

48:3-87.3 to 48:3-8.7
LEGISLATIVE HISTORY CHECKLIST
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LAWS OF: 2018 **CHAPTER:** 16

NJSA: 48:3-87.3 to 48:3-87.7 (Establishes zero emission certificate program for nuclear power plants)

BILL NO: S2313 (Substituted for A3724)

SPONSOR(S) Sweeney and others

DATE INTRODUCED: March 22, 2018

COMMITTEE: **ASSEMBLY:** ---

SENATE: Budget and Appropriations

AMENDED DURING PASSAGE: No

DATE OF PASSAGE: **ASSEMBLY:** April 12, 2018

SENATE: April 12, 2018

DATE OF APPROVAL: May 23, 2018

FOLLOWING ARE ATTACHED IF AVAILABLE:

FINAL TEXT OF BILL (Introduced version of bill enacted) Yes

S2313

SPONSOR'S STATEMENT: (Begins on page 13 of introduced bill) Yes

COMMITTEE STATEMENT: **ASSEMBLY:** No

SENATE: Yes

(Audio archived recordings of the committee meetings, corresponding to the date of the committee statement, *may possibly* be found at www.njleg.state.nj.us)

FLOOR AMENDMENT STATEMENT: No

LEGISLATIVE FISCAL ESTIMATE: Yes

A3724

SPONSOR'S STATEMENT: (Begins on page 13 of introduced bill) Yes

COMMITTEE STATEMENT: **ASSEMBLY:** Yes

SENATE: No

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FLOOR AMENDMENT STATEMENT: No

LEGISLATIVE FISCAL ESTIMATE: Yes

(continued)

VETO MESSAGE: No

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REPORTS: No

HEARINGS: Yes

Committee meeting of Senate Environment and Energy Committee [and] Assembly Telecommunications and Utilities Committee : the Committees will meet to hear testimony from invited experts and the public on strategies to prevent the premature retirement of existing, licensed, and operating nuclear power plants [December 4, 2017 Trenton, New Jersey].
Call number: 974.90 A881, 2017a
Available online at <https://dspace.njstatelib.org/handle/10929/45899>

Committee meeting of Senate Environment and Energy Committee [and] Assembly Telecommunications and Utilities Committee: Senate bill no. 3560, Assembly bill no. 5330; establishes Nuclear Diversity Certificate program [December 20, 2017 Trenton, New Jersey].
Call number: 974.90 A881, 2017b
Available online at <https://dspace.njstatelib.org/handle/10929/46279>

NEWSPAPER ARTICLES: Yes

"Nuclear plant bailout, rate hike approved," South Jersey Times, 5-24-2018
"New Jersey OKs \$300M annually to rescue nuclear industry," Associated Press State Wire: New Jersey, 5-23-2018
"Murphy signs off on 300M nuclear energy subsidy," NJBIZ, 5-23-2018
"New Jersey OKs \$300 million to rescue nuclear industry," Associated Press State Wire: New Jersey, 5-23-2018
"Nuclear plant bailout means you pay more," The Record, 5-24-2018
"Gov saves nuke plants, public may foot bill." The Jersey Journal, 5-24-2018

RWH/JA

P.L. 2018, CHAPTER 16, *approved May 23, 2018*
Senate, No. 2313

1 **AN ACT** concerning nuclear energy, and supplementing Title 48 of
2 the Revised Statutes.

3

4 **BE IT ENACTED** *by the Senate and General Assembly of the State*
5 *of New Jersey:*

6

7 1. a. The Legislature finds and declares that:

8 (1) Climate change is one of the greatest threats facing the State
9 today and in the future. Reducing emissions of carbon dioxide,
10 other greenhouse gases, and other pollutants by preserving and
11 expanding zero-emission electricity generation within and outside
12 the State is critical to mitigating the impacts of climate change.

13 (2) Nuclear power is a reliable, zero-emission source of energy
14 that has supplied New Jersey's energy demands for decades.

15 (3) New Jersey has historically relied on a diverse mix of energy
16 supply sources, including nuclear power, to meet the needs of its
17 residents and businesses.

18 (4) Reducing emissions of carbon dioxide, other greenhouse
19 gases, and other pollutants, and preserving and developing zero-
20 emission electricity generation sources within and outside the State
21 that currently provide electricity to customers in New Jersey, are
22 critical to improving air quality for New Jersey residents.

23 (5) The Energy Master Plan of New Jersey, last updated in 2015,
24 requires significant revisions to ensure that 100 percent of the
25 State's electric energy needs are generated by clean energy sources
26 by 2050, and any update to the Energy Master Plan by the State
27 must include a focus on the expansion of renewable and zero-
28 emission sources of energy.

29 (6) The existing renewable energy portfolio standard has been
30 successful in promoting the growth of renewable energy generation
31 to reduce air pollution in New Jersey; however, to achieve its near
32 term environmental goals, New Jersey must expand its commitment
33 to zero-emission energy generation and value the air quality and
34 other environmental attributes of zero-emission generation sources
35 that currently fall outside the scope of the existing renewable
36 energy portfolio standard, including but not limited to nuclear
37 power.

38 (7) Nuclear power generation is a critical component of the
39 State's clean energy portfolio because nuclear power plants do not
40 emit carbon dioxide, other greenhouse gases, or other pollutants; in
41 addition, nuclear power is an important element of a diverse energy

1 generation portfolio that currently meets approximately 40 percent
2 of New Jersey's electric power needs.

3 (8) Several of the existing, licensed, and operating nuclear power
4 plants within and outside the State that currently provide electricity
5 to customers in New Jersey are at risk of abrupt retirement due to a
6 variety of factors.

7 (9) The retirement of nuclear power generation will inevitably
8 result in an immediate increase in air emissions within New Jersey
9 due to increased reliance on natural gas-fired generation and coal-
10 fired generation.

11 (10) Poor air quality has a disproportionate impact on the most
12 vulnerable citizens of New Jersey including children, the elderly,
13 and people living in poverty. Fossil-fuel power plants drive
14 increases in pollutants like ground-level ozone, which aggravates
15 respiratory illnesses for individuals with decreased lung function.
16 Public health and environmental justice necessitate a reduction in
17 these pollutants to protect the most vulnerable of our citizenry.

18 (11) As a coastal state, New Jersey is particularly exposed to
19 many of the effects of global climate change, such as rising sea
20 levels and more extreme storms. Many of New Jersey's most
21 important commercial and tourism assets are located in coastal
22 areas, and events like Superstorm Sandy have demonstrated the
23 imminent and tangible threats that intense storms pose to New
24 Jersey's economy and environment.

25 (12) Given the overwhelming scientific consensus that fossil-fuel
26 use is causing potentially irreversible global climate change and the
27 attendant environmental catastrophes, it is a moral imperative that
28 the State invest in energy infrastructure within and outside the State
29 that does not produce greenhouse gases.

30 b. The Legislature therefore determines that:

31 (1) The abrupt retirement of existing, licensed, and operating
32 nuclear power plants within and outside the State that provide
33 electricity to customers in New Jersey, and any concomitant
34 increase in the proportion of New Jersey's electricity demand met
35 by natural gas and coal, will result in a substantial increase in
36 emissions of several serious pollutants, and associated adverse
37 public health and environmental impacts. The pollutants resulting
38 from increased fossil-fuel generation and drilling include emissions
39 of carbon dioxide, methane, carbon monoxide, sulfur dioxide,
40 particulate matter, volatile organic compounds, mercury, and
41 nitrous oxides, and the creation of ozone.

42 (2) New Jersey is currently not projected to meet certain federal
43 and State air quality standards and emissions level requirements,
44 counties of the State are currently designated as nonattainment for
45 the federal 8-hour Ozone National Ambient Air Quality Standard,
46 and the abrupt retirement of nuclear power plants that serve New
47 Jersey combined with increased reliance on natural gas-fired and
48 coal-fired generation will substantially impede the State's ability to

1 meet those federal and State air quality standards and emissions
2 level requirements.

3 (3) In light of the primacy of natural gas use for heating in New
4 Jersey, increased reliance on natural gas-fired generation will
5 render the electric generation and delivery systems less resilient and
6 more vulnerable to the impacts of extreme winter weather events,
7 natural gas pipeline accidents, and other factors affecting the
8 deliverability of natural gas to electric power generating stations in
9 and around the State.

10 (4) The model of providing credits to zero- or low-emission
11 energy generation sources as compensation for their environmental
12 attributes has proven successful for Class I and Class II renewable
13 energy sources, which receive renewable energy certificates, and
14 solar electric power generators, which receive solar renewable
15 energy certificates.

16 (5) A program that recognizes and compensates nuclear energy
17 generators in a manner similar to other non-emitting energy
18 generation resources to the extent required to prevent the loss of
19 nuclear energy, subject to independent review as provided in
20 section 3 of this act, which the State's residents and businesses rely
21 on for approximately 40 percent of their electricity needs, could, in
22 the absence of equally or more cost-effective clean energy
23 alternatives, further the State's interest in environmental protection
24 and maintaining a diverse mix of energy sources.

25 (6) While recognizing the importance of nuclear energy
26 generation, the State must also commit to the deployment of
27 renewable and zero-emission energy to address climate change,
28 drive economic development, and create new employment
29 opportunities.

30 (7) In order to meet the goals under the "Global Warming
31 Response Act," P.L.2007, c.112 (C.26:2C-37 et seq.), to reduce
32 greenhouse gas emissions 80 percent by 2050, it will be necessary
33 to significantly reduce emissions from the electric power generation
34 sector. This will require reducing the State's heavy reliance on
35 natural gas for electric power generation, the primary source of
36 emissions from the electric power generation sector.

37 (8) The zero emission certificate program set forth in this act is
38 structured such that its costs are guaranteed to be significantly less
39 than the social cost of carbon emissions avoided by the continued
40 operation of selected nuclear power plants, ensuring that the
41 program does not place an undue financial burden on retail
42 distribution customers. The social cost of carbon, as calculated by
43 the U.S. Interagency Working Group on the Social Cost of Carbon
44 in its August 2016 Technical Update, is an accepted measure of the
45 cost of carbon emissions. Carbon emissions avoided by selected
46 nuclear power plants are but one component of their emissions
47 avoidance benefits.

1 2. As used in this act:

2 “Board” means the New Jersey Board of Public Utilities or any
3 successor agency.

4 “Electric public utility” shall have the same meaning as provided
5 in section 3 of P.L.1999, c.23 (C.48:3-51).

6 “Eligibility period” means the period of time, measured in
7 energy years, during which a selected nuclear power plant may
8 receive zero emission certificates pursuant to section 3 of this act.

9 “Eligible nuclear power plant” means a nuclear power plant
10 certified by the board to allow it to be selected to participate in the
11 program established pursuant to section 3 of this act.

12 “Emissions avoidance benefits” means the benefits associated
13 with the preservation of better air quality and other environmental
14 attributes caused by the production of electric energy from a
15 selected nuclear power plant, as well as the reduction in damage
16 that would otherwise be caused by carbon dioxide or other
17 greenhouse gases or other pollutants emitted but for the production
18 of electric energy from a selected nuclear power plant. Such
19 damage threatens massive economic and lifestyle disruption, and
20 includes but is not limited to a contribution to sea level rise, heat
21 waves, more frequent and severe occurrence of extreme weather
22 events, and damage to agriculture, water resources, public health,
23 energy and communication systems, and the natural ecosystems that
24 define and support communities.

25 “Energy year” or “EY” shall have the same meaning as provided
26 in section 3 of P.L.1999, c.23 (C.48:3-51).

27 “Nuclear power plant” means an individual electric generating
28 unit utilizing nuclear fuel to produce electric power.

29 “Selected nuclear power plant” means an eligible nuclear power
30 plant selected by the board to participate in the program established
31 pursuant to section 3 of this act.

32 “Zero emission certificate” or “ZEC” means a certificate, issued
33 by the board or its designee, representing the fuel diversity, air
34 quality, and other environmental attributes of one megawatt-hour of
35 electricity generated by an eligible nuclear power plant selected by
36 the board to participate in the program established pursuant to
37 section 3 of this act.

38

39 3. a. As part of an application submitted to the board pursuant
40 to subsection c. of this section, a nuclear power plant seeking to
41 participate in the program established by this act shall provide to
42 the board any financial information requested by the board
43 pertaining to the nuclear power plant, including, but not limited to,
44 certified cost projections over the next three energy years, including
45 operation and maintenance expenses, fuel expenses, including spent
46 fuel expenses, non-fuel capital expenses, fully allocated overhead
47 costs, the cost of operational risks and market risks that would be
48 avoided by ceasing operations, and any other information, financial

1 or otherwise, to demonstrate that the nuclear power plant's fuel
2 diversity, air quality, and other environmental attributes are at risk
3 of loss because the nuclear power plant is projected to not fully
4 cover its costs and risks, or alternatively is projected to not fully
5 cover its costs and risks including its risk-adjusted cost of capital.
6 For purposes of this subsection, "operational risks" shall include,
7 but need not be limited to, the risk that operating costs will be
8 higher than anticipated because of new regulatory mandates or
9 equipment failures and the risk that per megawatt-hour costs will be
10 higher than anticipated because of a lower than expected capacity
11 factor, and "market risks" shall include, but need not be limited to,
12 the risk of a forced outage and the associated costs arising from
13 contractual obligations, and the risk that output from the nuclear
14 power plant may not be able to be sold at projected levels. An
15 application submitted to the board pursuant to subsection c. of this
16 section shall also include a certification that the nuclear power plant
17 will cease operations within three years unless the nuclear power
18 plant experiences a material financial change, and the certification
19 shall specify the necessary steps required to be completed to cease
20 the nuclear power plant's operations.

21 The financial and other information required pursuant to this
22 subsection may be submitted on a confidential basis and shall be
23 treated and maintained as confidential by the board and shall not be
24 subject to public disclosure, notwithstanding any law to the
25 contrary, including the common law. The board and the Attorney
26 General shall jointly approve the disclosure of such confidential
27 information to a party that they deem essential to aid the board in
28 making the determinations required under this subsection, provided
29 that the party is not in a position such that disclosure could harm
30 competition and the party agrees in writing to maintain the
31 confidentiality of the confidential information.

32 b. Notwithstanding any law, rule, regulation, or order to the
33 contrary, the board shall complete a proceeding no later than 180
34 days after the date of enactment of this act to allow for the
35 commencement of a program allowing for the issuance by the board
36 of a zero emission certificate. In this proceeding, the board shall
37 adopt, after notice, the opportunity for comment, and public
38 hearing, an order establishing a ZEC program for selected nuclear
39 power plants which shall include, but need not be limited to:

40 (1) a method and application process for determination of the
41 eligibility and selection of nuclear power plants; and

42 (2) establishment of a mechanism for each electric public utility
43 to purchase ZECs from selected nuclear power plants and a
44 mechanism for the board to effectuate the provisions of subsection
45 i. of this section.

46 c. No later than 210 days after the date of enactment of this act,
47 a nuclear power plant seeking to participate in the program
48 established by this act shall submit its application to the board.

1 d. Notwithstanding any law, rule, regulation, or order to the
2 contrary, the board shall complete a proceeding no later than 330
3 days after the date of enactment of this act and shall adopt, after
4 notice, the opportunity for comment, and public hearing, an order
5 establishing a rank-ordered list of the nuclear power plants eligible
6 to be selected to receive ZECs, and establishing which eligible
7 nuclear power plants have been selected to receive ZECs pursuant
8 to this section. If the board determines, in its discretion, that no
9 nuclear plant that applies pursuant to subsection c. of this section
10 satisfies the objectives of this act, then the board shall be under no
11 obligation to certify any nuclear power plant as an eligible nuclear
12 power plant.

13 e. To be certified by the board as an eligible nuclear power
14 plant, a nuclear power plant shall:

15 (1) be licensed to operate by the United States Nuclear
16 Regulatory Commission by the date of enactment of this act and
17 through 2030 or later;

18 (2) demonstrate to the satisfaction of the board that it makes a
19 significant and material contribution to the air quality in the State
20 by minimizing emissions that result from electricity consumed in
21 New Jersey, it minimizes harmful emissions that adversely affect
22 the citizens of the State, and if the nuclear power plant were to be
23 retired, that that retirement would significantly and negatively
24 impact New Jersey's ability to comply with State air emissions
25 reduction requirements;

26 (3) demonstrate to the satisfaction of the board, through the
27 financial and other confidential information submitted to the board
28 pursuant to subsection a. of this section, and any other information
29 required by the board, which information may be submitted on a
30 confidential basis and shall be treated and maintained as
31 confidential by the board and shall not be subject to public
32 disclosure, notwithstanding any law to the contrary, including the
33 common law, that the nuclear power plant's fuel diversity, air
34 quality, and other environmental attributes are at risk of loss
35 because the nuclear power plant is projected to not fully cover its
36 costs and risks, or alternatively is projected to not cover its costs
37 including its risk-adjusted cost of capital, and that the nuclear
38 power plant will cease operations within three years unless the
39 nuclear power plant experiences a material financial change;

40 (4) certify annually that the nuclear power plant does not receive
41 any direct or indirect payment or credit under a law, rule,
42 regulation, order, tariff, or other action of this State or any other
43 state, or a federal law, rule, regulation, order, tariff, or other action,
44 or a regional compact, despite its reasonable best efforts to obtain
45 any such payment or credit, for its fuel diversity, resilience, air
46 quality or other environmental attributes that will eliminate the need
47 for the nuclear power plant to retire, except for any payment or
48 credit received under the provisions of this act; and

1 (5) submit an application fee to the board in an amount to be
2 determined by the board, but which shall not exceed \$250,000, to be
3 used to defray the costs incurred by the board to administer the ZEC
4 program.

5 f. In ranking eligible nuclear power plants from first to last, the
6 board shall consider how well the nuclear power plants satisfy the
7 criteria set forth under the provisions of this act, and shall also
8 consider other relevant factors such as sustainability or long-term
9 commitment to nuclear energy production in a manner that supports
10 New Jersey's cost-effective transition to a zero carbon energy
11 supply. Two or more eligible nuclear power plants shall not have
12 the same ranking.

