all collaborative federalism statutes, envisions a federal-state relationship marked by interdependence.”). This interdependence is marked by two different but equally important roles in the broader energy market: FERC has exclusive jurisdiction over wholesale sales of electric energy in the interstate market; and states may regulate “any other sale” of electricity, which includes retail electricity sales, and sales in commodities other than electric energy. 16 U.S.C. §§ 824(b), 824e(a). These two roles complement each other and each is clearly defined.

Both the federal government and the states may regulate within the “domain” Congress assigned to them. *See FERC v. Elec. Power Supply Ass’n*

(*EPSA*), 136 S. Ct. 760, 774 (2016), *as revised* (Jan. 28, 2016). State programs compensating nuclear generators for their unique environmental attributes are essentially addressing externalities from electricity generation, by which we mean air pollution. By pricing externalities, state programs complement—but are not tied to—the wholesale markets by accounting for the social costs of generating electricity.<sup>58</sup> FERC has recognized that “a state may separately provide additional compensation for environmental externalities, outside the confines of, and, in addition to the [FERC-regulated interstate wholesale] rate.” *Cal. Pub. Utils. Comm’n*, 133 FERC ¶ 61,059, at P 31 (2010).

**B. ZECs, Like RECs, Are Commodities Exchanged Separately and Independently from Energy and Capacity.**

That state actions affect wholesale prices is nothing new. “It is a fact of economic life that the wholesale and retail markets in electricity, as in every other known product, are not hermetically sealed from each other.” *EPSA*, 136 S. Ct. at 776. There are almost countless ways state actions can impact interstate wholesale markets. State environmental limits can reduce the relative contribution of coal plants in our supply portfolio. The siting of power plants and transmission facilities routinely take into account, and often give way to, prevailing environmental policy considerations. States can create environmental

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<sup>58</sup> New York PSC, *supra* note 3 at 133.

commodities, such as ZECs and RECs, which are exchanged separately from wholesale sales. And the mechanisms need not be so subtle—states can also simply “order utilities to purchase [clean] generation.” *Entergy Nuclear Vt. Yankee, LLC v. Shumlin*, 733 F.3d 393, 417 (2d Cir. 2013) (citing *S. Cal. Edison Co.*, 71 FERC ¶ 61,269, at \*8 (1995)) (internal quotation marks omitted).

ZEC programs and REC programs take extra pains to separate themselves from the wholesale markets, by creating environmental “commodities” that are exchanged *separately and independently* from the wholesale markets. FERC has expressly approved this approach for RECs. *Cal. Pub. Utils. Comm’n*, 133 FERC ¶ 61,059, at P 31 n.62 (“RECs are separate commodities from the capacity and energy . . . . If a state chooses to create these separate commodities, they are not compensation for capacity and energy.”); *Am. Ref-Fuel Co.*, 105 FERC ¶ 61,004, at P 23 (2003) (“States, in creating RECs, have the power to determine who owns the REC in the initial instance, and how they may be sold or traded.”), *reh’g denied*, 107 FERC ¶ 61,016 (2004), *review denied sub nom. Xcel Energy Servs. Inc. v. FERC*, 407 F.3d 1242 (D.C. Cir. 2005). New York’s ZEC program is no different. As explained by the District Court, ZECs are credits for an “environmental attribute[,]” which are then sold by zero-emissions plants and purchased by retail utilities. Op. 26, ECF No. 159. The ZEC program creates a market based on emissions-avoided during generation, not the sale of electricity,

and is therefore not a market for capacity or energy. *Cal. Pub. Utils. Comm'n*, 133 FERC ¶ 61,059, at P 31 n.62.

Appellants' efforts to distinguish ZECs from RECs based on the Social Cost of Carbon do not chip away at this foundation. Appellants claim that ZECs are different from RECs because "REC prices are essentially determined by the supply and demand of renewable energy." Appellants Br. 41, ECF No. 56; *see also* AWEA Br. 11, ECF No. 94-2 ("In contrast to typical REC programs, the ZEC program is not market-based."). And they are correct: ZECs are based on a metric—the Social Cost of Carbon—that didn't exist when RECs were created.

Before the Social Cost of Carbon was developed, state REC programs used a wide variety of carbon cost estimations to support their REC programs. *Ctr. For Biological Diversity*, 538 F.3d at 1199 (discussing the large variety of carbon cost estimations used). States had to take alternative approaches to get to the same rough goal as the now established Social Cost of Carbon metric. As the metric has become more accepted, unsurprisingly states, such as California, Colorado, Minnesota, and New York, are increasingly turning to the Social Cost of Carbon to account for the effects of greenhouse-gas emissions in state initiatives. *Supra* Section I.C (at 22-23).

