

SENATE, No. 225

STATE OF NEW JERSEY 221st LEGISLATURE

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SYNOPSIS

Establishes incentive program for installation of energy storage systems.

CURRENT VERSION OF TEXT

Introduced Pending Technical Review by Legislative Counsel.



1 AN ACT concerning energy storage systems and supplementing
2 Title 48 of the Revised Statutes.

3

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

6

7 1. The Legislature finds and declares that:

8 a. The electric grid is evolving from a system that relies on
9 one-way, long-distance transmission of electricity from centralized
10 power plants to customers to a system that includes local energy
11 sources located close to customers, who increasingly both produce
12 and consume electricity;

13 b. Energy storage systems, located throughout the electric grid,
14 can facilitate greater energy independence and energy security for
15 the State's electric customers by providing increased stability of the
16 power supply, smoother integration of renewable energy sources, a
17 reduction in the peak demand placed on centralized power plants,
18 and cost savings;

19 c. Locating energy sources and energy storage systems in high
20 value locations, often near the point of consumption, enhances grid
21 stability and increases efficiency;

22 d. Empowering New Jerseyans to take a more active role in the
23 State's electric grid would leverage private capital, protect
24 customers from rising energy costs, and promote greater
25 understanding and engagement with the challenges associated with
26 updating the State's electric grid;

27 e. Front-of-the-meter energy storage systems that are
28 interconnected with the transmission and distribution system offer
29 distinctive advantages, including, but not limited to, lower costs and
30 responsiveness to price signals from the wholesale electricity
31 market or electric public utility;

32 f. There are currently significant barriers that disincline New
33 Jersey electric customers from obtaining the benefits of energy
34 storage systems, including inadequate valuation of energy storage;
35 and

36 g. It is fitting, proper, and in the public interest to encourage
37 the installation of energy storage systems by providing monetary
38 incentives to new energy storage systems and renewable energy
39 sources paired with energy storage systems, and to compensate
40 front-of-the-meter energy storage systems for their value to the grid,
41 until these barriers are removed by market forces.

42

43 2. As used in this act:

44 "All-in system cost" means the total cost of purchasing and
45 installing a new energy storage system, including the costs of
46 hardware, siting, installation, permitting, and interconnection.

47 "Board" means the Board of Public Utilities.

48 "Customer-sited energy storage system" means an energy storage
49 system that operates in parallel with an electric distribution system,

1 is connected on the customer side of the meter, and is owned by the
2 customer or another party that is not the electric public utility that
3 provides electric power to the customer.

4 “Electric public utility” means a public utility, as that term is
5 defined in R.S.48:2-13, that transmits and distributes electricity to
6 end users within the State.

7 “Energy storage system” means a commercially available
8 technology that is capable of absorbing energy, storing such energy
9 for a period of time, and redelivering the energy after it has been
10 stored to provide direct or indirect benefits to the broader electricity
11 system, including, but not limited to, a battery system, pumped
12 hydroelectric system, compressed air system, flywheel, or a
13 hydrogen production, storage, or fuel cell system, provided that the
14 hydrogen is produced through electrolysis using electricity from a
15 renewable source.

16 “Front-of-the-meter energy storage system” means an energy
17 storage system that is interconnected with the transmission and
18 distribution system on the utility side of the meter. “Front-of-the-
19 meter energy storage system” shall include an energy storage
20 system that is subject to a tariff from an electric public utility or
21 from PJM.

22 “Gap analysis” means an analysis that determines the difference
23 between the average all-in system costs of energy storage systems,
24 considering each energy storage technology and application, and the
25 prevailing revenue stream opportunities to support the economics of
26 the energy storage systems.

27 “Overburdened community” means the same as the term is
28 defined in section 2 of P.L.2020, c.92 (C.13:1D-158).

29 “Performance incentive” means a series of recurring monetary
30 payments paid by an electric public utility to an owner of an energy
31 storage system who participates in the pilot program to compensate
32 for the benefits to the transmission and distribution system provided
33 by the system.

34 “Pilot program” means the pilot program to incentivize the
35 installation of new energy storage systems in the State developed by
36 the board pursuant to section 3 of this act.