13 g. (1) The board shall select eligible nuclear power plants to
14 receive ZECs according to their ranking. Beginning with the top-
15 ranked eligible nuclear power plant and continuing in rank order,
16 the board shall continue to select nuclear power plants but not
17 beyond the point at which the combined number of megawatt-hours
18 of electricity produced in the energy year immediately prior to the
19 date of enactment of this act by all selected nuclear power plants
20 equals 40 percent of the total number of megawatt-hours of
21 electricity distributed by electric public utilities in the State in the
22 energy year immediately prior to the date of enactment of this act.
23 The board shall not select an eligible nuclear power plant to receive
24 ZECs if the addition of the electricity produced by that nuclear
25 power plant in the energy year immediately prior to the date of
26 enactment of this act to the electricity produced in the energy year
27 immediately prior to the date of enactment of this act by the
28 selected nuclear power plants ranked ahead of that plant on the
29 rank-ordered list exceeds 40 percent of the total number of
30 megawatt-hours of electricity distributed by electric public utilities
31 in the State in the energy year immediately prior to the date of
32 enactment of this act.

33 (2) A selected nuclear power plant shall be eligible to receive
34 ZECs 330 days after the date of enactment of this act. In the first
35 energy year in which an eligible nuclear power plant is selected, the
36 selected nuclear power plant shall receive a number of ZECs equal
37 to the number of megawatt-hours of electricity it produced in that
38 energy year starting on the date of the eligible nuclear power plant's
39 selection. In each energy year thereafter, each selected nuclear
40 power plant shall receive a number of ZECs equal to the number of
41 megawatt-hours of electricity that it produced in that energy year.

42 h. (1) Selected nuclear power plants shall initially receive
43 ZECs for an eligibility period that shall run through the end of the
44 first energy year in which the nuclear power plant is selected, plus
45 an additional three energy years.

46 (2) No later than 13 months prior to the conclusion of the initial
47 eligibility period established pursuant to paragraph (1) of this
48 subsection, and no later than 13 months prior to the conclusion of

1 each three energy year eligibility period thereafter, a nuclear power
2 plant may demonstrate its eligibility to the board and the board may
3 certify the nuclear power plant's eligibility to receive ZECs for
4 additional eligibility periods of three energy years, consistent with
5 the provisions of this act.

6 (3) A selected nuclear power plant shall annually certify to the
7 board that it will continue operations at full or near full capacity for
8 the duration of the period of its eligibility to receive ZECs, except
9 with respect to nuclear power plant shutdowns for necessary
10 maintenance and refueling.

11 i. (1) The board shall determine the price of a ZEC each
12 energy year by dividing the total number of dollars held by electric
13 public utilities in the accounts established pursuant to paragraph (1)
14 of subsection j. of this section at the end of the prior energy year by
15 the greater of: 40 percent of the total number of megawatt-hours of
16 electricity distributed by the electric public utilities in the State in
17 the prior energy year, or the number of megawatt-hours of
18 electricity generated in the prior energy year by the selected nuclear
19 power plants.

20 (2) Each electric public utility in the State shall be required to
21 begin to purchase ZECs on a monthly basis from each selected
22 nuclear power plant with payment to follow within 90 days after the
23 conclusion of the first energy year in which selected nuclear power
24 plants receive ZECs and within 90 days after the conclusion of each
25 subsequent energy year. The number of ZECs an electric public
26 utility shall be required to purchase shall equal the total number of
27 ZECs received by the selected nuclear power plants for the prior
28 energy year pursuant to paragraph (2) of subsection g. of this
29 section multiplied by the percentage of electricity distributed in the
30 State by the electric public utility as compared to other electric
31 public utilities in the State.

32 (3) To ensure that a selected nuclear power plant shall not
33 receive double-payment for its fuel diversity, resilience, air quality,
34 or other environmental attributes, the board shall annually
35 determine the dollar amount received by the selected nuclear power
36 plant in an energy year pursuant to a law, rule, regulation, order,
37 tariff, or other action of this State or any other state, or a federal
38 law, rule, regulation, order, tariff, or other action, or a regional
39 compact referenced in paragraph (4) of subsection e. of this section.
40 Notwithstanding paragraph (2) of this subsection, the number of
41 ZECs purchased by each electric public utility from a selected
42 nuclear power plant for an energy year shall be reduced by the
43 number of ZECs equal in value to the dollar amount determined by
44 the board in this paragraph, multiplied by the percentage of
45 electricity distributed in the State by the electric public utility as
46 compared to other electric public utilities in the State. To the extent
47 that the board determines that a selected nuclear plant receives
48 revenues for its fuel diversity, resilience, air quality, or other

1 environmental attributes, the board shall immediately reduce the
2 number of ZECs on a prospective basis consistent with the level of
3 such revenues.

4 j. (1) The board shall order the full recovery of all costs
5 associated with the electric public utility's required procurement of
6 ZECs, and with the board's implementation of the ZEC program
7 under this act, through a non-bypassable, irrevocable charge
8 imposed on the electric public utility's retail distribution customers.
9 Within 150 days after the date of enactment of this act, each electric
10 public utility shall file with the board a tariff to recover from its
11 retail distribution customers a charge in the amount of \$0.004 per
12 kilowatt-hour which reflects the emissions avoidance benefits
13 associated with the continued operation of selected nuclear power
14 plants. Within 60 days after the tariff filing required pursuant to
15 this paragraph, after notice, the opportunity for comment, and
16 public hearing, the board shall approve the tariff, provided that it is
17 consistent with the provisions of this subsection. No later than the
18 date of the board's order establishing the initial selected nuclear
19 power plants to receive ZECs, each electric public utility shall
20 implement the tariff and begin collecting from its retail distribution
21 customers the approved charge. Revenues collected by the electric
22 public utility from the non-bypassable, irrevocable charge shall be
23 placed in a separate, interest-bearing account and shall be used
24 solely to purchase ZECs, and to reimburse the board for reasonable,
25 verifiable costs the board incurs to implement the ZEC program
26 pursuant to this act to the extent the board's costs exceed the
27 application fees collected by the board pursuant to paragraph (5) of
28 subsection e. of this section.

29 (2) Notwithstanding any provision of this act to the contrary, an
30 electric public utility shall not be required to purchase any
31 additional number of ZECs if the cost of the additional number of
32 ZECs exceeds the revenues deposited in the electric public utility's
33 separate, interest-bearing account, created pursuant to paragraph (1)
34 of this subsection, for that energy year, after subtracting the
35 reasonable, verifiable costs incurred by the board during that energy
36 year to implement the ZEC program pursuant to this section, which
37 costs shall be remitted to the board from the ZEC fund each energy
38 year in a manner to be determined by the board. Excess monies in
39 an electric public utility's separate, interest-bearing account shall be
40 refunded to its retail distribution customers at the end of each
41 energy year.

42 (3) (a) Notwithstanding the provisions of paragraph (1) of this
43 subsection, and to ensure that the ZEC program remains affordable to
44 New Jersey retail distribution customers, the board may, in its
45 discretion, reduce the per kilowatt-hour charge imposed by paragraph
46 (1) of this subsection starting in the second three year eligibility period
47 and for each subsequent three year eligibility period thereafter,
48 provided that the board determines that a reduced charge will

1 nonetheless be sufficient to achieve the State's air quality and other
2 environmental objectives by preventing the retirement of the
3 nuclear power plants that meet the eligibility criteria established
4 pursuant to subsections d. and e. of this section.

5 (b) If the board reduces the per kilowatt-hour charge imposed by
6 paragraph (1) of this subsection pursuant to subparagraph (a) of this
7 paragraph, the reduction shall be applicable to the next eligibility
8 period only and the board shall make its determination no later than 13
9 months prior to the start of that eligibility period. Within 30 days
10 thereafter, each electric public utility shall file, in lieu of the tariff
11 described in paragraph (1) of this subsection, a tariff consistent with
12 the board's determination. Within 60 days after filing of the tariff,
13 after notice, the opportunity for comment, and public hearing, the
14 board shall approve the revised tariff, provided that it is consistent
15 with the board's determination. The revised tariff shall take effect
16 starting in the next eligibility period.

17 (c) If the board does not certify any nuclear power plants for a
18 subsequent eligibility period pursuant to this act, the board may, in
19 its discretion, reduce the per kilowatt-hour charge imposed pursuant
20 to paragraph (1) of this subsection to ensure that the ZEC program
21 remains affordable to New Jersey retail distribution customers in
22 the final year of the first eligibility period, provided that the board
23 determines that a reduced charge will nonetheless be sufficient to
24 achieve the State's air quality and other environmental objectives
25 by preventing the retirement of the nuclear power plants that meet
26 the eligibility criteria established pursuant to subsections d. and e.
27 of this section.

28 (d) For the second three energy year eligibility period, and every
29 subsequent eligibility period thereafter, a selected nuclear power
30 plant shall pay a renewal fee to the board in an amount to be
31 determined by the board, but which shall not exceed \$250,000, to be
32 used to defray the costs incurred by the board to administer the ZEC
33 program.

34 k. (1) A selected nuclear power plant shall be excused from
35 performance, including but not limited to the sale of ZECs, and a
36 payment from an electric public utility shall not be due to the
37 selected nuclear power plant, if:

38 (a) the selected nuclear power suspends or ceases operations,
39 despite the selected nuclear power plant's reasonable efforts to
40 continue operations, due to an event beyond its control, including
41 but not limited to acts of God, flood, drought, earthquake, storm,
42 fire, lightning, epidemic, war, riot, labor dispute, labor or material
43 shortage, sabotage, or explosion. The selected nuclear power plant
44 shall no longer be excused from performance, and a payment from
45 an electric public utility shall be due, after conclusion of the event;

46 (b) a State law is enacted imposing a significant new tax, special
47 assessment, or fee on the generation of electricity, the ownership or
48 leasehold of a generating unit, or the privilege or occupation of the

1 generation, ownership, or leasehold of generation units by a
2 selected nuclear power plant;

3 (c) a State or federal law is enacted that materially reduces the
4 value of a ZEC, or the board exercises its discretion to reduce the
5 amount of the per kilowatt-hour charge pursuant to paragraph (3) of
6 subsection j. of this section;

7 (d) the selected nuclear power plant requires capital
8 expenditures in excess of \$40,000,000 that were neither known nor
9 reasonably foreseeable at the time it was selected to receive ZECs,
10 and the capital expenditures are expenditures that a prudent owner
11 or operator of a selected nuclear power plant would not undertake;
12 or

13 (e) The United States Nuclear Regulatory Commission
14 terminates the selected nuclear power plant's license.

15 (2) If a selected nuclear power plant ceases operations during an
16 eligibility period for any reason other than those specified in this
17 subsection, the selected nuclear power plant shall pay a charge to
18 the electric public utilities that purchased ZECs from the selected
19 nuclear power plant in an amount equal to the compensation
20 received for the sale of ZECs since the board's last determination of
21 the selected nuclear power plant's eligibility to receive ZECs. An
22 electric public utility shall provide a refund to its retail distribution
23 customers in an amount equal to the charge paid by a selected
24 nuclear power plant to the electric public utility pursuant to this
25 paragraph.

26 (3) The owner of a selected nuclear power plant shall, within
27 two years after receiving ZECs, submit a plan to the board to retain,
28 retrain, or compensate personnel whose employment would be
29 eliminated as a direct result of the cessation of the selected nuclear
30 power plant's operations, including an alternative economic
31 development plan for communities that rely on the selected nuclear
32 power plant for a substantial portion of their tax revenues.

33 1. A selected nuclear power plant shall not lay off any
34 personnel unless the lay-off is due to employee misconduct or
35 underperformance issues, or due to the suspension or cessation of
36 the selected nuclear power plant's operations as provided in
37 subsection k. of this section.

38 m. The owner of a selected nuclear power plant shall, within
39 two years after receiving ZECs, conduct a study and prepare a
40 written report in cooperation with selected experts, to determine the
41 optimal use of dry cask storage of spent nuclear fuel at its site,
42 considering environmental impacts, worker safety, and cost
43 impacts.

44
45 4. a. No later than 10 years after the date of enactment of this
46 act, the Board of Public Utilities shall conduct a study to evaluate
47 the efficacy of the zero emission certificate program and submit a
48 written report thereon to the Governor and, pursuant to section 2 of

1 P.L.1991, c.164 (C.52:14-19.1), to the Legislature. In conducting
2 the study, the board shall evaluate the program's effect on the
3 premature retirement of nuclear power plants, its effect on the air
4 quality and environment in the State, and its contribution to a more
5 reliable energy supply by assuring fuel diversity. The study shall
6 also evaluate the program's benefits and costs to ratepayers.

7 b. The written report shall: (1) summarize the study and
8 analysis conducted pursuant to subsection a. of this section; (2)
9 discuss and quantify the potential benefits and costs associated with
10 the program; (3) recommend any changes to the program or whether
11 it should continue; and (4) recommend whether the program should
12 be expanded to include other technologies.

13
14 5. If any provision of this act or its application to any person or
15 circumstance is held invalid or unconstitutional, that judgment or
16 decision shall not affect other provisions or applications of this act
17 which can be given effect without the invalid or unconstitutional
18 provision or application, and to this end the provisions of this act
19 are severable.

20
21 6. This act shall take effect immediately.

22
23
24 STATEMENT

25
26 This bill directs the Board of Public Utilities (board) to establish
27 a Zero Emission Certificate (ZEC) program. Under the bill, a ZEC
28 is a certificate, issued by the board or its designee, representing the
29 fuel diversity, air quality, and other environmental attributes of one
30 megawatt-hour of electricity generated by an eligible nuclear power
31 plant selected by the board to participate in the ZEC program.

32 To participate in the ZEC program, a nuclear power plant is
33 required to: (1) be licensed to operate by the United States Nuclear
34 Regulatory Commission by the date of enactment of this bill and
35 through 2030 or later; (2) demonstrate to the satisfaction of the
36 board that it makes a significant and material contribution to the air
37 quality in the State by minimizing emissions that result from
38 electricity consumed in New Jersey; (3) provide financial
39 information to the board demonstrating that the plant will cease
40 operations unless the nuclear power plant experiences a material
41 financial change; (4) certify annually to the board that the nuclear
42 power plant does not receive any direct or indirect payment or
43 credit under a law of this State, or any other state, or a federal law,
44 or a regional compact, that would eliminate the need for the nuclear
45 power plant to retire prematurely, despite its reasonable best efforts
46 to obtain any such payment or credit; and (5) submit an application
47 fee to the board in an amount to be determined by the board, but

1 which is not to exceed \$250,000, to be used to defray the costs
2 incurred by the board to administer the ZEC program.

3 The board is to determine the price of a ZEC each energy year
4 under the formula provided in the bill. Within 90 days after the
5 conclusion of an energy year, each electric public utility (utility) in
6 the State is required to pay each nuclear power plant that received
7 ZECs for that prior energy year for the total number of ZECs
8 received by the nuclear power plant multiplied by the percentage of
9 electricity the utility distributed in the State as compared to other
10 utilities in the State.

11 The board is to order the full recovery of all costs associated
12 with the utility's procurement of ZECs through a non-bypassable,
13 irrevocable charge imposed on the retail distribution customers of
14 the utility in the amount of \$0.004 per kilowatt-hour. This charge
15 may be reduced by the board if certain conditions are met as
16 specified in the bill. Excess monies collected by utilities through
17 the charge are to be refunded to their customers.

18 A nuclear power plant selected by the board to participate in the
19 program is to initially receive ZECs through the end of the first
20 energy year in which the plant was selected, plus an additional three
21 energy years thereafter, and then is subject to review by the board
22 triennially for renewed eligibility for additional, three energy year
23 periods.

24 A nuclear power plant selected by the board to participate in the
25 program may suspend or cease operations under certain
26 circumstances, including circumstances in which events prevent the
27 selected nuclear power plant from continuing operations despite the
28 plant's reasonable efforts to continue operations. If a selected
29 nuclear power plant ceases operations during an eligibility period
30 for any reason other than those specified in the bill, the plant is to
31 pay a charge to the utilities that purchased ZECs from the selected
32 nuclear power plant in an amount equal to the compensation
33 received for the sale of ZECs since the board's last determination of
34 the selected nuclear power plant's eligibility to receive ZECs. A
35 selected nuclear power plant would not be authorized to lay off
36 personnel except for employee misconduct or underperformance
37 issues. Finally, the bill requires the board to conduct a study to
38 evaluate the program within 10 years.

39

40

41

42

43 Establishes zero emission certificate program for nuclear power
44 plants.

SENATE, No. 2313

STATE OF NEW JERSEY

218th LEGISLATURE

INTRODUCED MARCH 22, 2018

Sponsored by:

Senator STEPHEN M. SWEENEY

District 3 (Cumberland, Gloucester and Salem)

Senator BOB SMITH

District 17 (Middlesex and Somerset)

Senator JEFF VAN DREW

District 1 (Atlantic, Cape May and Cumberland)

Assemblyman JOHN F. MCKEON

District 27 (Essex and Morris)

Assemblyman JOHN J. BURZICHELLI

District 3 (Cumberland, Gloucester and Salem)

Assemblyman WAYNE P. DEANGELO

District 14 (Mercer and Middlesex)

Assemblyman JOSEPH V. EGAN

District 17 (Middlesex and Somerset)

Co-Sponsored by:

Assemblywoman Jasey

SYNOPSIS

Establishes zero emission certificate program for nuclear power plants.

CURRENT VERSION OF TEXT

As introduced.



(Sponsorship Updated As Of: 4/13/2018)

1 AN ACT concerning nuclear energy, and supplementing Title 48 of
2 the Revised Statutes.

3

4 **BE IT ENACTED** by the Senate and General Assembly of the State
5 of New Jersey:

6

7 1. a. The Legislature finds and declares that:

8 (1) Climate change is one of the greatest threats facing the State
9 today and in the future. Reducing emissions of carbon dioxide,
10 other greenhouse gases, and other pollutants by preserving and
11 expanding zero-emission electricity generation within and outside
12 the State is critical to mitigating the impacts of climate change.

13 (2) Nuclear power is a reliable, zero-emission source of energy
14 that has supplied New Jersey's energy demands for decades.

15 (3) New Jersey has historically relied on a diverse mix of energy
16 supply sources, including nuclear power, to meet the needs of its
17 residents and businesses.