In all other semblances too, ZECs are like RECs. American Petroleum Institute (API) falsely suggests that only ZECs are "created and tracked" via the

New York Generation Attribute System (NYGATS), a system for tracking the environmental attributes of electricity entering the power grid. API Br. 15-16, ECF No. 75. This ignores that New York also allows RECs to be created and tracked via NYGATS.<sup>59</sup>

AWEA likewise mischaracterizes both ZECs and RECs by stating that the latter are “without regard to economic need” to encourage broad participation, while only nuclear plants that would otherwise shut down are able to access ZECs. AWEA Br. 14, ECF No. 94-2. But REC programs likewise support otherwise unprofitable renewable generation sources by attempting to compensate for something that the wholesale markets do not address.<sup>60</sup> Indeed, Lawrence

Berkeley National Laboratory reports that *virtually all* of the 2016 renewable

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<sup>59</sup> REC facilities, like the ZEC facilities, provide NYGATS information when seeking contracts. New York State Energy Research and Development Authority (NYSERDA), Renewable Energy Standard Purchase of New York Tier 1 Eligible Renewable Energy Credits Request for Proposals (RFP) No. RESRFP17-1, Attachment I (RES Standard Form Agreement), Art. 3, §§ 3.01, 3.02 (Mar. 2017), <https://portal.nyserdanyc.gov/servlet/servlet.FileDownload?file=00Pt0000003Hha3EAC>.

<sup>60</sup> See New York PSC, *supra* note 3 at 99 (“Without the assurances that a long-term [REC] contract provides, the renewable generation projects that the State requires will not come to fruition.”); Ivan Gold & Nidhi Thakar, *A Survey of State Renewable Portfolio Standards: Square Pegs for Round Climate Change Holes?*, 35 Wm. & Mary Envtl. L. & Pol’y Rev. 183, 189 (2010) (State RPS and associated REC “programs generally relied on legislative findings that [they] were needed to subsidize renewable energy resources” among other goals.). The New York REC program also provides for maintenance contracts to existing renewable facilities that otherwise would cease operations. New York PSC, *supra* note 3 at 117.

capacity additions in the Northeast (which includes New York) were to serve demand created by state renewable portfolio standards.<sup>61</sup> Moreover, economic need is irrelevant for the legal analysis here. The New York ZEC program, like state REC programs, is targeted towards technologies not being adequately compensated for their environmental attributes, which is what the ZEC program intends to cure.

In addition, the existence of a ZEC price adjustment clause—a consumer protection measure—fails to differentiate ZECs from RECs. The New York ZEC program is capped at the Social Cost of Carbon, which means that the program is designed to ensure the value of the credit never exceeds the value of the environmental attributes the program is seeking to compensate. It is typical for REC programs to also contain administrative caps to keep REC prices from getting too high, through “alternative compliance payments.” For example, New York’s REC program itself sets a cap on REC prices through alternative compliance payments.<sup>62</sup> And New York is not alone: according to one report Connecticut, Delaware, the District of Columbia, Maryland, New Jersey, Pennsylvania, Massachusetts, Maine, New Hampshire, and Rhode Island all have alternative

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<sup>61</sup> Galen Barbose, Lawrence Berkeley National Laboratory, *U.S. Renewables Portfolio Standards: 2017 Annual Status Report* 14-15 (July 2017), <https://emp.lbl.gov/sites/default/files/2017-annual-rps-summary-report.pdf>.

<sup>62</sup> New York PSC, *supra* note 3 at 16, 102.

compliance payments or similar programs.<sup>63</sup> The Social Cost of Carbon simply provides a different value as a cap for the ZEC program, one that is more closely linked to the value of the avoided carbon emissions.

It also is irrelevant that the ZEC price adjustment clause *references* a regional wholesale futures price index. Appellants Br. 33, ECF No. 56. The District Court correctly stated that *referencing* the futures index is not akin to *interfering* in the wholesale markets. Op. 18-19, ECF No. 159 (*Hughes* “nowhere stated, implied or even considered that a State program’s incorporation of the wholesale market price would provide a basis for preemption.”). Referencing the futures index to help in a price adjustment is no different than referencing any other value, as the intent is merely to adjust the ZEC credit, not to interfere with or require participation in the wholesale market.<sup>64</sup>

Indeed, setting a precedent that prohibits mere references to futures prices for *independent state activities* risks expanding the scope of federal jurisdiction to

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<sup>63</sup> Edward A. Holt, Ed Holt & Assocs., Inc., *CESA State RPS Policy Report: Increasing Coordination and Uniformity Among State Renewable Portfolio Standards* 18-19 (2008), <https://cesa.org/assets/Uploads/Resources-pre-8-16/CESA-Holt-RPS-policy-report-dec2008.pdf>.

<sup>64</sup> The PSC emphasized that the futures index does not establish the actual energy or capacity price for any generator, including those receiving ZECs. New York PSC, *supra* note 3 at 138-39. REC programs can also reference wholesale prices for adjustments. *See, e.g.*, 20 Ill. Comp. Stat. 3855/1-75(c)(1)(D) (allowing regulators to consider “expected current and future regional energy prices” in setting cost caps so that Illinois RECs remain “cost effective”).

the same “near-infinite breadth” the Supreme Court in *EPSA* sought to reign in. *EPSA*, 136 S. Ct. at 764. That is why the method of pricing is irrelevant to determining interference with the wholesale markets. No matter how they are priced or how large their influence, both ZECs and RECs remain unbundled commodities traded outside of the wholesale markets, independently of electricity and capacity, and thus do not interfere with wholesale markets. Op. 26, ECF No. 159; *Cal. Pub. Utils. Comm’n*, 133 FERC ¶ 61,059, at P 31.

### CONCLUSION

For the foregoing reasons, and those in the appellees’ briefs, the District Court decision should be affirmed.

Respectfully submitted,

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## **CERTIFICATE OF COMPLIANCE**

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**CERTIFICATE OF SERVICE**

I certify that on November 24, 2017, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Second Circuit using the CM/ECF system. I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

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