37 “PJM Interconnection, L.L.C.” or “PJM” means the same as the
38 term is defined in section 3 of P.L.1999, c.23 (C.48:3-51).

39 “Transmission and distribution system” means the same as the
40 term is defined in section 3 of P.L.1999, c.23 (C.48:3-51).

41 “Upfront incentive” means a one-time monetary payment from
42 the board to an owner of an energy storage system who participates
43 in the pilot program to mitigate the upfront costs of the system.

44

45 3. a. No later than 90 days after the effective date of this act,
46 the board shall initiate a proceeding to develop a pilot program to
47 incentivize the installation of new energy storage systems in the
48 State. The pilot program shall include an upfront incentive as set
49 forth in section 4 of this act and a performance incentive as set forth

1 in section 5 of this act for owners of energy storage systems that are
2 approved by the board to participate in the program. The provisions
3 of the pilot program shall be based upon the best available data
4 from similarly designed programs in other states.

5 At the completion of the proceeding or 180 days after the
6 effective date of this act, whichever occurs sooner, the board shall
7 issue a board order establishing the pilot program. The order shall
8 include: the incentive amounts established for customer-sited
9 energy storage systems and front-of-the-meter energy storage
10 systems pursuant to sections 4 and 5 of this act; a methodology for
11 determining compensation amounts for tariffs filed for front-of-the-
12 meter energy storage systems not subject to a tariff from PJM
13 pursuant to section 6 of this act; and an application process for
14 persons who wish to participate in the pilot program. The upfront
15 incentive amounts shall be based on the nameplate storage capacity
16 of the energy storage system, as measured in kilowatt hours of
17 alternating current power output.

18 b. Stand-alone energy storage systems or energy storage
19 systems that are paired with a renewable source of electric power,
20 including, but not limited to, a solar photovoltaic array, shall be
21 eligible for the program. However, the pilot program shall be
22 available only to an energy storage system that:

23 (1) becomes operable on or after the date of the pilot program's
24 establishment; and

25 (2) is either:

26 (a) a customer-sited energy storage system that is owned,
27 leased, or operated by a residential or non-residential customer of
28 an electric public utility; or

29 (b) a front-of-the-meter energy storage system located in the
30 service area of an electric public utility.

31 c. The board shall reserve at least one third of the upfront
32 incentives provided to customer-sited energy storage systems for
33 customer classes or deployment scenarios that face greater
34 economic hurdles, including, but not limited to, low-to-moderate
35 income customers and customers sited in overburdened
36 communities.

37 d. In the course of developing the pilot program, the board
38 shall consider revising the eligibility requirement for net-metering
39 for solar energy systems that requires that the capacity of the solar
40 energy system be no greater than the annualized electricity usage of
41 the facility to which the solar energy system supplies electricity, in
42 order to accommodate the inclusion of energy storage system
43 capacity, as well as the potential for future electric vehicle capacity.
44 The board shall include its recommendation in the report required
45 by section 7 of this act.

46 e. The pilot program shall be designed to achieve or exceed,
47 together with other programs established by the board, the energy
48 storage goals established by subsection d. of section 1 of P.L.2018,
49 c.17 (C.48:3-87.8).

1 f. The program shall not prevent energy storage systems from
2 providing services to, or participating in, the wholesale market.
3 Any evaluation of costs and benefits of energy storage systems shall
4 include benefits that accrue directly or indirectly to ratepayers due
5 to the participation of the energy storage systems in wholesale
6 markets.

7 g. The pilot program shall be closed immediately upon the
8 adoption of the rules and regulations required pursuant to section 8
9 of this act.

10

11 4. a. The pilot program shall include an upfront incentive for
12 the owner of a customer-sited energy storage system or front-of-the-
13 meter energy storage system, which shall be based on the installed
14 capacity of the energy storage system and provided in dollars per
15 kilowatt-hour and shall not exceed 40 percent of the project's all-in
16 cost. When determining the amount of the upfront incentive offered
17 to an energy storage system, the board shall perform a gap analysis
18 to ensure that the incentive to the owner incorporates consideration
19 of the difference between available revenue streams, including any
20 performance incentive offered under the pilot program, and the all-
21 in system costs of the energy storage system. The board may
22 develop a system of incentive bonuses to differentiate between
23 projects by attributes, including, but not limited to, those serving
24 low- and middle-income communities. After the expiration of the
25 pilot program, the board may reduce or eliminate the upfront
26 incentive commensurate with a Statewide reduction in all-in system
27 costs for energy storage systems or an increase in revenue streams
28 available to owners of energy storage systems.