18 (4) Reducing emissions of carbon dioxide, other greenhouse
19 gases, and other pollutants, and preserving and developing zero-
20 emission electricity generation sources within and outside the State
21 that currently provide electricity to customers in New Jersey, are
22 critical to improving air quality for New Jersey residents.

23 (5) The Energy Master Plan of New Jersey, last updated in 2015,
24 requires significant revisions to ensure that 100 percent of the
25 State's electric energy needs are generated by clean energy sources
26 by 2050, and any update to the Energy Master Plan by the State
27 must include a focus on the expansion of renewable and zero-
28 emission sources of energy.

29 (6) The existing renewable energy portfolio standard has been
30 successful in promoting the growth of renewable energy generation
31 to reduce air pollution in New Jersey; however, to achieve its near
32 term environmental goals, New Jersey must expand its commitment
33 to zero-emission energy generation and value the air quality and
34 other environmental attributes of zero-emission generation sources
35 that currently fall outside the scope of the existing renewable
36 energy portfolio standard, including but not limited to nuclear
37 power.

38 (7) Nuclear power generation is a critical component of the
39 State's clean energy portfolio because nuclear power plants do not
40 emit carbon dioxide, other greenhouse gases, or other pollutants; in
41 addition, nuclear power is an important element of a diverse energy
42 generation portfolio that currently meets approximately 40 percent
43 of New Jersey's electric power needs.

44 (8) Several of the existing, licensed, and operating nuclear power
45 plants within and outside the State that currently provide electricity
46 to customers in New Jersey are at risk of abrupt retirement due to a
47 variety of factors.

1 (9) The retirement of nuclear power generation will inevitably
2 result in an immediate increase in air emissions within New Jersey
3 due to increased reliance on natural gas-fired generation and coal-
4 fired generation.

5 (10) Poor air quality has a disproportionate impact on the most
6 vulnerable citizens of New Jersey including children, the elderly,
7 and people living in poverty. Fossil-fuel power plants drive
8 increases in pollutants like ground-level ozone, which aggravates
9 respiratory illnesses for individuals with decreased lung function.
10 Public health and environmental justice necessitate a reduction in
11 these pollutants to protect the most vulnerable of our citizenry.

12 (11) As a coastal state, New Jersey is particularly exposed to
13 many of the effects of global climate change, such as rising sea
14 levels and more extreme storms. Many of New Jersey's most
15 important commercial and tourism assets are located in coastal
16 areas, and events like Superstorm Sandy have demonstrated the
17 imminent and tangible threats that intense storms pose to New
18 Jersey's economy and environment.

19 (12) Given the overwhelming scientific consensus that fossil-fuel
20 use is causing potentially irreversible global climate change and the
21 attendant environmental catastrophes, it is a moral imperative that
22 the State invest in energy infrastructure within and outside the State
23 that does not produce greenhouse gases.

24 b. The Legislature therefore determines that:

25 (1) The abrupt retirement of existing, licensed, and operating
26 nuclear power plants within and outside the State that provide
27 electricity to customers in New Jersey, and any concomitant
28 increase in the proportion of New Jersey's electricity demand met
29 by natural gas and coal, will result in a substantial increase in
30 emissions of several serious pollutants, and associated adverse
31 public health and environmental impacts. The pollutants resulting
32 from increased fossil-fuel generation and drilling include emissions
33 of carbon dioxide, methane, carbon monoxide, sulfur dioxide,
34 particulate matter, volatile organic compounds, mercury, and
35 nitrous oxides, and the creation of ozone.

36 (2) New Jersey is currently not projected to meet certain federal
37 and State air quality standards and emissions level requirements,
38 counties of the State are currently designated as nonattainment for
39 the federal 8-hour Ozone National Ambient Air Quality Standard,
40 and the abrupt retirement of nuclear power plants that serve New
41 Jersey combined with increased reliance on natural gas-fired and
42 coal-fired generation will substantially impede the State's ability to
43 meet those federal and State air quality standards and emissions
44 level requirements.

45 (3) In light of the primacy of natural gas use for heating in New
46 Jersey, increased reliance on natural gas-fired generation will
47 render the electric generation and delivery systems less resilient and
48 more vulnerable to the impacts of extreme winter weather events,

1 natural gas pipeline accidents, and other factors affecting the
2 deliverability of natural gas to electric power generating stations in
3 and around the State.

4 (4) The model of providing credits to zero- or low-emission
5 energy generation sources as compensation for their environmental
6 attributes has proven successful for Class I and Class II renewable
7 energy sources, which receive renewable energy certificates, and
8 solar electric power generators, which receive solar renewable
9 energy certificates.

10 (5) A program that recognizes and compensates nuclear energy
11 generators in a manner similar to other non-emitting energy
12 generation resources to the extent required to prevent the loss of
13 nuclear energy, subject to independent review as provided in
14 section 3 of this act, which the State's residents and businesses rely
15 on for approximately 40 percent of their electricity needs, could, in
16 the absence of equally or more cost-effective clean energy
17 alternatives, further the State's interest in environmental protection
18 and maintaining a diverse mix of energy sources.

19 (6) While recognizing the importance of nuclear energy
20 generation, the State must also commit to the deployment of
21 renewable and zero-emission energy to address climate change,
22 drive economic development, and create new employment
23 opportunities.

24 (7) In order to meet the goals under the "Global Warming
25 Response Act," P.L.2007, c.112 (C.26:2C-37 et seq.), to reduce
26 greenhouse gas emissions 80 percent by 2050, it will be necessary
27 to significantly reduce emissions from the electric power generation
28 sector. This will require reducing the State's heavy reliance on
29 natural gas for electric power generation, the primary source of
30 emissions from the electric power generation sector.

31 (8) The zero emission certificate program set forth in this act is
32 structured such that its costs are guaranteed to be significantly less
33 than the social cost of carbon emissions avoided by the continued
34 operation of selected nuclear power plants, ensuring that the
35 program does not place an undue financial burden on retail
36 distribution customers. The social cost of carbon, as calculated by
37 the U.S. Interagency Working Group on the Social Cost of Carbon
38 in its August 2016 Technical Update, is an accepted measure of the
39 cost of carbon emissions. Carbon emissions avoided by selected
40 nuclear power plants are but one component of their emissions
41 avoidance benefits.

42

43 2. As used in this act:

44 "Board" means the New Jersey Board of Public Utilities or any
45 successor agency.

46 "Electric public utility" shall have the same meaning as provided
47 in section 3 of P.L.1999, c.23 (C.48:3-51).

1 "Eligibility period" means the period of time, measured in
2 energy years, during which a selected nuclear power plant may
3 receive zero emission certificates pursuant to section 3 of this act.

4 "Eligible nuclear power plant" means a nuclear power plant
5 certified by the board to allow it to be selected to participate in the
6 program established pursuant to section 3 of this act.

7 "Emissions avoidance benefits" means the benefits associated
8 with the preservation of better air quality and other environmental
9 attributes caused by the production of electric energy from a
10 selected nuclear power plant, as well as the reduction in damage
11 that would otherwise be caused by carbon dioxide or other
12 greenhouse gases or other pollutants emitted but for the production
13 of electric energy from a selected nuclear power plant. Such
14 damage threatens massive economic and lifestyle disruption, and
15 includes but is not limited to a contribution to sea level rise, heat
16 waves, more frequent and severe occurrence of extreme weather
17 events, and damage to agriculture, water resources, public health,
18 energy and communication systems, and the natural ecosystems that
19 define and support communities.

20 "Energy year" or "EY" shall have the same meaning as provided
21 in section 3 of P.L.1999, c.23 (C.48:3-51).

22 "Nuclear power plant" means an individual electric generating
23 unit utilizing nuclear fuel to produce electric power.

24 "Selected nuclear power plant" means an eligible nuclear power
25 plant selected by the board to participate in the program established
26 pursuant to section 3 of this act.

27 "Zero emission certificate" or "ZEC" means a certificate, issued
28 by the board or its designee, representing the fuel diversity, air
29 quality, and other environmental attributes of one megawatt-hour of
30 electricity generated by an eligible nuclear power plant selected by
31 the board to participate in the program established pursuant to
32 section 3 of this act.

33

34 3. a. As part of an application submitted to the board pursuant
35 to subsection c. of this section, a nuclear power plant seeking to
36 participate in the program established by this act shall provide to
37 the board any financial information requested by the board
38 pertaining to the nuclear power plant, including, but not limited to,
39 certified cost projections over the next three energy years, including
40 operation and maintenance expenses, fuel expenses, including spent
41 fuel expenses, non-fuel capital expenses, fully allocated overhead
42 costs, the cost of operational risks and market risks that would be
43 avoided by ceasing operations, and any other information, financial
44 or otherwise, to demonstrate that the nuclear power plant's fuel
45 diversity, air quality, and other environmental attributes are at risk
46 of loss because the nuclear power plant is projected to not fully
47 cover its costs and risks, or alternatively is projected to not fully
48 cover its costs and risks including its risk-adjusted cost of capital.

1 For purposes of this subsection, "operational risks" shall include,
2 but need not be limited to, the risk that operating costs will be
3 higher than anticipated because of new regulatory mandates or
4 equipment failures and the risk that per megawatt-hour costs will be
5 higher than anticipated because of a lower than expected capacity
6 factor, and "market risks" shall include, but need not be limited to,
7 the risk of a forced outage and the associated costs arising from
8 contractual obligations, and the risk that output from the nuclear
9 power plant may not be able to be sold at projected levels. An
10 application submitted to the board pursuant to subsection c. of this
11 section shall also include a certification that the nuclear power plant
12 will cease operations within three years unless the nuclear power
13 plant experiences a material financial change, and the certification
14 shall specify the necessary steps required to be completed to cease
15 the nuclear power plant's operations.

16 The financial and other information required pursuant to this
17 subsection may be submitted on a confidential basis and shall be
18 treated and maintained as confidential by the board and shall not be
19 subject to public disclosure, notwithstanding any law to the
20 contrary, including the common law. The board and the Attorney
21 General shall jointly approve the disclosure of such confidential
22 information to a party that they deem essential to aid the board in
23 making the determinations required under this subsection, provided
24 that the party is not in a position such that disclosure could harm
25 competition and the party agrees in writing to maintain the
26 confidentiality of the confidential information.

27 b. Notwithstanding any law, rule, regulation, or order to the
28 contrary, the board shall complete a proceeding no later than 180
29 days after the date of enactment of this act to allow for the
30 commencement of a program allowing for the issuance by the board
31 of a zero emission certificate. In this proceeding, the board shall
32 adopt, after notice, the opportunity for comment, and public
33 hearing, an order establishing a ZEC program for selected nuclear
34 power plants which shall include, but need not be limited to:

35 (1) a method and application process for determination of the
36 eligibility and selection of nuclear power plants; and

37 (2) establishment of a mechanism for each electric public utility
38 to purchase ZECs from selected nuclear power plants and a
39 mechanism for the board to effectuate the provisions of subsection
40 i. of this section.

41 c. No later than 210 days after the date of enactment of this act,
42 a nuclear power plant seeking to participate in the program
43 established by this act shall submit its application to the board.

44 d. Notwithstanding any law, rule, regulation, or order to the
45 contrary, the board shall complete a proceeding no later than 330
46 days after the date of enactment of this act and shall adopt, after
47 notice, the opportunity for comment, and public hearing, an order
48 establishing a rank-ordered list of the nuclear power plants eligible

1 to be selected to receive ZECs, and establishing which eligible
2 nuclear power plants have been selected to receive ZECs pursuant
3 to this section. If the board determines, in its discretion, that no
4 nuclear plant that applies pursuant to subsection c. of this section
5 satisfies the objectives of this act, then the board shall be under no
6 obligation to certify any nuclear power plant as an eligible nuclear
7 power plant.

8 e. To be certified by the board as an eligible nuclear power
9 plant, a nuclear power plant shall:

10 (1) be licensed to operate by the United States Nuclear
11 Regulatory Commission by the date of enactment of this act and
12 through 2030 or later;

13 (2) demonstrate to the satisfaction of the board that it makes a
14 significant and material contribution to the air quality in the State
15 by minimizing emissions that result from electricity consumed in
16 New Jersey, it minimizes harmful emissions that adversely affect
17 the citizens of the State, and if the nuclear power plant were to be
18 retired, that that retirement would significantly and negatively
19 impact New Jersey's ability to comply with State air emissions
20 reduction requirements;

21 (3) demonstrate to the satisfaction of the board, through the
22 financial and other confidential information submitted to the board
23 pursuant to subsection a. of this section, and any other information
24 required by the board, which information may be submitted on a
25 confidential basis and shall be treated and maintained as
26 confidential by the board and shall not be subject to public
27 disclosure, notwithstanding any law to the contrary, including the
28 common law, that the nuclear power plant's fuel diversity, air
29 quality, and other environmental attributes are at risk of loss
30 because the nuclear power plant is projected to not fully cover its
31 costs and risks, or alternatively is projected to not cover its costs
32 including its risk-adjusted cost of capital, and that the nuclear
33 power plant will cease operations within three years unless the
34 nuclear power plant experiences a material financial change;

35 (4) certify annually that the nuclear power plant does not receive
36 any direct or indirect payment or credit under a law, rule,
37 regulation, order, tariff, or other action of this State or any other
38 state, or a federal law, rule, regulation, order, tariff, or other action,
39 or a regional compact, despite its reasonable best efforts to obtain
40 any such payment or credit, for its fuel diversity, resilience, air
41 quality or other environmental attributes that will eliminate the need
42 for the nuclear power plant to retire, except for any payment or
43 credit received under the provisions of this act; and

44 (5) submit an application fee to the board in an amount to be
45 determined by the board, but which shall not exceed \$250,000, to be
46 used to defray the costs incurred by the board to administer the ZEC
47 program.

1 f. In ranking eligible nuclear power plants from first to last, the
2 board shall consider how well the nuclear power plants satisfy the
3 criteria set forth under the provisions of this act, and shall also
4 consider other relevant factors such as sustainability or long-term
5 commitment to nuclear energy production in a manner that supports
6 New Jersey's cost-effective transition to a zero carbon energy
7 supply. Two or more eligible nuclear power plants shall not have
8 the same ranking.

9 g. (1) The board shall select eligible nuclear power plants to
10 receive ZECs according to their ranking. Beginning with the top-
11 ranked eligible nuclear power plant and continuing in rank order,
12 the board shall continue to select nuclear power plants but not
13 beyond the point at which the combined number of megawatt-hours
14 of electricity produced in the energy year immediately prior to the
15 date of enactment of this act by all selected nuclear power plants
16 equals 40 percent of the total number of megawatt-hours of
17 electricity distributed by electric public utilities in the State in the
18 energy year immediately prior to the date of enactment of this act.
19 The board shall not select an eligible nuclear power plant to receive
20 ZECs if the addition of the electricity produced by that nuclear
21 power plant in the energy year immediately prior to the date of
22 enactment of this act to the electricity produced in the energy year
23 immediately prior to the date of enactment of this act by the
24 selected nuclear power plants ranked ahead of that plant on the
25 rank-ordered list exceeds 40 percent of the total number of
26 megawatt-hours of electricity distributed by electric public utilities
27 in the State in the energy year immediately prior to the date of
28 enactment of this act.

29 (2) A selected nuclear power plant shall be eligible to receive
30 ZECs 330 days after the date of enactment of this act. In the first
31 energy year in which an eligible nuclear power plant is selected, the
32 selected nuclear power plant shall receive a number of ZECs equal
33 to the number of megawatt-hours of electricity it produced in that
34 energy year starting on the date of the eligible nuclear power plant's
35 selection. In each energy year thereafter, each selected nuclear
36 power plant shall receive a number of ZECs equal to the number of
37 megawatt-hours of electricity that it produced in that energy year.

38 h. (1) Selected nuclear power plants shall initially receive
39 ZECs for an eligibility period that shall run through the end of the
40 first energy year in which the nuclear power plant is selected, plus
41 an additional three energy years.

42 (2) No later than 13 months prior to the conclusion of the initial
43 eligibility period established pursuant to paragraph (1) of this
44 subsection, and no later than 13 months prior to the conclusion of
45 each three energy year eligibility period thereafter, a nuclear power
46 plant may demonstrate its eligibility to the board and the board may
47 certify the nuclear power plant's eligibility to receive ZECs for

1 additional eligibility periods of three energy years, consistent with
2 the provisions of this act.

3 (3) A selected nuclear power plant shall annually certify to the
4 board that it will continue operations at full or near full capacity for
5 the duration of the period of its eligibility to receive ZECs, except
6 with respect to nuclear power plant shutdowns for necessary
7 maintenance and refueling.

8 i. (1) The board shall determine the price of a ZEC each
9 energy year by dividing the total number of dollars held by electric
10 public utilities in the accounts established pursuant to paragraph (1)
11 of subsection j. of this section at the end of the prior energy year by
12 the greater of: 40 percent of the total number of megawatt-hours of
13 electricity distributed by the electric public utilities in the State in
14 the prior energy year, or the number of megawatt-hours of
15 electricity generated in the prior energy year by the selected nuclear
16 power plants.

17 (2) Each electric public utility in the State shall be required to
18 begin to purchase ZECs on a monthly basis from each selected
19 nuclear power plant with payment to follow within 90 days after the
20 conclusion of the first energy year in which selected nuclear power
21 plants receive ZECs and within 90 days after the conclusion of each
22 subsequent energy year. The number of ZECs an electric public
23 utility shall be required to purchase shall equal the total number of
24 ZECs received by the selected nuclear power plants for the prior
25 energy year pursuant to paragraph (2) of subsection g. of this
26 section multiplied by the percentage of electricity distributed in the
27 State by the electric public utility as compared to other electric
28 public utilities in the State.

29 (3) To ensure that a selected nuclear power plant shall not
30 receive double-payment for its fuel diversity, resilience, air quality,
31 or other environmental attributes, the board shall annually
32 determine the dollar amount received by the selected nuclear power
33 plant in an energy year pursuant to a law, rule, regulation, order,
34 tariff, or other action of this State or any other state, or a federal
35 law, rule, regulation, order, tariff, or other action, or a regional
36 compact referenced in paragraph (4) of subsection e. of this section.
37 Notwithstanding paragraph (2) of this subsection, the number of
38 ZECs purchased by each electric public utility from a selected
39 nuclear power plant for an energy year shall be reduced by the
40 number of ZECs equal in value to the dollar amount determined by
41 the board in this paragraph, multiplied by the percentage of
42 electricity distributed in the State by the electric public utility as
43 compared to other electric public utilities in the State. To the extent
44 that the board determines that a selected nuclear plant receives
45 revenues for its fuel diversity, resilience, air quality, or other
46 environmental attributes, the board shall immediately reduce the
47 number of ZECs on a prospective basis consistent with the level of
48 such revenues.

1 j. (1) The board shall order the full recovery of all costs
2 associated with the electric public utility's required procurement of
3 ZECs, and with the board's implementation of the ZEC program
4 under this act, through a non-bypassable, irrevocable charge
5 imposed on the electric public utility's retail distribution customers.
6 Within 150 days after the date of enactment of this act, each electric
7 public utility shall file with the board a tariff to recover from its
8 retail distribution customers a charge in the amount of \$0.004 per
9 kilowatt-hour which reflects the emissions avoidance benefits
10 associated with the continued operation of selected nuclear power
11 plants. Within 60 days after the tariff filing required pursuant to
12 this paragraph, after notice, the opportunity for comment, and
13 public hearing, the board shall approve the tariff, provided that it is
14 consistent with the provisions of this subsection. No later than the
15 date of the board's order establishing the initial selected nuclear
16 power plants to receive ZECs, each electric public utility shall
17 implement the tariff and begin collecting from its retail distribution
18 customers the approved charge. Revenues collected by the electric
19 public utility from the non-bypassable, irrevocable charge shall be
20 placed in a separate, interest-bearing account and shall be used
21 solely to purchase ZECs, and to reimburse the board for reasonable,
22 verifiable costs the board incurs to implement the ZEC program
23 pursuant to this act to the extent the board's costs exceed the
24 application fees collected by the board pursuant to paragraph (5) of
25 subsection e. of this section.

26 (2) Notwithstanding any provision of this act to the contrary, an
27 electric public utility shall not be required to purchase any
28 additional number of ZECs if the cost of the additional number of
29 ZECs exceeds the revenues deposited in the electric public utility's
30 separate, interest-bearing account, created pursuant to paragraph (1)
31 of this subsection, for that energy year, after subtracting the
32 reasonable, verifiable costs incurred by the board during that energy
33 year to implement the ZEC program pursuant to this section, which
34 costs shall be remitted to the board from the ZEC fund each energy
35 year in a manner to be determined by the board. Excess monies in
36 an electric public utility's separate, interest-bearing account shall be
37 refunded to its retail distribution customers at the end of each
38 energy year.

39 (3) (a) Notwithstanding the provisions of paragraph (1) of this
40 subsection, and to ensure that the ZEC program remains affordable to
41 New Jersey retail distribution customers, the board may, in its
42 discretion, reduce the per kilowatt-hour charge imposed by paragraph
43 (1) of this subsection starting in the second three year eligibility period
44 and for each subsequent three year eligibility period thereafter,
45 provided that the board determines that a reduced charge will
46 nonetheless be sufficient to achieve the State's air quality and other
47 environmental objectives by preventing the retirement of the

1 nuclear power plants that meet the eligibility criteria established
2 pursuant to subsections d. and e. of this section.

3 (b) If the board reduces the per kilowatt-hour charge imposed by
4 paragraph (1) of this subsection pursuant to subparagraph (a) of this
5 paragraph, the reduction shall be applicable to the next eligibility
6 period only and the board shall make its determination no later than 13
7 months prior to the start of that eligibility period. Within 30 days
8 thereafter, each electric public utility shall file, in lieu of the tariff
9 described in paragraph (1) of this subsection, a tariff consistent with
10 the board's determination. Within 60 days after filing of the tariff,
11 after notice, the opportunity for comment, and public hearing, the
12 board shall approve the revised tariff, provided that it is consistent
13 with the board's determination. The revised tariff shall take effect
14 starting in the next eligibility period.

15 (c) If the board does not certify any nuclear power plants for a
16 subsequent eligibility period pursuant to this act, the board may, in
17 its discretion, reduce the per kilowatt-hour charge imposed pursuant
18 to paragraph (1) of this subsection to ensure that the ZEC program
19 remains affordable to New Jersey retail distribution customers in
20 the final year of the first eligibility period, provided that the board
21 determines that a reduced charge will nonetheless be sufficient to
22 achieve the State's air quality and other environmental objectives
23 by preventing the retirement of the nuclear power plants that meet
24 the eligibility criteria established pursuant to subsections d. and e.
25 of this section.

26 (d) For the second three energy year eligibility period, and every
27 subsequent eligibility period thereafter, a selected nuclear power
28 plant shall pay a renewal fee to the board in an amount to be
29 determined by the board, but which shall not exceed \$250,000, to be
30 used to defray the costs incurred by the board to administer the ZEC
31 program.

32 k. (1) A selected nuclear power plant shall be excused from
33 performance, including but not limited to the sale of ZECs, and a
34 payment from an electric public utility shall not be due to the
35 selected nuclear power plant, if:

36 (a) the selected nuclear power suspends or ceases operations,
37 despite the selected nuclear power plant's reasonable efforts to
38 continue operations, due to an event beyond its control, including
39 but not limited to acts of God, flood, drought, earthquake, storm,
40 fire, lightning, epidemic, war, riot, labor dispute, labor or material
41 shortage, sabotage, or explosion. The selected nuclear power plant
42 shall no longer be excused from performance, and a payment from
43 an electric public utility shall be due, after conclusion of the event;

44 (b) a State law is enacted imposing a significant new tax, special
45 assessment, or fee on the generation of electricity, the ownership or
46 leasehold of a generating unit, or the privilege or occupation of the
47 generation, ownership, or leasehold of generation units by a
48 selected nuclear power plant;

1 (c) a State or federal law is enacted that materially reduces the
2 value of a ZEC, or the board exercises its discretion to reduce the
3 amount of the per kilowatt-hour charge pursuant to paragraph (3) of
4 subsection j. of this section;

5 (d) the selected nuclear power plant requires capital
6 expenditures in excess of \$40,000,000 that were neither known nor
7 reasonably foreseeable at the time it was selected to receive ZECs,
8 and the capital expenditures are expenditures that a prudent owner
9 or operator of a selected nuclear power plant would not undertake;
10 or

11 (e) The United States Nuclear Regulatory Commission
12 terminates the selected nuclear power plant's license.

13 (2) If a selected nuclear power plant ceases operations during an
14 eligibility period for any reason other than those specified in this
15 subsection, the selected nuclear power plant shall pay a charge to
16 the electric public utilities that purchased ZECs from the selected
17 nuclear power plant in an amount equal to the compensation
18 received for the sale of ZECs since the board's last determination of
19 the selected nuclear power plant's eligibility to receive ZECs. An
20 electric public utility shall provide a refund to its retail distribution
21 customers in an amount equal to the charge paid by a selected
22 nuclear power plant to the electric public utility pursuant to this
23 paragraph.

24 (3) The owner of a selected nuclear power plant shall, within
25 two years after receiving ZECs, submit a plan to the board to retain,
26 retrain, or compensate personnel whose employment would be
27 eliminated as a direct result of the cessation of the selected nuclear
28 power plant's operations, including an alternative economic
29 development plan for communities that rely on the selected nuclear
30 power plant for a substantial portion of their tax revenues.

31 1. A selected nuclear power plant shall not lay off any
32 personnel unless the lay-off is due to employee misconduct or
33 underperformance issues, or due to the suspension or cessation of
34 the selected nuclear power plant's operations as provided in
35 subsection k. of this section.

36 m. The owner of a selected nuclear power plant shall, within
37 two years after receiving ZECs, conduct a study and prepare a
38 written report in cooperation with selected experts, to determine the
39 optimal use of dry cask storage of spent nuclear fuel at its site,
40 considering environmental impacts, worker safety, and cost
41 impacts.

42
43 4. a. No later than 10 years after the date of enactment of this
44 act, the Board of Public Utilities shall conduct a study to evaluate
45 the efficacy of the zero emission certificate program and submit a
46 written report thereon to the Governor and, pursuant to section 2 of
47 P.L.1991, c.164 (C.52:14-19.1), to the Legislature. In conducting
48 the study, the board shall evaluate the program's effect on the

1 premature retirement of nuclear power plants, its effect on the air
2 quality and environment in the State, and its contribution to a more
3 reliable energy supply by assuring fuel diversity. The study shall
4 also evaluate the program's benefits and costs to ratepayers.

5 b. The written report shall: (1) summarize the study and
6 analysis conducted pursuant to subsection a. of this section; (2)
7 discuss and quantify the potential benefits and costs associated with
8 the program; (3) recommend any changes to the program or whether
9 it should continue; and (4) recommend whether the program should
10 be expanded to include other technologies.

11

12 5. If any provision of this act or its application to any person or
13 circumstance is held invalid or unconstitutional, that judgment or
14 decision shall not affect other provisions or applications of this act
15 which can be given effect without the invalid or unconstitutional
16 provision or application, and to this end the provisions of this act
17 are severable.

18

19 6. This act shall take effect immediately.

20

21

22

STATEMENT

23

24 This bill directs the Board of Public Utilities (board) to establish
25 a Zero Emission Certificate (ZEC) program. Under the bill, a ZEC
26 is a certificate, issued by the board or its designee, representing the
27 fuel diversity, air quality, and other environmental attributes of one
28 megawatt-hour of electricity generated by an eligible nuclear power
29 plant selected by the board to participate in the ZEC program.

30 To participate in the ZEC program, a nuclear power plant is
31 required to: (1) be licensed to operate by the United States Nuclear
32 Regulatory Commission by the date of enactment of this bill and
33 through 2030 or later; (2) demonstrate to the satisfaction of the
34 board that it makes a significant and material contribution to the air
35 quality in the State by minimizing emissions that result from
36 electricity consumed in New Jersey; (3) provide financial
37 information to the board demonstrating that the plant will cease
38 operations unless the nuclear power plant experiences a material
39 financial change; (4) certify annually to the board that the nuclear
40 power plant does not receive any direct or indirect payment or
41 credit under a law of this State, or any other state, or a federal law,
42 or a regional compact, that would eliminate the need for the nuclear
43 power plant to retire prematurely, despite its reasonable best efforts
44 to obtain any such payment or credit; and (5) submit an application
45 fee to the board in an amount to be determined by the board, but
46 which is not to exceed \$250,000, to be used to defray the costs
47 incurred by the board to administer the ZEC program.

1 The board is to determine the price of a ZEC each energy year
2 under the formula provided in the bill. Within 90 days after the
3 conclusion of an energy year, each electric public utility (utility) in
4 the State is required to pay each nuclear power plant that received
5 ZECs for that prior energy year for the total number of ZECs
6 received by the nuclear power plant multiplied by the percentage of
7 electricity the utility distributed in the State as compared to other
8 utilities in the State.

9 The board is to order the full recovery of all costs associated
10 with the utility's procurement of ZECs through a non-bypassable,
11 irrevocable charge imposed on the retail distribution customers of
12 the utility in the amount of \$0.004 per kilowatt-hour. This charge
13 may be reduced by the board if certain conditions are met as
14 specified in the bill. Excess monies collected by utilities through
15 the charge are to be refunded to their customers.

16 A nuclear power plant selected by the board to participate in the
17 program is to initially receive ZECs through the end of the first
18 energy year in which the plant was selected, plus an additional three
19 energy years thereafter, and then is subject to review by the board
20 triennially for renewed eligibility for additional, three energy year
21 periods.

22 A nuclear power plant selected by the board to participate in the
23 program may suspend or cease operations under certain
24 circumstances, including circumstances in which events prevent the
25 selected nuclear power plant from continuing operations despite the
26 plant's reasonable efforts to continue operations. If a selected
27 nuclear power plant ceases operations during an eligibility period
28 for any reason other than those specified in the bill, the plant is to
29 pay a charge to the utilities that purchased ZECs from the selected
30 nuclear power plant in an amount equal to the compensation
31 received for the sale of ZECs since the board's last determination of
32 the selected nuclear power plant's eligibility to receive ZECs. A
33 selected nuclear power plant would not be authorized to lay off
34 personnel except for employee misconduct or underperformance
35 issues. Finally, the bill requires the board to conduct a study to
36 evaluate the program within 10 years.

SENATE BUDGET AND APPROPRIATIONS COMMITTEE

STATEMENT TO

SENATE, No. 2313

STATE OF NEW JERSEY

DATED: APRIL 5, 2018

The Senate Budget and Appropriations Committee reports favorably Senate Bill No. 2313.

This bill directs the Board of Public Utilities (board) to establish a Zero Emission Certificate (ZEC) program. Under the bill, a ZEC is a certificate, issued by the board or its designee, representing the fuel diversity, air quality, and other environmental attributes of one megawatt-hour of electricity generated by an eligible nuclear power plant selected by the board to participate in the ZEC program.

To participate in the ZEC program, a nuclear power plant is required to: (1) be licensed to operate by the United States Nuclear Regulatory Commission by the date of enactment of this bill and through 2030 or later; (2) demonstrate to the satisfaction of the board that it makes a significant and material contribution to the air quality in the State by minimizing emissions that result from electricity consumed in New Jersey; (3) provide financial information to the board demonstrating that the plant will cease operations unless the nuclear power plant experiences a material financial change; (4) certify annually to the board that the nuclear power plant does not receive any direct or indirect payment or credit under a law of this State, or any other state, or a federal law, or a regional compact, that would eliminate the need for the nuclear power plant to retire prematurely, despite its reasonable best efforts to obtain any such payment or credit; and (5) submit an application fee to the board in an amount to be determined by the board, but which is not to exceed \$250,000, to be used to defray the costs incurred by the board to administer the ZEC program.

The board is to determine the price of a ZEC each energy year under the formula provided in the bill. Within 90 days after the conclusion of an energy year, each electric public utility (utility) in the State is required to pay each nuclear power plant that received ZECs for that prior energy year for the total number of ZECs received by the nuclear power plant multiplied by the percentage of electricity the utility distributed in the State as compared to other utilities in the State.

The board is to order the full recovery of all costs associated with the utility's procurement of ZECs through a non-bypassable, irrevocable charge imposed on the retail distribution customers of the utility in the amount of \$0.004 per kilowatt-hour. This charge

may be reduced by the board if certain conditions are met as specified in the bill. Excess monies collected by utilities through the charge are to be refunded to their customers.

A nuclear power plant selected by the board to participate in the program is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the board triennially for renewed eligibility for additional, three energy year periods.

A nuclear power plant selected by the board to participate in the program may suspend or cease operations under certain circumstances, including circumstances in which events prevent the selected nuclear power plant from continuing operations despite the plant's reasonable efforts to continue operations. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the plant is to pay a charge to the utilities that purchased ZECs from the selected nuclear power plant in an amount equal to the compensation received for the sale of ZECs since the board's last determination of the selected nuclear power plant's eligibility to receive ZECs. A selected nuclear power plant would not be authorized to lay off personnel except for employee misconduct or underperformance issues. Finally, the bill requires the board to conduct a study to evaluate the program within 10 years.

FISCAL IMPACT:

The Office of Legislative Services (OLS) estimates that the bill may increase costs to State and local government entities that are retail consumers of electricity by indeterminate amounts annually subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers.

The OLS estimates that this bill will increase sales and use tax revenue by up to \$20.0 million. As a result of imposing the tariff authorized by the bill, retail distribution customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the tariff will be subject to the sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax.

Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, Board of the Public Utilities is able to recover costs from the electric public utility accounts established pursuant to the bill.

LEGISLATIVE FISCAL ESTIMATE
SENATE, No. 2313
STATE OF NEW JERSEY
218th LEGISLATURE

DATED: APRIL 5, 2018

SUMMARY

Synopsis: Establishes zero emission certificate program for nuclear power plants.

Type of Impact: Annual increase in State revenue. Annual increase in expenditures for public entity electric utility ratepayers.

Agencies Affected: All State and local government entities; Board of Public Utilities (BPU).

Office of Legislative Services Estimate

Fiscal Impact	<u>Annual Impact for Lifetime of ZEC Program</u>
State Revenue Increase	Up to \$20.0 million
State Expenditure Increase	Indeterminate
Local Expenditure Increase	Indeterminate
BPU Revenue and Cost Increase	Indeterminate

- The Office of Legislative Services (OLS) estimates that the bill may increase costs to State and local government entities that are retail consumers of electricity by indeterminate amounts annually subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers.
- The OLS estimates that this bill will increase sales and use tax revenue by up to \$20.0 million. As a result of imposing the tariff authorized by the bill, retail distribution customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the tariff will be subject to the sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax.
- Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, the Public Utilities (BPU) is able to recover costs from the electric public utility accounts established pursuant to the bill.

BILL DESCRIPTION

This bill directs the BPU to establish a zero emissions certificate (ZEC) program. Under the bill, a ZEC is a certificate, issued by the BPU, representing the fuel diversity, air quality, and environmental attributes of one megawatt-hour of electricity generated by an eligible nuclear power plant selected by the BPU to participate in the ZEC program.

“Nuclear power plant,” as defined in this bill, means an individual electric generating unit utilizing nuclear fuel to produce electric power. In order to be certified by the BPU as an eligible nuclear power plant, a nuclear power plant is required to: 1) be licensed to operate by the United States Nuclear Regulatory Commission by the date of enactment of the bill and through 2030 or later; 2) demonstrate a significant and material contribution to the air quality in the State by minimizing emissions that result from electricity consumed in New Jersey, demonstrate that it minimizes harmful emissions that adversely affect the citizens of the State, and that if the nuclear power plant was to retire, the retirement would significantly and negatively impact the State’s ability to comply with air emissions reduction requirements; 3) demonstrate that the nuclear power plant’s fuel diversity, air quality, and environmental attributes are at risk of loss because the nuclear power plant is projected not to fully cover its costs and risks, or alternatively is projected not to cover its costs including its risk-adjusted cost of capital, and that the nuclear power plant will cease operations within three years unless the nuclear power plant experiences a material financial change; 4) certify annually that the nuclear power plant does not receive any direct or indirect payment of credit under State or federal law or regional compact except for any payment or credit received under the provisions of the bill; and 5) submit an application fee to the BPU in an amount to be determined by the BPU, but not to exceed \$250,000.