29 b. The board shall establish qualifications and requirements an
30 applicant shall be required to meet in order to be eligible for an
31 upfront incentive pursuant to this section, which may be more
32 stringent than the requirements of subsection b. of section 3 of this
33 act.

34 c. For energy storage systems with 25 kilowatts of nameplate
35 storage capacity or greater, the board shall require the applicant for
36 an upfront incentive to pay to the board a refundable deposit, which
37 shall be refunded once the energy storage system is determined by
38 the board to be operable and in use. The board shall develop a
39 formula for calculating the deposit amount, in which the amount of
40 the deposit is proportional to the nameplate capacity of the energy
41 storage system.

42 d. (1) The board shall require an applicant for an upfront
43 incentive to complete the energy storage project:

44 (a) for customer-sited energy storage systems, no later than 18
45 months after the date the board approves the applicant's
46 application; and

47 (b) for front-of-the-meter energy storage systems, no later than
48 40 months after the date the board approves the applicant's
49 application.

1 (2) An applicant that does not comply with the project timeline
2 requirements of this subsection shall not be refunded the deposit
3 paid to the board pursuant to subsection c. of this section. The
4 deposit shall be transferred by the board to the General Fund. The
5 board may waive or extend the project timeline requirements
6 established by this subsection for an applicant that demonstrates
7 extenuating circumstances that caused a delay in the completion of
8 the energy storage project, including any delays caused by an
9 electric public utility or PJM.

10 e. The board shall limit upfront incentives to one award per
11 electric meter, for customer-sited energy storage systems.

12 f. The board shall allocate at least \$60 million per year, for the
13 duration of the pilot program, from moneys collected from the
14 societal benefits charge imposed pursuant to section 12 of P.L.1999,
15 c.23 (C.48:3-60) to fund upfront incentives pursuant to this section.
16 After the expiration of the pilot program, the board may determine
17 the appropriate amount of funds to allocate to upfront incentives.

18
19 5. a. The pilot program shall include a performance incentive to
20 compensate the owner of a customer-sited energy storage system
21 or front-of-the-meter energy storage system. The purpose of the
22 performance payment shall be to:

23 (1) provide fair compensation for the full value of services
24 provided by the energy storage system, including improving the
25 efficiency of the transmission and distribution system and reducing
26 the peak demand placed on electricity generators;

27 (2) increase the number of cost-effective energy storage systems
28 that are connected to the transmission and distribution system;

29 (3) facilitate the integration of distributed sources of electricity
30 generation; and

31 (4) increase the resilience of the transmission and distribution
32 systems through the deployment of back-up power.

33 b. The board shall require each electric public utility in the
34 State to offer an appropriate performance incentive, for a period to
35 be determined by the board, to an owner of an energy storage
36 system that participates in the program, which compensates for the
37 operational attributes of the system, including, but not limited to,
38 capacity, demand response, load shifting, generation shifting,
39 locational value, and voltage support. The costs of the performance
40 incentives shall be apportioned to ratepayers using a methodology
41 approved by the board.

42 c. The board shall establish qualifications and requirements an
43 applicant shall be required to meet in order to be eligible for a
44 performance incentive pursuant to this section, which may be more
45 stringent than the requirements of subsection b. of section 3 of this
46 act.

47
48 6. In addition to the upfront incentive established pursuant to
49 section 4 of this act, and the performance incentive established

1 pursuant to section 5 of this act, each electric public utility in the
2 State shall file a tariff with the board, no later than 12 months after
3 the effective date of this act, that shall apply only to front-of-the-
4 meter energy storage systems that are not subject to a tariff from
5 PJM. The tariff shall be formulated to provide front-of-the-meter
6 energy storage systems with compensation for their value to the
7 grid, as described in section 5 of this act. The tariff shall establish a
8 new rate design for front-of-the-meter energy storage systems that
9 accurately reflects cost causation, based on a cost of service study.
10 The tariff may distinguish between different sizes and types of
11 energy storage systems. The tariff shall exempt front-of-the-meter
12 energy storage systems from charges intended for customers who
13 consume electricity, including, but not limited to, the societal
14 benefits charge imposed pursuant to section 12 of P.L.1999, c.23
15 (C.48:3-60).