A nuclear power plant seeking to participate in the ZEC program is required to submit certain financial documentation to the BPU as requested. The BPU is required to adopt an order no later than 180 days after the date of enactment of the bill establishing the ZEC program. A nuclear power plant seeking to participate in the ZEC program is required to submit an application to the BPU no later than 210 days after the date of enactment of the bill. Lastly, the BPU is required to establish a rank-ordered list of the nuclear power plants eligible to receive ZECs and select eligible nuclear power plants to receive ZECs based on their ranking. If the BPU determines that no nuclear power plants satisfy the criteria set forth in the bill, the BPU is under no obligation to certify any nuclear power plant.

The BPU is to determine the price of a ZEC each energy year pursuant to the formula prescribed in the bill. Within 90 days after the conclusion of an energy year, each electric public utility in this State is required to purchase ZECs in an amount equal to the total number of ZECs received by the nuclear power plants multiplied by the percentage of electricity the electric public utility distributed in this State. The BPU is to order the full recovery of all costs associated with the electric public utility’s procurement of the ZECs through a non-bypassable, irrevocable charge imposed on the customers of the electric public utility (\$0.004 per kilowatt hour) which reflects the emissions avoidance benefits associated with the continued operation of selected nuclear power plants. The BPU may reduce the per kilowatt-hour charge starting in the second three-year eligibility period thereafter, provided that the BPU determines that the reduced charge will be sufficient to achieve the State’s air quality and other environmental objectives by preventing the retirement of the eligible nuclear power plants.

A selected nuclear power plant is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods. For the second three energy year eligibility period, and every subsequent eligibility

period thereafter, a selected nuclear power plant is required to pay a renewal fee to the BPU in an amount determined by the BPU, not to exceed \$250,000.

A selected nuclear power plant may suspend or cease operations under certain circumstances. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the selected nuclear power plant is to pay a charge to the electric public utilities that purchases ZECs. The electric public utility is required to provide a refund to its distribution customers in an amount equal to the charge paid by a selected nuclear power plant to the electric public utility.

FISCAL ANALYSIS

EXECUTIVE BRANCH

None received.

OFFICE OF LEGISLATIVE SERVICES

The OLS estimates that the bill may cost electric public utility ratepayers in this State, which includes State and local government entities, approximately \$250.0 million to \$302.0 million per energy year, subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers. The percentage of the total cost that will be borne by State and local governments as retail electricity consumers is indeterminate. The OLS notes that the monies generated from the tariff imposed by electric public utilities in this State are to be used to purchase ZECs from selected nuclear power plants. The OLS further notes that excess monies in an electric public utility's account, following the purchase of required ZECs, are to be refunded to its retail distribution customers at the end of each energy year. Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, the BPU is able to recover costs from the electric public utility accounts established pursuant to the bill. Due to increased retail energy prices from the tariff, State sales and use tax revenue will increase annually.

Eligible Nuclear Power Plants: There are three domestic nuclear power plants, totaling four individual electric generating units, currently operating in New Jersey: 1) Public Service Electric and Gas Company (PSE&G) Salem Nuclear Generating Station ("PSE&G Salem") (unit one is licensed to operate through August 13, 2036; unit two is licensed to operate through April 18, 2040); 2) PSE&G Hope Creek Nuclear Generating Station ("PSE&G Hope Creek") (licensed to operate through April 11, 2046); and 3) Oyster Creek Nuclear Generating Station (scheduled to be permanently shut down in October 2018). Since Oyster Creek Nuclear Generating Station is not licensed to operate through 2030, this nuclear power plant is not eligible to participate in the ZEC program. Based strictly on the first criteria for eligibility, the requirement for a nuclear power plant to be licensed to operate through 2030, the two units of PSE&G Salem and the single unit of PSE&G Hope Creek are eligible to participate in the ZEC program if all other criteria prescribed by the bill are met. However, a nuclear power plant outside the State may be eligible to apply for and could be selected if the nuclear power plant meets all other criteria prescribed by the bill.

The OLS notes that numerous deadlines are set forth in the provisions of the bill which may further limit a nuclear power plant's ability to participate in the ZEC program. The OLS further notes that eligible nuclear power plants are required to pay an application fee of not more than \$250,000 to the BPU to cover the costs incurred by the BPU to administer the ZEC program. Assuming that the three eligible individual electric generating units submit an application to participate in the ZEC program, the maximum amount the BPU can raise through the application fee to defray the costs of the bill is \$750,000.

A selected nuclear power plant is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods. For the second three energy year eligibility period, and every subsequent eligibility period thereafter, a selected nuclear power plant is required to pay a renewal fee to the BPU in an amount determined by the BPU, not to exceed \$250,000.

Selection of Eligible Nuclear Power Plants: The BPU is required to select eligible nuclear power plants in accordance with a rank-ordered list described in the bill. The combined number of megawatt-hours (MWh) of electricity distributed in the energy year prior to the enactment of the bill by all selected nuclear power plants cannot exceed 40 percent of the total number of MWh of electricity distributed by electric public utilities in the State in the energy year immediately prior to the date of enactment of the bill. According to calendar year 2016 data provided by the U.S. Energy Information Administration, total electricity distribution (retail sales) in New Jersey reached 75,359,371 MWh. Total combined generation between PSE&G Salem (15,696,653 MWh – includes both units) and PSE&G Hope Creek (9,603,443 MWh) was 25,300,096 MWh, which was 33.5 percent of the total electricity distribution by electric public utilities in the State in calendar year 2016. The OLS has preliminary generation data by plant solely for calendar year 2016; thus, for the energy year prior to the date of enactment of the bill the OLS assumes that PSE&G Salem and PSE&G Hope Creek combined electricity distribution will fall below the 40 percent threshold.

Tariff on Ratepayers: The bill requires each electric public utility to impose a \$0.004 per kilowatt hour (KWh) tariff on its retail distribution customers. Based on calendar year 2016 total electricity distribution (retail sales) of 75,359,371 MWh (75,359,371,000 KWh), the total amount of revenue generated by the tariff would be approximately \$301.44 million.

The revenues generated by the tariff are required to be deposited into an interest-bearing account and are to be solely used for the purpose of purchasing ZECs, and to reimburse the BPU for administrative costs which exceed the application fees collected by the BPU. The OLS notes that the BPU may reduce the per kilowatt-hour charge starting in the second three year eligibility period thereafter, provided that the BPU determines that the reduced charge will be sufficient to achieve the State's air quality and other environmental objectives by preventing the retirement of the eligible nuclear power plants.

Sales and Use Tax Implications: As a result of the tariff authorized and imposed pursuant to the bill on retail distribution customers, customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the imposition of the tariff will be subject to the imposition of sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax. Utilizing a sales and use tax rate of 6.625 percent, and multiplying this rate by the \$301.44 million in projected revenue from the tariff, the maximum amount of sales and use tax revenue the State may realize annually as a result of the ZEC program would be \$20.0 million. The OLS notes that the \$20.0 million

estimate does not account for entities which are subject to the tariff, but are exempt from sales and use tax; thus, the amount of sales and use tax revenues could be less than \$20.0 million. The OLS further notes that the sales and use tax gain will be an additional cost to electric public utility ratepayers since the sales and use tax is imposed on ratepayers' electricity bills (unless the ratepayer is exempt).

Zero Emission Certificate: Selected nuclear power plants are eligible to receive ZECs 330 days after the date of enactment of the bill. The number of ZECs each nuclear power plant receives is equal to the number of MWh of electricity each nuclear power plant produced in a given energy year starting on the date of the eligible nuclear power plant's selection. Based on preliminary calendar year 2016 data, PSE&G Salem and PSE&G Hope Creek collectively distributed 25,300,096 MWh of electricity in the State; thus, the nuclear power plants would have collectively received 25,300,096 ZECs. Selected nuclear power plants are to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then are subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods.

The cost of each ZEC is determined by dividing the total number of dollars held by electric public utilities in accounts established by the bill (approximately \$301.44 million based on the amounts to be generated from the tariff) at the end of the prior energy year by the greater of: 40 percent of the total number of MWh of electricity distributed by the electric public utilities in this State in the prior energy year, or the number of MWh of electricity generated in the prior energy year by the selected nuclear power plants. The OLS notes that the combined electricity distribution by PSE&G Salem and PSE&G Hope Creek in calendar year 2016 was 25,300,096 MWh, which was 33.5 percent of the total electricity distribution by public utilities in the State in calendar year 2016 and is less than the alternative calculation. Thus, in order to determine an estimate regarding the cost per ZEC, \$301.44 million would be divided by 30,143,748 MWh (40 percent of the total number of MWh of electricity distributed by the electric public utilities in this State in calendar year 2016 – 75,359,371 MWh), which results in a per ZEC cost of about \$10.00.

Each electric public utility in this State is required to use the funds generated by the tariff and deposited into the accounts established pursuant to the bill to purchase ZECs on a monthly basis from each selected nuclear power plant. Based on the approximate total number of ZECs available for PSE&G Salem and PSE&G Hope Creek to sell, 25,300,096 based on calendar year 2016 data, and the cost per ZEC, \$10.00, PSE&G Salem and PSE&G Hope Creek would receive approximately \$253.00 million in revenue from ZEC sales to electric public utilities.

The OLS recognizes that the \$253.00 million is less than the total amount of revenue that would be generated by the tariff (\$301.44 million). Thus, this OLS estimate specifies a potential range of \$253.00 million to \$301.44 million based on total electricity distribution in calendar year 2016. This range will be subject to variance each energy year as the total amount of electricity distributed throughout the State is subject to annual fluctuation.

The OLS notes that the bill requires excess monies in an electric public utility's account to be refunded to its retail distribution customers at the end of each energy year. The OLS further acknowledges that electric public utilities are not required to purchase any additional number of ZECs if the cost of the additional number of ZECs exceeds the revenues deposited in an electric public utility's account established pursuant to the bill.

A selected nuclear power plant may suspend or cease operations under certain circumstances. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the selected nuclear power plant is to pay a charge to the electric public utilities that purchases ZECs. The electric public utility is required to provide a

refund to its distribution customers in an amount equal to the charge paid by a selected nuclear power plant to the electric public utility.

Reporting Requirements: The owner of a selected nuclear power plant is required to provide a plan to the BPU, two years after receiving ZECs, to retain, retrain, or compensate personnel whose employment would be eliminated as a direct result of the cessation of the selected nuclear power plant's operations.

Further, the owner of a selected nuclear power plant is required to conduct a study and prepare a written report, within two years after receiving ZECs, in cooperation with selected experts to determine the optimal use of dry cask storage of spent nuclear fuel at its site, considering environmental impacts, worker safety, and cost impacts.

The BPU is required to conduct a study, no later than 10 years after the date of enactment of the bill, to evaluate the efficacy of the ZEC program and submit a written report to the Governor and the Legislature. The written report is required to: 1) summarize the effectiveness of the program in deterring the premature retirement of nuclear power plants, its effect on the environment and air quality in the State, and its contribution to a more reliable energy supply by assuring fuel diversity; 2) discuss and quantify the potential benefits and costs associated with the ZEC program; 3) recommend any changes to the program or whether it should continue; and 4) recommend whether the ZEC program should be expanded to include other technologies.

The OLS notes that the reporting requirements in the bill will likely result in higher administrative costs for various executive departments and agencies. The number of staff required to be hired to implement the provisions of the bill, the use of outside consultants to provide assistance with implementing the provisions of the bill, and the associated expenditures that the various executive departments and agencies will incur as a result of the bill, will be determined by future decisions of executive branch officials.

Section: Revenue, Finance and Appropriations

*Analyst: Jordan M. DiGiovanni
Associate Fiscal Analyst*

*Approved: Frank W. Haines III
Legislative Budget and Finance Officer*

This fiscal estimate has been prepared pursuant to P.L.1980, c.67 (C.52:13B-6 et seq.).

ASSEMBLY, No. 3724

STATE OF NEW JERSEY 218th LEGISLATURE

INTRODUCED MARCH 22, 2018

Sponsored by:

Assemblyman JOHN F. MCKEON

District 27 (Essex and Morris)

Assemblyman JOHN J. BURZICHELLI

District 3 (Cumberland, Gloucester and Salem)

Assemblyman WAYNE P. DEANGELO

District 14 (Mercer and Middlesex)

Assemblyman JOSEPH V. EGAN

District 17 (Middlesex and Somerset)

Co-Sponsored by:

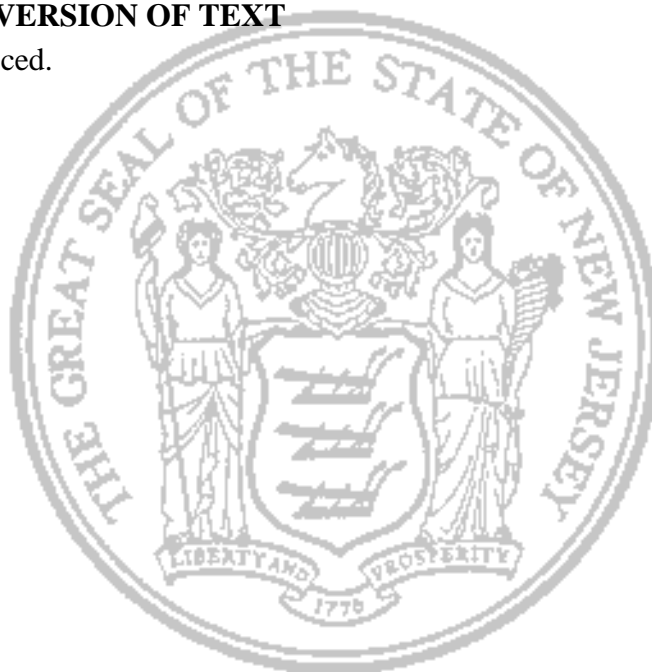
Assemblywoman Jasey

SYNOPSIS

Establishes zero emission certificate program for nuclear power plants.

CURRENT VERSION OF TEXT

As introduced.



(Sponsorship Updated As Of: 4/13/2018)

1 AN ACT concerning nuclear energy, and supplementing Title 48 of
2 the Revised Statutes.

3

4 **BE IT ENACTED** by the Senate and General Assembly of the State
5 of New Jersey:

6

7 1. a. The Legislature finds and declares that:

8 (1) Climate change is one of the greatest threats facing the State
9 today and in the future. Reducing emissions of carbon dioxide,
10 other greenhouse gases, and other pollutants by preserving and
11 expanding zero-emission electricity generation within and outside
12 the State is critical to mitigating the impacts of climate change.

13 (2) Nuclear power is a reliable, zero-emission source of energy
14 that has supplied New Jersey's energy demands for decades.

15 (3) New Jersey has historically relied on a diverse mix of energy
16 supply sources, including nuclear power, to meet the needs of its
17 residents and businesses.

18 (4) Reducing emissions of carbon dioxide, other greenhouse
19 gases, and other pollutants, and preserving and developing zero-
20 emission electricity generation sources within and outside the State
21 that currently provide electricity to customers in New Jersey, are
22 critical to improving air quality for New Jersey residents.

23 (5) The Energy Master Plan of New Jersey, last updated in 2015,
24 requires significant revisions to ensure that 100 percent of the
25 State's electric energy needs are generated by clean energy sources
26 by 2050, and any update to the Energy Master Plan by the State
27 must include a focus on the expansion of renewable and zero-
28 emission sources of energy.

29 (6) The existing renewable energy portfolio standard has been
30 successful in promoting the growth of renewable energy generation
31 to reduce air pollution in New Jersey; however, to achieve its near
32 term environmental goals, New Jersey must expand its commitment
33 to zero-emission energy generation and value the air quality and
34 other environmental attributes of zero-emission generation sources
35 that currently fall outside the scope of the existing renewable
36 energy portfolio standard, including but not limited to nuclear
37 power.

38 (7) Nuclear power generation is a critical component of the
39 State's clean energy portfolio because nuclear power plants do not
40 emit carbon dioxide, other greenhouse gases, or other pollutants; in
41 addition, nuclear power is an important element of a diverse energy
42 generation portfolio that currently meets approximately 40 percent
43 of New Jersey's electric power needs.

44 (8) Several of the existing, licensed, and operating nuclear power
45 plants within and outside the State that currently provide electricity
46 to customers in New Jersey are at risk of abrupt retirement due to a
47 variety of factors.

1 (9) The retirement of nuclear power generation will inevitably
2 result in an immediate increase in air emissions within New Jersey
3 due to increased reliance on natural gas-fired generation and coal-
4 fired generation.

5 (10) Poor air quality has a disproportionate impact on the most
6 vulnerable citizens of New Jersey including children, the elderly,
7 and people living in poverty. Fossil-fuel power plants drive
8 increases in pollutants like ground-level ozone, which aggravates
9 respiratory illnesses for individuals with decreased lung function.
10 Public health and environmental justice necessitate a reduction in
11 these pollutants to protect the most vulnerable of our citizenry.

12 (11) As a coastal state, New Jersey is particularly exposed to
13 many of the effects of global climate change, such as rising sea
14 levels and more extreme storms. Many of New Jersey's most
15 important commercial and tourism assets are located in coastal
16 areas, and events like Superstorm Sandy have demonstrated the
17 imminent and tangible threats that intense storms pose to New
18 Jersey's economy and environment.

19 (12) Given the overwhelming scientific consensus that fossil-fuel
20 use is causing potentially irreversible global climate change and the
21 attendant environmental catastrophes, it is a moral imperative that
22 the State invest in energy infrastructure within and outside the State
23 that does not produce greenhouse gases.

24 b. The Legislature therefore determines that:

25 (1) The abrupt retirement of existing, licensed, and operating
26 nuclear power plants within and outside the State that provide
27 electricity to customers in New Jersey, and any concomitant
28 increase in the proportion of New Jersey's electricity demand met
29 by natural gas and coal, will result in a substantial increase in
30 emissions of several serious pollutants, and associated adverse
31 public health and environmental impacts. The pollutants resulting
32 from increased fossil-fuel generation and drilling include emissions
33 of carbon dioxide, methane, carbon monoxide, sulfur dioxide,
34 particulate matter, volatile organic compounds, mercury, and
35 nitrous oxides, and the creation of ozone.

36 (2) New Jersey is currently not projected to meet certain federal
37 and State air quality standards and emissions level requirements,
38 counties of the State are currently designated as nonattainment for
39 the federal 8-hour Ozone National Ambient Air Quality Standard,
40 and the abrupt retirement of nuclear power plants that serve New
41 Jersey combined with increased reliance on natural gas-fired and
42 coal-fired generation will substantially impede the State's ability to
43 meet those federal and State air quality standards and emissions
44 level requirements.

45 (3) In light of the primacy of natural gas use for heating in New
46 Jersey, increased reliance on natural gas-fired generation will
47 render the electric generation and delivery systems less resilient and
48 more vulnerable to the impacts of extreme winter weather events,

1 natural gas pipeline accidents, and other factors affecting the
2 deliverability of natural gas to electric power generating stations in
3 and around the State.

4 (4) The model of providing credits to zero- or low-emission
5 energy generation sources as compensation for their environmental
6 attributes has proven successful for Class I and Class II renewable
7 energy sources, which receive renewable energy certificates, and
8 solar electric power generators, which receive solar renewable
9 energy certificates.

10 (5) A program that recognizes and compensates nuclear energy
11 generators in a manner similar to other non-emitting energy
12 generation resources to the extent required to prevent the loss of
13 nuclear energy, subject to independent review as provided in
14 section 3 of this act, which the State's residents and businesses rely
15 on for approximately 40 percent of their electricity needs, could, in
16 the absence of equally or more cost-effective clean energy
17 alternatives, further the State's interest in environmental protection
18 and maintaining a diverse mix of energy sources.

19 (6) While recognizing the importance of nuclear energy
20 generation, the State must also commit to the deployment of
21 renewable and zero-emission energy to address climate change,
22 drive economic development, and create new employment
23 opportunities.

24 (7) In order to meet the goals under the "Global Warming
25 Response Act," P.L.2007, c.112 (C.26:2C-37 et seq.), to reduce
26 greenhouse gas emissions 80 percent by 2050, it will be necessary
27 to significantly reduce emissions from the electric power generation
28 sector. This will require reducing the State's heavy reliance on
29 natural gas for electric power generation, the primary source of
30 emissions from the electric power generation sector.

31 (8) The zero emission certificate program set forth in this act is
32 structured such that its costs are guaranteed to be significantly less
33 than the social cost of carbon emissions avoided by the continued
34 operation of selected nuclear power plants, ensuring that the
35 program does not place an undue financial burden on retail
36 distribution customers. The social cost of carbon, as calculated by
37 the U.S. Interagency Working Group on the Social Cost of Carbon
38 in its August 2016 Technical Update, is an accepted measure of the
39 cost of carbon emissions. Carbon emissions avoided by selected
40 nuclear power plants are but one component of their emissions
41 avoidance benefits.

42

43 2. As used in this act:

44 "Board" means the New Jersey Board of Public Utilities or any
45 successor agency.

46 "Electric public utility" shall have the same meaning as provided
47 in section 3 of P.L.1999, c.23 (C.48:3-51).

1 “Eligibility period” means the period of time, measured in
2 energy years, during which a selected nuclear power plant may
3 receive zero emission certificates pursuant to section 3 of this act.

4 “Eligible nuclear power plant” means a nuclear power plant
5 certified by the board to allow it to be selected to participate in the
6 program established pursuant to section 3 of this act.

7 “Emissions avoidance benefits” means the benefits associated
8 with the preservation of better air quality and other environmental
9 attributes caused by the production of electric energy from a
10 selected nuclear power plant, as well as the reduction in damage
11 that would otherwise be caused by carbon dioxide or other
12 greenhouse gases or other pollutants emitted but for the production
13 of electric energy from a selected nuclear power plant. Such
14 damage threatens massive economic and lifestyle disruption, and
15 includes but is not limited to a contribution to sea level rise, heat
16 waves, more frequent and severe occurrence of extreme weather
17 events, and damage to agriculture, water resources, public health,
18 energy and communication systems, and the natural ecosystems that
19 define and support communities.

20 “Energy year” or “EY” shall have the same meaning as provided
21 in section 3 of P.L.1999, c.23 (C.48:3-51).

22 “Nuclear power plant” means an individual electric generating
23 unit utilizing nuclear fuel to produce electric power.

24 “Selected nuclear power plant” means an eligible nuclear power
25 plant selected by the board to participate in the program established
26 pursuant to section 3 of this act.

27 “Zero emission certificate” or “ZEC” means a certificate, issued
28 by the board or its designee, representing the fuel diversity, air
29 quality, and other environmental attributes of one megawatt-hour of
30 electricity generated by an eligible nuclear power plant selected by
31 the board to participate in the program established pursuant to
32 section 3 of this act.

33

34 3. a. As part of an application submitted to the board pursuant
35 to subsection c. of this section, a nuclear power plant seeking to
36 participate in the program established by this act shall provide to
37 the board any financial information requested by the board
38 pertaining to the nuclear power plant, including, but not limited to,
39 certified cost projections over the next three energy years, including
40 operation and maintenance expenses, fuel expenses, including spent
41 fuel expenses, non-fuel capital expenses, fully allocated overhead
42 costs, the cost of operational risks and market risks that would be
43 avoided by ceasing operations, and any other information, financial
44 or otherwise, to demonstrate that the nuclear power plant’s fuel
45 diversity, air quality, and other environmental attributes are at risk
46 of loss because the nuclear power plant is projected to not fully
47 cover its costs and risks, or alternatively is projected to not fully
48 cover its costs and risks including its risk-adjusted cost of capital.

1 For purposes of this subsection, "operational risks" shall include,
2 but need not be limited to, the risk that operating costs will be
3 higher than anticipated because of new regulatory mandates or
4 equipment failures and the risk that per megawatt-hour costs will be
5 higher than anticipated because of a lower than expected capacity
6 factor, and "market risks" shall include, but need not be limited to,
7 the risk of a forced outage and the associated costs arising from
8 contractual obligations, and the risk that output from the nuclear
9 power plant may not be able to be sold at projected levels. An
10 application submitted to the board pursuant to subsection c. of this
11 section shall also include a certification that the nuclear power plant
12 will cease operations within three years unless the nuclear power
13 plant experiences a material financial change, and the certification
14 shall specify the necessary steps required to be completed to cease
15 the nuclear power plant's operations.

16 The financial and other information required pursuant to this
17 subsection may be submitted on a confidential basis and shall be
18 treated and maintained as confidential by the board and shall not be
19 subject to public disclosure, notwithstanding any law to the
20 contrary, including the common law. The board and the Attorney
21 General shall jointly approve the disclosure of such confidential
22 information to a party that they deem essential to aid the board in
23 making the determinations required under this subsection, provided
24 that the party is not in a position such that disclosure could harm
25 competition and the party agrees in writing to maintain the
26 confidentiality of the confidential information.

27 b. Notwithstanding any law, rule, regulation, or order to the
28 contrary, the board shall complete a proceeding no later than 180
29 days after the date of enactment of this act to allow for the
30 commencement of a program allowing for the issuance by the board
31 of a zero emission certificate. In this proceeding, the board shall
32 adopt, after notice, the opportunity for comment, and public
33 hearing, an order establishing a ZEC program for selected nuclear
34 power plants which shall include, but need not be limited to:

35 (1) a method and application process for determination of the
36 eligibility and selection of nuclear power plants; and

37 (2) establishment of a mechanism for each electric public utility
38 to purchase ZECs from selected nuclear power plants and a
39 mechanism for the board to effectuate the provisions of subsection
40 i. of this section.

41 c. No later than 210 days after the date of enactment of this act,
42 a nuclear power plant seeking to participate in the program
43 established by this act shall submit its application to the board.

44 d. Notwithstanding any law, rule, regulation, or order to the
45 contrary, the board shall complete a proceeding no later than 330
46 days after the date of enactment of this act and shall adopt, after
47 notice, the opportunity for comment, and public hearing, an order
48 establishing a rank-ordered list of the nuclear power plants eligible

1 to be selected to receive ZECs, and establishing which eligible
2 nuclear power plants have been selected to receive ZECs pursuant
3 to this section. If the board determines, in its discretion, that no
4 nuclear plant that applies pursuant to subsection c. of this section
5 satisfies the objectives of this act, then the board shall be under no
6 obligation to certify any nuclear power plant as an eligible nuclear
7 power plant.

8 e. To be certified by the board as an eligible nuclear power
9 plant, a nuclear power plant shall:

10 (1) be licensed to operate by the United States Nuclear
11 Regulatory Commission by the date of enactment of this act and
12 through 2030 or later;

13 (2) demonstrate to the satisfaction of the board that it makes a
14 significant and material contribution to the air quality in the State
15 by minimizing emissions that result from electricity consumed in
16 New Jersey, it minimizes harmful emissions that adversely affect
17 the citizens of the State, and if the nuclear power plant were to be
18 retired, that that retirement would significantly and negatively
19 impact New Jersey's ability to comply with State air emissions
20 reduction requirements;

21 (3) demonstrate to the satisfaction of the board, through the
22 financial and other confidential information submitted to the board
23 pursuant to subsection a. of this section, and any other information
24 required by the board, which information may be submitted on a
25 confidential basis and shall be treated and maintained as
26 confidential by the board and shall not be subject to public
27 disclosure, notwithstanding any law to the contrary, including the
28 common law, that the nuclear power plant's fuel diversity, air
29 quality, and other environmental attributes are at risk of loss
30 because the nuclear power plant is projected to not fully cover its
31 costs and risks, or alternatively is projected to not cover its costs
32 including its risk-adjusted cost of capital, and that the nuclear
33 power plant will cease operations within three years unless the
34 nuclear power plant experiences a material financial change;

35 (4) certify annually that the nuclear power plant does not receive
36 any direct or indirect payment or credit under a law, rule,
37 regulation, order, tariff, or other action of this State or any other
38 state, or a federal law, rule, regulation, order, tariff, or other action,
39 or a regional compact, despite its reasonable best efforts to obtain
40 any such payment or credit, for its fuel diversity, resilience, air
41 quality, or other environmental attributes that will eliminate the
42 need for the nuclear power plant to retire, except for any payment or
43 credit received under the provisions of this act; and

44 (5) submit an application fee to the board in an amount to be
45 determined by the board, but which shall not exceed \$250,000, to be
46 used to defray the costs incurred by the board to administer the ZEC
47 program.

1 f. In ranking eligible nuclear power plants from first to last, the
2 board shall consider how well the nuclear power plants satisfy the
3 criteria set forth under the provisions of this act, and shall also
4 consider other relevant factors such as sustainability or long-term
5 commitment to nuclear energy production in a manner that supports
6 New Jersey's cost-effective transition to a zero carbon energy
7 supply. Two or more eligible nuclear power plants shall not have
8 the same ranking.

9 g. (1) The board shall select eligible nuclear power plants to
10 receive ZECs according to their ranking. Beginning with the top-
11 ranked eligible nuclear power plant and continuing in rank order,
12 the board shall continue to select nuclear power plants but not
13 beyond the point at which the combined number of megawatt-hours
14 of electricity produced in the energy year immediately prior to the
15 date of enactment of this act by all selected nuclear power plants
16 equals 40 percent of the total number of megawatt-hours of
17 electricity distributed by electric public utilities in the State in the
18 energy year immediately prior to the date of enactment of this act.
19 The board shall not select an eligible nuclear power plant to receive
20 ZECs if the addition of the electricity produced by that nuclear
21 power plant in the energy year immediately prior to the date of
22 enactment of this act to the electricity produced in the energy year
23 immediately prior to the date of enactment of this act by the
24 selected nuclear power plants ranked ahead of that plant on the
25 rank-ordered list exceeds 40 percent of the total number of
26 megawatt-hours of electricity distributed by electric public utilities
27 in the State in the energy year immediately prior to the date of
28 enactment of this act.

29 (2) A selected nuclear power plant shall be eligible to receive
30 ZECs 330 days after the date of enactment of this act. In the first
31 energy year in which an eligible nuclear power plant is selected, the
32 selected nuclear power plant shall receive a number of ZECs equal
33 to the number of megawatt-hours of electricity it produced in that
34 energy year starting on the date of the eligible nuclear power plant's
35 selection. In each energy year thereafter, each selected nuclear
36 power plant shall receive a number of ZECs equal to the number of
37 megawatt-hours of electricity that it produced in that energy year.

38 h. (1) Selected nuclear power plants shall initially receive
39 ZECs for an eligibility period that shall run through the end of the
40 first energy year in which the nuclear power plant is selected, plus
41 an additional three energy years.

42 (2) No later than 13 months prior to the conclusion of the initial
43 eligibility period established pursuant to paragraph (1) of this
44 subsection, and no later than 13 months prior to the conclusion of
45 each three energy year eligibility period thereafter, a nuclear power
46 plant may demonstrate its eligibility to the board and the board may
47 certify the nuclear power plant's eligibility to receive ZECs for

1 additional eligibility periods of three energy years, consistent with
2 the provisions of this act.

3 (3) A selected nuclear power plant shall annually certify to the
4 board that it will continue operations at full or near full capacity for
5 the duration of the period of its eligibility to receive ZECs, except
6 with respect to nuclear power plant shutdowns for necessary
7 maintenance and refueling.

8 i. (1) The board shall determine the price of a ZEC each
9 energy year by dividing the total number of dollars held by electric
10 public utilities in the accounts established pursuant to paragraph (1)
11 of subsection j. of this section at the end of the prior energy year by
12 the greater of: 40 percent of the total number of megawatt-hours of
13 electricity distributed by the electric public utilities in the State in
14 the prior energy year, or the number of megawatt-hours of
15 electricity generated in the prior energy year by the selected nuclear
16 power plants.

17 (2) Each electric public utility in the State shall be required to
18 begin to purchase ZECs on a monthly basis from each selected
19 nuclear power plant with payment to follow within 90 days after the
20 conclusion of the first energy year in which selected nuclear power
21 plants receive ZECs and within 90 days after the conclusion of each
22 subsequent energy year. The number of ZECs an electric public
23 utility shall be required to purchase shall equal the total number of
24 ZECs received by the selected nuclear power plants for the prior
25 energy year pursuant to paragraph (2) of subsection g. of this
26 section multiplied by the percentage of electricity distributed in the
27 State by the electric public utility as compared to other electric
28 public utilities in the State.

29 (3) To ensure that a selected nuclear power plant shall not
30 receive double-payment for its fuel diversity, resilience, air quality,
31 or other environmental attributes, the board shall annually
32 determine the dollar amount received by the selected nuclear power
33 plant in an energy year pursuant to a law, rule, regulation, order,
34 tariff, or other action of this State or any other state, or a federal
35 law, rule, regulation, order, tariff, or other action, or a regional
36 compact referenced in paragraph (4) of subsection e. of this section.
37 Notwithstanding paragraph (2) of this subsection, the number of
38 ZECs purchased by each electric public utility from a selected
39 nuclear power plant for an energy year shall be reduced by the
40 number of ZECs equal in value to the dollar amount determined by
41 the board in this paragraph, multiplied by the percentage of
42 electricity distributed in the State by the electric public utility as
43 compared to other electric public utilities in the State. To the extent
44 that the board determines that a selected nuclear plant receives
45 revenues for its fuel diversity, resilience, air quality, or other
46 environmental attributes, the board shall immediately reduce the
47 number of ZECs on a prospective basis consistent with the level of
48 such revenues.

1 j. (1) The board shall order the full recovery of all costs
2 associated with the electric public utility's required procurement of
3 ZECs, and with the board's implementation of the ZEC program
4 under this act, through a non-bypassable, irrevocable charge
5 imposed on the electric public utility's retail distribution customers.
6 Within 150 days after the date of enactment of this act, each electric
7 public utility shall file with the board a tariff to recover from its
8 retail distribution customers a charge in the amount of \$0.004 per
9 kilowatt-hour which reflects the emissions avoidance benefits
10 associated with the continued operation of selected nuclear power
11 plants. Within 60 days after the tariff filing required pursuant to
12 this paragraph, after notice, the opportunity for comment, and
13 public hearing, the board shall approve the tariff, provided that it is
14 consistent with the provisions of this subsection. No later than the
15 date of the board's order establishing the initial selected nuclear
16 power plants to receive ZECs, each electric public utility shall
17 implement the tariff and begin collecting from its retail distribution
18 customers the approved charge. Revenues collected by the electric
19 public utility from the non-bypassable, irrevocable charge shall be
20 placed in a separate, interest-bearing account and shall be used
21 solely to purchase ZECs, and to reimburse the board for reasonable,
22 verifiable costs the board incurs to implement the ZEC program
23 pursuant to this act to the extent the board's costs exceed the
24 application fees collected by the board pursuant to paragraph (5) of
25 subsection e. of this section.

26 (2) Notwithstanding any provision of this act to the contrary, an
27 electric public utility shall not be required to purchase any
28 additional number of ZECs if the cost of the additional number of
29 ZECs exceeds the revenues deposited in the electric public utility's
30 separate, interest-bearing account, created pursuant to paragraph (1)
31 of this subsection, for that energy year, after subtracting the
32 reasonable, verifiable costs incurred by the board during that energy
33 year to implement the ZEC program pursuant to this section, which
34 costs shall be remitted to the board from the ZEC fund each energy
35 year in a manner to be determined by the board. Excess monies in
36 an electric public utility's separate, interest-bearing account shall be
37 refunded to its retail distribution customers at the end of each
38 energy year.

39 (3) (a) Notwithstanding the provisions of paragraph (1) of this
40 subsection, and to ensure that the ZEC program remains affordable to
41 New Jersey retail distribution customers, the board may, in its
42 discretion, reduce the per kilowatt-hour charge imposed by paragraph
43 (1) of this subsection starting in the second three year eligibility period
44 and for each subsequent three year eligibility period thereafter,
45 provided that the board determines that a reduced charge will
46 nonetheless be sufficient to achieve the State's air quality and other
47 environmental objectives by preventing the retirement of the

1 nuclear power plants that meet the eligibility criteria established
2 pursuant to subsections d. and e. of this section.