16

17 7. No later than one year after the date of the pilot program's
18 establishment, the board shall conduct a review of the program and
19 submit a report, pursuant to section 2 of P.L.1991, c.164 (C.52:14-
20 19.1), to the Legislature that includes, but need not be limited to,
21 details about the recipients of incentive payments, the total costs of
22 upfront incentives provided through the program, an evaluation of
23 the extent of energy storage capacity that has been deployed in the
24 State as a result of the program, an evaluation of the distribution of
25 different energy storage technologies deployed, and an analysis of
26 the maturity of the energy storage market in the State.

27

28 8. No later than three years after the effective date of this act,
29 the board, pursuant to the "Administrative Procedure Act,"
30 P.L.1968, c.410 (C.52:14B-1 et seq.), shall adopt rules and
31 regulations establishing a permanent energy storage incentive
32 program. The permanent program shall be consistent with the
33 provisions of this act.

34

35 9. This act shall take effect immediately.

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37

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STATEMENT

39

40 This bill requires the Board of Public Utilities (board) to develop a
41 program to provide monetary incentives to persons who install new
42 energy storage systems in the State.

43 Specifically, the bill directs the board, no later than 180 days after
44 the bill's effective date, to publish incentive levels and an application
45 process for an energy storage incentive pilot program. The pilot
46 program will continue until the board adopts rules and regulations to
47 establish a permanent program pursuant to the bill. The program is to
48 meet or exceed the State's goal of hosting two gigawatts of energy
49 storage capacity by 2030.

1 The bill establishes certain requirements for the program, including
2 parameters for the types of energy storage projects eligible for the
3 program, as described in the bill. The program is available to
4 customer-sited energy storage systems, which are smaller energy
5 storage systems owned by a customer of electric utilities and sited in a
6 customer's residence or business, and to front-of-the-meter energy
7 storage systems, which are larger energy storage systems that are
8 connected directly to the grid.

9 The bill directs the board to reserve a portion of the incentives for
10 energy storage systems owned by low-to-moderate income customers
11 and customers sited in overburdened communities. The incentives are
12 an upfront incentive and a performance incentive.

13 The upfront incentive consists of a one-time payment made by the
14 board's Clean Energy Program, which is funded by the societal
15 benefits charge imposed under current law pursuant to N.J.S.A.48:3-
16 60. The amount of the upfront incentive is calculated using a "gap
17 analysis," as defined in the bill, to determine the difference between
18 the all-in system cost and the expected lifetime revenue that the
19 customer can expect to gain from the system. "All-in system cost" is
20 defined as the total cost of purchasing and installing a new energy
21 storage system, including the costs of hardware, siting, installation,
22 permitting, and interconnection. The bill requires certain applicants
23 for an upfront incentive to pay a deposit and requires applicants to
24 meet certain timeline requirements, as described in the bill. The bill
25 specifies that the board is to allocate at least \$60 million per year of
26 funds collected from the societal benefits charge for upfront incentives
27 for the duration of the pilot program.

28 The performance incentive is a recurring payment, made by an
29 electric public utility, to compensate the owner of the energy storage
30 system for services to the grid made by the system, including reduction
31 of peak demand and supply of power during outages.

32 The bill directs each electric public utility to file a tariff, a pricing
33 structure that includes rates and other charges, with the board for front-
34 of-the-meter energy storage systems that are not subject to a tariff by
35 PJM Interconnection, L.L.C. The tariff is required to take into account
36 the costs of service and benefits to the grid from front-of-the-meter
37 energy storage systems. The tariff is required to exempt front-of-the-
38 meter energy storage systems from charges intended for customers
39 who consume electricity, including, but not limited to, the societal
40 benefits charge.

41 Finally, the bill directs the board to submit a report to the
42 Legislature on the pilot program no later than one year after the
43 program is established.