3 (b) If the board reduces the per kilowatt-hour charge imposed by
4 paragraph (1) of this subsection pursuant to subparagraph (a) of this
5 paragraph, the reduction shall be applicable to the next eligibility
6 period only and the board shall make its determination no later than 13
7 months prior to the start of that eligibility period. Within 30 days
8 thereafter, each electric public utility shall file, in lieu of the tariff
9 described in paragraph (1) of this subsection, a tariff consistent with
10 the board's determination. Within 60 days after filing of the tariff,
11 after notice, the opportunity for comment, and public hearing, the
12 board shall approve the revised tariff, provided that it is consistent
13 with the board's determination. The revised tariff shall take effect
14 starting in the next eligibility period.

15 (c) If the board does not certify any nuclear power plants for a
16 subsequent eligibility period pursuant to this act, the board may, in
17 its discretion, reduce the per kilowatt-hour charge imposed pursuant
18 to paragraph (1) of this subsection to ensure that the ZEC program
19 remains affordable to New Jersey retail distribution customers in
20 the final year of the first eligibility period, provided that the board
21 determines that a reduced charge will nonetheless be sufficient to
22 achieve the State's air quality and other environmental objectives
23 by preventing the retirement of the nuclear power plants that meet
24 the eligibility criteria established pursuant to subsections d. and e.
25 of this section.

26 (d) For the second three energy year eligibility period, and every
27 subsequent eligibility period thereafter, a selected nuclear power
28 plant shall pay a renewal fee to the board in an amount to be
29 determined by the board, but which shall not exceed \$250,000, to be
30 used to defray the costs incurred by the board to administer the ZEC
31 program.

32 k. (1) A selected nuclear power plant shall be excused from
33 performance, including but not limited to the sale of ZECs, and a
34 payment from an electric public utility shall not be due to the
35 selected nuclear power plant, if:

36 (a) the selected nuclear power suspends or ceases operations,
37 despite the selected nuclear power plant's reasonable efforts to
38 continue operations, due to an event beyond its control, including
39 but not limited to acts of God, flood, drought, earthquake, storm,
40 fire, lightning, epidemic, war, riot, labor dispute, labor or material
41 shortage, sabotage, or explosion. The selected nuclear power plant
42 shall no longer be excused from performance, and a payment from
43 an electric public utility shall be due, after conclusion of the event;

44 (b) a State law is enacted imposing a significant new tax, special
45 assessment, or fee on the generation of electricity, the ownership or
46 leasehold of a generating unit, or the privilege or occupation of the
47 generation, ownership, or leasehold of generation units by a
48 selected nuclear power plant;

1 (c) a State or federal law is enacted that materially reduces the
2 value of a ZEC, or the board exercises its discretion to reduce the
3 amount of the per kilowatt-hour charge pursuant to paragraph (3) of
4 subsection j. of this section;

5 (d) the selected nuclear power plant requires capital
6 expenditures in excess of \$40,000,000 that were neither known nor
7 reasonably foreseeable at the time it was selected to receive ZECs,
8 and the capital expenditures are expenditures that a prudent owner
9 or operator of a selected nuclear power plant would not undertake;
10 or

11 (e) The United States Nuclear Regulatory Commission
12 terminates the selected nuclear power plant's license.

13 (2) If a selected nuclear power plant ceases operations during an
14 eligibility period for any reason other than those specified in this
15 subsection, the selected nuclear power plant shall pay a charge to
16 the electric public utilities that purchased ZECs from the selected
17 nuclear power plant in an amount equal to the compensation
18 received for the sale of ZECs since the board's last determination of
19 the selected nuclear power plant's eligibility to receive ZECs. An
20 electric public utility shall provide a refund to its retail distribution
21 customers in an amount equal to the charge paid by a selected
22 nuclear power plant to the electric public utility pursuant to this
23 paragraph.

24 (3) The owner of a selected nuclear power plant shall, within
25 two years after receiving ZECs, submit a plan to the board to retain,
26 retrain, or compensate personnel whose employment would be
27 eliminated as a direct result of the cessation of the selected nuclear
28 power plant's operations, including an alternative economic
29 development plan for communities that rely on the selected nuclear
30 power plant for a substantial portion of their tax revenues.

31 1. A selected nuclear power plant shall not lay off any
32 personnel unless the lay-off is due to employee misconduct or
33 underperformance issues, or due to the suspension or cessation of
34 the selected nuclear power plant's operations as provided in
35 subsection k. of this section.

36 m. The owner of a selected nuclear power plant shall, within
37 two years after receiving ZECs, conduct a study and prepare a
38 written report in cooperation with selected experts, to determine the
39 optimal use of dry cask storage of spent nuclear fuel at its site,
40 considering environmental impacts, worker safety, and cost
41 impacts.

42
43 4. a. No later than 10 years after the date of enactment of this
44 act, the Board of Public Utilities shall conduct a study to evaluate
45 the efficacy of the zero emission certificate program and submit a
46 written report thereon to the Governor and, pursuant to section 2 of
47 P.L.1991, c.164 (C.52:14-19.1), to the Legislature. In conducting
48 the study, the board shall evaluate the program's effect on the

1 premature retirement of nuclear power plants, its effect on the air
2 quality and environment in the State, and its contribution to a more
3 reliable energy supply by assuring fuel diversity. The study shall
4 also evaluate the program's benefits and costs to ratepayers.

5 b. The written report shall: (1) summarize the study and
6 analysis conducted pursuant to subsection a. of this section; (2)
7 discuss and quantify the potential benefits and costs associated with
8 the program; (3) recommend any changes to the program or whether
9 it should continue; and (4) recommend whether the program should
10 be expanded to include other technologies.

11
12 5. If any provision of this act or its application to any person or
13 circumstance is held invalid or unconstitutional, that judgment or
14 decision shall not affect other provisions or applications of this act
15 which can be given effect without the invalid or unconstitutional
16 provision or application, and to this end the provisions of this act
17 are severable.

18
19 6. This act shall take effect immediately.

20

21

22

STATEMENT

23

24 This bill directs the Board of Public Utilities (board) to establish
25 a Zero Emission Certificate (ZEC) program. Under the bill, a ZEC
26 is a certificate, issued by the board or its designee, representing the
27 fuel diversity, air quality, and other environmental attributes of one
28 megawatt-hour of electricity generated by an eligible nuclear power
29 plant selected by the board to participate in the ZEC program.

30 To participate in the ZEC program, a nuclear power plant is
31 required to: (1) be licensed to operate by the United States Nuclear
32 Regulatory Commission by the date of enactment of this bill and
33 through 2030 or later; (2) demonstrate to the satisfaction of the
34 board that it makes a significant and material contribution to the air
35 quality in the State by minimizing emissions that result from
36 electricity consumed in New Jersey; (3) provide financial
37 information to the board demonstrating that the plant will cease
38 operations unless the nuclear power plant experiences a material
39 financial change; (4) certify annually to the board that the nuclear
40 power plant does not receive any direct or indirect payment or
41 credit under a law of this State, or any other state, or a federal law,
42 or a regional compact, that would eliminate the need for the nuclear
43 power plant to retire prematurely, despite its reasonable best efforts
44 to obtain any such payment or credit; and (5) submit an application
45 fee to the board in an amount to be determined by the board, but
46 which is not to exceed \$250,000, to be used to defray the costs
47 incurred by the board to administer the ZEC program.

1 The board is to determine the price of a ZEC each energy year
2 under the formula provided in the bill. Within 90 days after the
3 conclusion of an energy year, each electric public utility (utility) in
4 the State is required to pay each nuclear power plant that received
5 ZECs for that prior energy year for the total number of ZECs
6 received by the nuclear power plant multiplied by the percentage of
7 electricity the utility distributed in the State as compared to other
8 utilities in the State.

9 The board is to order the full recovery of all costs associated
10 with the utility's procurement of ZECs through a non-bypassable,
11 irrevocable charge imposed on the retail distribution customers of
12 the utility in the amount of \$0.004 per kilowatt-hour. This charge
13 may be reduced by the board if certain conditions are met as
14 specified in the bill. Excess monies collected by utilities through
15 the charge are to be refunded to their customers.

16 A nuclear power plant selected by the board to participate in the
17 program is to initially receive ZECs through the end of the first
18 energy year in which the plant was selected, plus an additional three
19 energy years thereafter, and then is subject to review by the board
20 triennially for renewed eligibility for additional, three energy year
21 periods.

22 A nuclear power plant selected by the board to participate in the
23 program may suspend or cease operations under certain
24 circumstances, including circumstances in which events prevent the
25 selected nuclear power plant from continuing operations despite the
26 plant's reasonable efforts to continue operations. If a selected
27 nuclear power plant ceases operations during an eligibility period
28 for any reason other than those specified in the bill, the plant is to
29 pay a charge to the utilities that purchased ZECs from the selected
30 nuclear power plant in an amount equal to the compensation
31 received for the sale of ZECs since the board's last determination of
32 the selected nuclear power plant's eligibility to receive ZECs. A
33 selected nuclear power plant would not be authorized to lay off
34 personnel except for employee misconduct or underperformance
35 issues. Finally, the bill requires the board to conduct a study to
36 evaluate the program within 10 years.

ASSEMBLY APPROPRIATIONS COMMITTEE

STATEMENT TO

ASSEMBLY, No. 3724

STATE OF NEW JERSEY

DATED: APRIL 5, 2018

The Assembly Appropriations Committee reports favorably Assembly Bill No. 3724.

This bill directs the Board of Public Utilities (board) to establish a Zero Emission Certificate (ZEC) program. Under the bill, a ZEC is a certificate, issued by the board or its designee, representing the fuel diversity, air quality, and other environmental attributes of one megawatt-hour of electricity generated by an eligible nuclear power plant selected by the board to participate in the ZEC program.

To participate in the ZEC program, a nuclear power plant is required to: (1) be licensed to operate by the United States Nuclear Regulatory Commission by the date of enactment of this bill and through 2030 or later; (2) demonstrate to the satisfaction of the board that it makes a significant and material contribution to the air quality in the State by minimizing emissions that result from electricity consumed in New Jersey; (3) provide financial information to the board demonstrating that the plant will cease operations unless the nuclear power plant experiences a material financial change; (4) certify annually to the board that the nuclear power plant does not receive any direct or indirect payment or credit under a law of this State, or any other state, or a federal law, or a regional compact, that would eliminate the need for the nuclear power plant to retire prematurely, despite its reasonable best efforts to obtain any such payment or credit; and (5) submit an application fee to the board in an amount to be determined by the board, but which is not to exceed \$250,000, to be used to defray the costs incurred by the board to administer the ZEC program.

The board is to determine the price of a ZEC each energy year under the formula provided in the bill. Within 90 days after the conclusion of an energy year, each electric public utility (utility) in the State is required to pay each nuclear power plant that received ZECs for that prior energy year for the total number of ZECs received by the nuclear power plant multiplied by the percentage of electricity the utility distributed in the State as compared to other utilities in the State.

The board is to order the full recovery of all costs associated with the utility's procurement of ZECs through a non-bypassable, irrevocable charge imposed on the retail distribution customers of the utility in the amount of \$0.004 per kilowatt-hour. This charge

may be reduced by the board if certain conditions are met as specified in the bill. Excess monies collected by utilities through the charge are to be refunded to their customers.

A nuclear power plant selected by the board to participate in the program is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the board triennially for renewed eligibility for additional, three energy year periods.

A nuclear power plant selected by the board to participate in the program may suspend or cease operations under certain circumstances, including circumstances in which events prevent the selected nuclear power plant from continuing operations despite the plant's reasonable efforts to continue operations. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the plant is to pay a charge to the utilities that purchased ZECs from the selected nuclear power plant in an amount equal to the compensation received for the sale of ZECs since the board's last determination of the selected nuclear power plant's eligibility to receive ZECs. A selected nuclear power plant would not be authorized to lay off personnel except for employee misconduct or underperformance issues. Finally, the bill requires the board to conduct a study to evaluate the program within 10 years.

FISCAL IMPACT:

The Office of Legislative Services (OLS) estimates that the bill may increase costs to State and local government entities that are retail consumers of electricity by indeterminate amounts annually subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers.

The OLS estimates that this bill will increase sales and use tax revenue by up to \$20 million. As a result of imposing the tariff, authorized by the bill, retail distribution customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the tariff will be subject to the sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax.

Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, the Board of Public Utilities is able to recover costs from the electric public utility accounts established pursuant to the bill.

LEGISLATIVE FISCAL ESTIMATE
ASSEMBLY, No. 3724
STATE OF NEW JERSEY
218th LEGISLATURE

DATED: APRIL 19, 2018

SUMMARY

- Synopsis:** Establishes zero emission certificate program for nuclear power plants.
- Type of Impact:** Annual increase in State revenue. Annual increase in expenditures for public entity electric utility ratepayers.
- Agencies Affected:** All State and local government entities; Board of Public Utilities (BPU).

Office of Legislative Services Estimate

Fiscal Impact	<u>Annual Impact for Lifetime of ZEC Program</u>
State Revenue Increase	Up to \$20.0 million
State Expenditure Increase	Indeterminate
Local Expenditure Increase	Indeterminate
BPU Revenue and Cost Increase	Indeterminate

- The Office of Legislative Services (OLS) estimates that the bill may increase costs to State and local government entities that are retail consumers of electricity by indeterminate amounts annually subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers.
- The OLS estimates that this bill will increase sales and use tax revenue by up to \$20.0 million. As a result of imposing the tariff authorized by the bill, retail distribution customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the tariff will be subject to the sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax.
- Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, the Public Utilities (BPU) are able to recover costs from the electric public utility accounts established pursuant to the bill.

BILL DESCRIPTION

This bill directs the BPU to establish a zero emissions certificate (ZEC) program. Under the bill, a ZEC is a certificate, issued by the BPU, representing the fuel diversity, air quality, and environmental attributes of one megawatt-hour of electricity generated by an eligible nuclear power plant selected by the BPU to participate in the ZEC program.

“Nuclear power plant,” as defined in this bill, means an individual electric generating unit utilizing nuclear fuel to produce electric power. In order to be certified by the BPU as an eligible nuclear power plant, a nuclear power plant is required to: 1) be licensed to operate by the United States Nuclear Regulatory Commission by the date of enactment of the bill and through 2030 or later; 2) demonstrate a significant and material contribution to the air quality in the State by minimizing emissions that result from electricity consumed in New Jersey, demonstrate that it minimizes harmful emissions that adversely affect the citizens of the State, and that if the nuclear power plant was to retire, the retirement would significantly and negatively impact the State’s ability to comply with air emissions reduction requirements; 3) demonstrate that the nuclear power plant’s fuel diversity, air quality, and environmental attributes are at risk of loss because the nuclear power plant is projected not to fully cover its costs and risks, or alternatively is projected not to cover its costs including its risk-adjusted cost of capital, and that the nuclear power plant will cease operations within three years unless the nuclear power plant experiences a material financial change; 4) certify annually that the nuclear power plant does not receive any direct or indirect payment of credit under State or federal law or regional compact except for any payment or credit received under the provisions of the bill; and 5) submit an application fee to the BPU in an amount to be determined by the BPU, but not to exceed \$250,000.

A nuclear power plant seeking to participate in the ZEC program is required to submit certain financial documentation to the BPU as requested. The BPU is required to adopt an order no later than 180 days after the date of enactment of the bill establishing the ZEC program. A nuclear power plant seeking to participate in the ZEC program is required to submit an application to the BPU no later than 210 days after the date of enactment of the bill. Lastly, the BPU is required to establish a rank-ordered list of the nuclear power plants eligible to receive ZECs and select eligible nuclear power plants to receive ZECs based on their ranking. If the BPU determines that no nuclear power plants satisfy the criteria set forth in the bill, the BPU is under no obligation to certify any nuclear power plant.

The BPU is to determine the price of a ZEC each energy year pursuant to the formula prescribed in the bill. Within 90 days after the conclusion of an energy year, each electric public utility in this State is required to purchase ZECs in an amount equal to the total number of ZECs received by the nuclear power plants multiplied by the percentage of electricity the electric public utility distributed in this State. The BPU is to order the full recovery of all costs associated with the electric public utility’s procurement of the ZECs through a non-bypassable, irrevocable charge imposed on the customers of the electric public utility (\$0.004 per kilowatt hour) which reflects the emissions avoidance benefits associated with the continued operation of selected nuclear power plants. The BPU may reduce the per kilowatt-hour charge starting in the second three-year eligibility period thereafter, provided that the BPU determines that the reduced charge will be sufficient to achieve the State’s air quality and other environmental objectives by preventing the retirement of the eligible nuclear power plants.

A selected nuclear power plant is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods. For the second three energy year eligibility period, and every subsequent eligibility

period thereafter, a selected nuclear power plant is required to pay a renewal fee to the BPU in an amount determined by the BPU, not to exceed \$250,000.

A selected nuclear power plant may suspend or cease operations under certain circumstances. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the selected nuclear power plant is to pay a charge to the electric public utilities that purchase ZECs. The electric public utility is required to provide a refund to its distribution customers in an amount equal to the charge paid by a selected nuclear power plant to the electric public utility.

FISCAL ANALYSIS

EXECUTIVE BRANCH

None received.

OFFICE OF LEGISLATIVE SERVICES

The OLS estimates that the bill may cost electric public utility ratepayers in this State, which includes State and local government entities, approximately \$250.0 million to \$302.0 million per energy year, subject to increases and decreases based on total electricity distribution by selected nuclear power plants, due to a tariff imposed at a rate of \$0.004 per kilowatt hour on retail distribution customers. The percentage of the total cost that will be borne by State and local governments as retail electricity consumers is indeterminate. The OLS notes that the monies generated from the tariff imposed by electric public utilities in this State are to be used to purchase ZECs from selected nuclear power plants. The OLS further notes that excess monies in an electric public utility's account, following the purchase of required ZECs, are to be refunded to its retail distribution customers at the end of each energy year. Any administrative costs associated with the bill are covered in part or in whole by application fees. If the administrative costs exceed the amounts generated by application fees, the BPU is able to recover costs from the electric public utility accounts established pursuant to the bill. Due to increased retail energy prices from the tariff, State sales and use tax revenue will increase annually.

Eligible Nuclear Power Plants: There are three domestic nuclear power plants, totaling four individual electric generating units, currently operating in New Jersey: 1) Public Service Electric and Gas Company (PSE&G) Salem Nuclear Generating Station ("PSE&G Salem") (unit one is licensed to operate through August 13, 2036; unit two is licensed to operate through April 18, 2040); 2) PSE&G Hope Creek Nuclear Generating Station ("PSE&G Hope Creek") (licensed to operate through April 11, 2046); and 3) Oyster Creek Nuclear Generating Station (scheduled to be permanently shut down in October 2018). Since Oyster Creek Nuclear Generating Station is not licensed to operate through 2030, this nuclear power plant is not eligible to participate in the ZEC program. Based strictly on the first criteria for eligibility, the requirement for a nuclear power plant to be licensed to operate through 2030, the two units of PSE&G Salem and the single unit of PSE&G Hope Creek are eligible to participate in the ZEC program if all other criteria prescribed by the bill are met. However, a nuclear power plant outside the State may be eligible to apply for and could be selected if the nuclear power plant meets all other criteria prescribed by the bill.

The OLS notes that numerous deadlines are set forth in the provisions of the bill which may further limit a nuclear power plant's ability to participate in the ZEC program. The OLS further notes that eligible nuclear power plants are required to pay an application fee of not more than \$250,000 to the BPU to cover the costs incurred by the BPU to administer the ZEC program. Assuming that the three eligible individual electric generating units submit an application to participate in the ZEC program, the maximum amount the BPU can raise through the application fee to defray the costs of the bill is \$750,000.

A selected nuclear power plant is to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then is subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods. For the second three energy year eligibility period, and every subsequent eligibility period thereafter, a selected nuclear power plant is required to pay a renewal fee to the BPU in an amount determined by the BPU, not to exceed \$250,000.

Selection of Eligible Nuclear Power Plants: The BPU is required to select eligible nuclear power plants in accordance with a rank-ordered list described in the bill. The combined number of megawatt-hours (MWh) of electricity distributed in the energy year prior to the enactment of the bill by all selected nuclear power plants cannot exceed 40 percent of the total number of MWh of electricity distributed by electric public utilities in the State in the energy year immediately prior to the date of enactment of the bill. According to calendar year 2016 data provided by the U.S. Energy Information Administration, total electricity distribution (retail sales) in New Jersey reached 75,359,371 MWh. Total combined generation between PSE&G Salem (15,696,653 MWh – includes both units) and PSE&G Hope Creek (9,603,443 MWh) was 25,300,096 MWh, which was 33.5 percent of the total electricity distribution by electric public utilities in the State in calendar year 2016. The OLS has preliminary generation data by plant solely for calendar year 2016; thus, for the energy year prior to the date of enactment of the bill the OLS assumes that PSE&G Salem and PSE&G Hope Creek combined electricity distribution will fall below the 40 percent threshold.

Tariff on Ratepayers: The bill requires each electric public utility to impose a \$0.004 per kilowatt hour (KWh) tariff on its retail distribution customers. Based on calendar year 2016 total electricity distribution (retail sales) of 75,359,371 MWh (75,359,371,000 KWh), the total amount of revenue generated by the tariff would be approximately \$301.44 million.

The revenues generated by the tariff are required to be deposited into an interest-bearing account and are to be solely used for the purpose of purchasing ZECs, and to reimburse the BPU for administrative costs which exceed the application fees collected by the BPU. The OLS notes that the BPU may reduce the per kilowatt-hour charge starting in the second three year eligibility period thereafter, provided that the BPU determines that the reduced charge will be sufficient to achieve the State's air quality and other environmental objectives by preventing the retirement of the eligible nuclear power plants.

Sales and Use Tax Implications: As a result of the tariff authorized and imposed pursuant to the bill on retail distribution customers, customers will experience an increase in the retail price paid for electricity. The amount of the retail price increase attributable to the imposition of the tariff will be subject to the imposition of sales and use tax, excluding electricity purchases by certain entities and users which are exempt under the sales and use tax. Utilizing a sales and use tax rate of 6.625 percent, and multiplying this rate by the \$301.44 million in projected revenue from the tariff, the maximum amount of sales and use tax revenue the State may realize annually as a result of the ZEC program would be \$20.0 million. The OLS notes that the \$20.0 million

estimate does not account for entities which are subject to the tariff, but are exempt from sales and use tax; thus, the amount of sales and use tax revenues could be less than \$20.0 million. The OLS further notes that the sales and use tax gain will be an additional cost to electric public utility ratepayers since the sales and use tax is imposed on ratepayers' electricity bills (unless the ratepayer is exempt).

Zero Emission Certificate: Selected nuclear power plants are eligible to receive ZECs 330 days after the date of enactment of the bill. The number of ZECs each nuclear power plant receives is equal to the number of MWh of electricity each nuclear power plant produced in a given energy year starting on the date of the eligible nuclear power plant's selection. Based on preliminary calendar year 2016 data, PSE&G Salem and PSE&G Hope Creek collectively distributed 25,300,096 MWh of electricity in the State; thus, the nuclear power plants would have collectively received 25,300,096 ZECs. Selected nuclear power plants are to initially receive ZECs through the end of the first energy year in which the plant was selected, plus an additional three energy years thereafter, and then are subject to review by the BPU triennially for renewed eligibility for additional, three energy year periods.

The cost of each ZEC is determined by dividing the total number of dollars held by electric public utilities in accounts established by the bill (approximately \$301.44 million based on the amounts to be generated from the tariff) at the end of the prior energy year by the greater of: 40 percent of the total number of MWh of electricity distributed by the electric public utilities in this State in the prior energy year, or the number of MWh of electricity generated in the prior energy year by the selected nuclear power plants. The OLS notes that the combined electricity distribution by PSE&G Salem and PSE&G Hope Creek in calendar year 2016 was 25,300,096 MWh, which was 33.5 percent of the total electricity distribution by public utilities in the State in calendar year 2016 and is less than the alternative calculation. Thus, in order to determine an estimate regarding the cost per ZEC, \$301.44 million would be divided by 30,143,748 MWh (40 percent of the total number of MWh of electricity distributed by the electric public utilities in this State in calendar year 2016 – 75,359,371 MWh), which results in a per ZEC cost of about \$10.00.

Each electric public utility in this State is required to use the funds generated by the tariff and deposited into the accounts established pursuant to the bill to purchase ZECs on a monthly basis from each selected nuclear power plant. Based on the approximate total number of ZECs available for PSE&G Salem and PSE&G Hope Creek to sell, 25,300,096 based on calendar year 2016 data, and the cost per ZEC, \$10.00, PSE&G Salem and PSE&G Hope Creek would receive approximately \$253.00 million in revenue from ZEC sales to electric public utilities.

The OLS recognizes that the \$253.00 million is less than the total amount of revenue that would be generated by the tariff (\$301.44 million). Thus, this OLS estimate specifies a potential range of \$253.00 million to \$301.44 million based on total electricity distribution in calendar year 2016. This range will be subject to variance each energy year as the total amount of electricity distributed throughout the State is subject to annual fluctuation.

The OLS notes that the bill requires excess monies in an electric public utility's account to be refunded to its retail distribution customers at the end of each energy year. The OLS further acknowledges that electric public utilities are not required to purchase any additional number of ZECs if the cost of the additional number of ZECs exceeds the revenues deposited in an electric public utility's account established pursuant to the bill.

A selected nuclear power plant may suspend or cease operations under certain circumstances. If a selected nuclear power plant ceases operations during an eligibility period for any reason other than those specified in the bill, the selected nuclear power plant is to pay a charge to the electric public utilities that purchases ZECs. The electric public utility is required to provide a

refund to its distribution customers in an amount equal to the charge paid by a selected nuclear power plant to the electric public utility.

Reporting Requirements: The owner of a selected nuclear power plant is required to provide a plan to the BPU, two years after receiving ZECs, to retain, retrain, or compensate personnel whose employment would be eliminated as a direct result of the cessation of the selected nuclear power plant's operations.

Further, the owner of a selected nuclear power plant is required to conduct a study and prepare a written report, within two years after receiving ZECs, in cooperation with selected experts to determine the optimal use of dry cask storage of spent nuclear fuel at its site, considering environmental impacts, worker safety, and cost impacts.

The BPU is required to conduct a study, no later than 10 years after the date of enactment of the bill, to evaluate the efficacy of the ZEC program and submit a written report to the Governor and the Legislature. The written report is required to: 1) summarize the effectiveness of the program in deterring the premature retirement of nuclear power plants, its effect on the environment and air quality in the State, and its contribution to a more reliable energy supply by assuring fuel diversity; 2) discuss and quantify the potential benefits and costs associated with the ZEC program; 3) recommend any changes to the program or whether it should continue; and 4) recommend whether the ZEC program should be expanded to include other technologies.

The OLS notes that the reporting requirements in the bill will likely result in higher administrative costs for various executive departments and agencies. The number of staff required to be hired to implement the provisions of the bill, the use of outside consultants to provide assistance with implementing the provisions of the bill, and the associated expenditures that the various executive departments and agencies will incur as a result of the bill, will be determined by future decisions of executive branch officials.

Section: Revenue, Finance and Appropriations

*Analyst: Jordan M. DiGiovanni
Associate Fiscal Analyst*

*Approved: Frank W. Haines III
Legislative Budget and Finance Officer*

This fiscal estimate has been prepared pursuant to P.L.1980, c.67 (C.52:13B-6 et seq.).



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Newark, N.J.

Governor Murphy Signs Measures to Advance New Jersey's Clean Energy Economy

05/23/2018

MONMOUTH JUNCTION – Bolstering his commitment to New Jersey's energy future, Governor Phil Murphy today signed several legislative initiatives to establish New Jersey's leadership in the clean energy economy. Governor Murphy also signed an executive order directing the development of an updated Energy Master Plan (EMP) for the state to achieve 100 percent clean energy by 2050.

"Today, we're taking another step forward in rebuilding New Jersey's reputation as a leader in the development of clean energy sources while fulfilling a critical promise to foster our state's energy future," **said Governor Murphy**. "Signing these measures represents a down payment to the people of New Jersey on the clean energy agenda I set forth at the beginning of my administration – a plan that will always consider the best interests of our residents and our environment while growing our economy."

A-3723 – the Renewable Energy bill – takes several critical steps to improve and expand New Jersey's renewable energy programs. Programs include:

Renewable Energy Standard: This establishes one of the most ambitious renewable energy standards in the country by requiring 21 percent of the energy sold in the state be from Class I renewable energy sources by 2020; 35 percent by 2025 and 50 percent by 2030. A cap on costs provides additional protections for consumers.

Solar: This provision reforms the state's solar program by making near-term structural changes to ensure that the program is sustainable over the long term.

Offshore Wind: The bill codifies the Governor's goal of 3,500 MW of offshore wind by 2030. It also reinstates an expired program to provide tax credits for offshore wind manufacturing activities.

Energy Efficiency: This requires each utility to implement energy efficiency measures to reduce electricity usage by 2 percent and natural gas usage by 0.75 percent.

Community Solar: The bill establishes a community solar energy program to allow all New Jersey residents to benefit from solar energy.

Energy Storage: This provision codifies the Governor's goal of achieving 600 MW of energy storage by 2021 and 2,000 MW by 2030.

Sponsors of the legislation are Assemblyman McKeon, Assemblywoman Pinkin, Assemblyman DeAngelo, Senate President Sweeney and Senators Smith and Van Drew.

Bill S-2313 establishes a Zero Emissions Certificate (ZEC) program to maintain New Jersey's nuclear energy supply, which contributes close to 40 percent of the State's electric capacity and is by far New Jersey's largest source of carbon free energy. Plants seeking to participate in the program would be required, among other things,

to demonstrate that they make a significant contribution to New Jersey air quality and that they are at risk of closure within three years.

The new law gives the Board of Public Utilities broad latitude to engage outside experts to analyze nuclear power plant financial information and applications, and to adjust ZEC payments as necessary to meet a plant's actual financial need. A plant seeking to participate in the program would be required to certify that it is not receiving funding from any other federal, regional, or state source that would negate the need for the ZEC. Employees at plants participating in the ZEC program would further be protected from layoffs for reasons other than underperformance or misconduct.

Sponsors of S-2313 include Senate President Sweeney, Senators Smith and Van Drew, as well as Assemblymen McKeon, Burzichelli, DeAngelo and Egan.

In addition, Governor Murphy signed Executive Order No. 28 directing state agencies to develop an updated Energy Master Plan (EMP) that provides a path to 100 percent clean energy by 2050. The new EMP is to be completed and delivered by June 1, 2019 and will provide a blueprint for the total conversion of the State's energy production profile to 100 percent clean energy sources by January 1, 2050. The EMP will integrate the programs established in these bills, and will facilitate the implementation of Executive Order No. 8, establishing the Offshore Wind Strategic Plan.

Underscoring the economic benefits of clean energy programs, Governor Murphy also announced Atlantic City Electric's (ACE) \$6.5 million Workforce Development initiative, which will provide funds to expand clean energy job training and workforce development efforts to help improve employment in ACE's Southern New Jersey service area. These programs will include Get Into Energy Math Test and Boot Camp; Women in Sustainable Employment (WISE)-Pathway; ACE Line School; High School Energy Career Academy, and County Driven Initiatives.

"Creating energy jobs of the future is critical to growing New Jersey's economy," **added Governor Murphy.** "I applaud Atlantic City Electric for their workforce development efforts to train the next generation to seize the opportunity of the clean energy economy. I thank Atlantic City Electric for its long-range view, and look forward to working alongside them to grow our energy economy together."

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Governor Phil Murphy

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EXECUTIVE ORDER NO. 28

WHEREAS, the international scientific and political communities have widely accepted that human activity is the main driver of global climate change and its corresponding deleterious impacts on our natural environment; and

WHEREAS, traditional methods of energy production that rely on the burning of fossil fuels release harmful emissions of carbon dioxide and other greenhouse gases, which in turn contribute to global climate change; and

WHEREAS, in order to curtail the serious impacts of global climate change caused by greenhouse gas emissions, New Jersey must shift away from its reliance on fossil fuels as a primary energy source and turn to clean energy sources; and

WHEREAS, my administration has already taken several steps to move New Jersey in this direction, including Executive Order No. 7 (2018), which directed New Jersey to begin the process of re-entering the Regional Greenhouse Gas Initiative, and Executive Order No. 8 (2018), which emphasized the vital importance of offshore wind energy to the State of New Jersey; and

WHEREAS, by law, N.J.S.A. 52:27F-14, et seq., the State of New Jersey, through the Energy Master Plan Committee, is required to prepare an Energy Master Plan and revise and update that plan at least once every three (3) years; and

WHEREAS, New Jersey's Energy Master Plan is intended to set forth a strategic vision for the production, distribution, consumption, and conservation of energy in the State of New Jersey; and

WHEREAS, the Energy Master Plan was last updated in 2015; and

WHEREAS, in order to achieve appropriate reductions in dangerous greenhouse gases, New Jersey must overhaul the 2015 Energy Master Plan and adopt an innovative Energy Master Plan that recognizes the need for significant investment and support for clean energy sources, particularly the considerable opportunity for the development of wind

energy in New Jersey, and that aims to shift New Jersey's energy production profile away from reliance on outdated technologies that contribute to global climate change and towards clean energy sources;

NOW, THEREFORE, I, PHILIP D. MURPHY, Governor of the State of New Jersey, by virtue of the authority vested in me by the Constitution and by the Statutes of this State, do hereby ORDER and DIRECT:

1. The President of the Board of Public Utilities shall convene the Energy Master Plan Committee within thirty (30) days of the date of this Order, and shall also designate a senior staff member of the Board of Public Utilities to serve on the Energy Master Plan Committee. That designee shall serve as the chairperson of the Committee.

2. The heads of the following principal departments of the Executive Branch of State government shall designate a senior staff member from their respective departments to serve on the Energy Master Plan Committee: 1) Department of Community Affairs; 2) Economic Development Authority; 3) Department of Environmental Protection; 4) Department of Health; 5) Department of Human Services; 6) Department of Transportation; and 7) Department of the Treasury.

3. The Energy Master Plan Committee shall prepare, complete and deliver a new Energy Master Plan, consistent with the provisions of N.J.S.A. 52:27F-14, et seq., and this Order on or before June 1, 2019.

This 2019 Energy Master Plan (the "2019 Plan") shall provide a comprehensive blueprint for the total conversion of the State's energy production profile to 100% clean energy sources on or before January 1, 2050, and shall further provide specific proposals to be implemented over the next ten (10) years in order to achieve the January 1, 2050 goal.

4. The 2019 Plan shall incorporate the offshore wind development goals set forth in Executive Order No. 8 (2018) and also shall include recommendations consistent with the provisions of the Offshore Wind Strategic Plan.

In addition to wind energy development, the 2019 Plan shall include provisions guiding the continued development of solar energy in New Jersey, including community solar projects.

5. The 2019 Plan also shall include recommendations to position New Jersey as a leader in clean energy storage, including the establishment of goals of 600 MW of energy storage by January 1, 2021 and 2000 MW of storage by January 1, 2030. The 2019 Plan shall also provide specific proposals to be implemented over the next ten (10) years in order to achieve the January 1, 2030 goal.

The 2019 Plan shall also explore methods to incentivize the use of clean, efficient energy and electric technology alternatives in New Jersey's transportation sector and at New Jersey's ports.

6. Should any part of this Order be declared to be invalid or unenforceable, or should the enforcement of or compliance with any part of this Order be suspended, restrained or barred by the final judgment of a court of competent jurisdiction, the remainder of this Order shall remain in full force and effect.

7. This Order shall take effect immediately.

[seal] GIVEN, under my hand and seal this
23rd day of May,
Two Thousand and Eighteen, and
of the Independence of the
United States, the Two Hundred
and Forty-Second.

/s/ Philip D. Murphy

Governor

Attest:

/s/ Parimal Garg

Deputy Chief Counsel to the Governor