

[Fifth Reprint]

ASSEMBLY, No. 5517

STATE OF NEW JERSEY

221st LEGISLATURE

INTRODUCED MARCH 24, 2025

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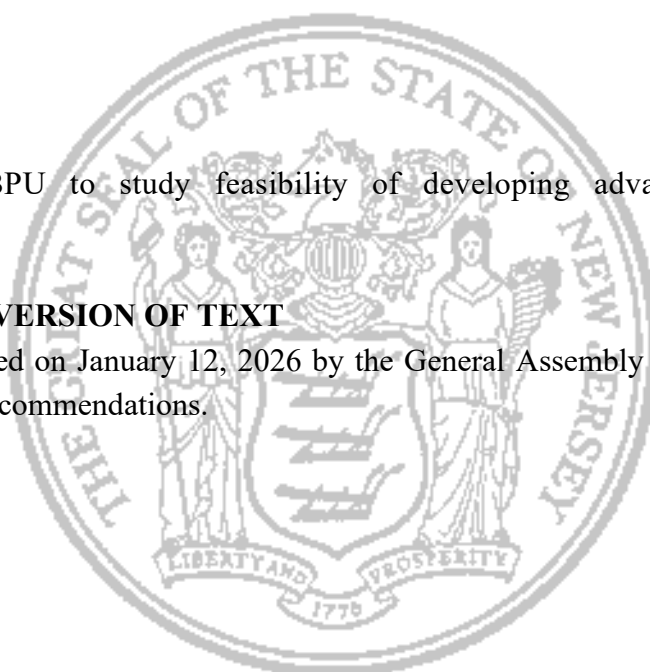
Assemblymen Barranco, Karabinchak, Assemblywomen Ramirez, Murphy, Assemblymen Guardian, Freiman, Assemblywoman Drulis, Assemblyman Calabrese, Senators Turner and Amato

SYNOPSIS

Directs BPU to study feasibility of developing advanced reactors Statewide.

CURRENT VERSION OF TEXT

As amended on January 12, 2026 by the General Assembly pursuant to the Governor's recommendations.



(Sponsorship Updated As Of: 12/22/2025)

1 AN ACT directing the Board of Public Utilities to conduct a study
 2 concerning the development of ²**[small modular]** advanced²
 3 reactors throughout the State ¹**[and making an appropriation]**¹.

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

7
 8 1. The Legislature finds and declares that:

9 a. ²Nuclear energy currently provides over 40 percent of New
 10 Jersey's electricity and represents a reliable, zero-emission baseload
 11 power source.

12 b.² New Jersey is committed to reducing greenhouse gas
 13 emissions while ensuring ²safety,² energy reliability, affordability,
 14 and security ¹**[;]** ¹.

15 ²**[b. Small modular]** c. Nuclear² reactors offer a carbon-free,
 16 safe, and scalable energy solution that ¹**[compliments]**
 17 complements¹ the State's energy and environmental goals ¹**[;]** ¹.

18 ²**[c]** d². In order to successfully deploy ²**[small modular]**
 19 advanced² reactors, the State must conduct feasibility studies to
 20 ensure regulatory clarity, engage with the public, and gain private-
 21 sector investment ¹**[; and]** ¹.

22 ²**[d]** e². It is therefore in the public interest for New Jersey to
 23 establish a structured process to assess the viability of ²**[small**
 24 **modular]** advanced² reactor development throughout the State.

25
 26 2. As used in this act:

27 ²"Advanced reactor" means a nuclear reactor, including a
 28 prototype plant, as defined in 10 C.F.R. s.50.2 and s.52.1, with
 29 significant improvements compared to reactors operating on
 30 December ⁴**[27]** ⁵**[31⁴]** ²⁷⁵, ⁴**[2020]** ⁵**[2017⁴]** ²⁰²⁰⁵, including
 31 improvements such as: (1) additional inherent safety features; (2)
 32 lower waste yields; (3) improved fuel and material performance; (4)
 33 increased tolerance to loss of fuel cooling; (5) enhanced reliability
 34 or improved resilience; (6) increased proliferation resistance; (7)
 35 increased thermal efficiency; (8) reduced consumption of cooling
 36 water and other environmental impacts; (9) the ability to integrate
 37 into electric applications and nonelectric applications; ⁵**[⁴and⁴]**⁵
 38 (10) ⁴[modular sizes to allow for deployment that corresponds with
 39 the demand for electricity or process heat; and (11) operational
 40 flexibility to respond to changes in demand for electricity or process

EXPLANATION – Matter enclosed in bold-faced brackets **[thus]** in the above bill is not enacted and is intended to be omitted in the law.

Matter underlined thus is new matter.

Matter enclosed in superscript numerals has been adopted as follows:

¹Assembly ATU committee amendments adopted May 5, 2025.

²Assembly AAP committee amendments adopted June 19, 2025.

³Senate SEN committee amendments adopted December 1, 2025.

⁴Senate floor amendments adopted December 18, 2025.

⁵Assembly amendments adopted in accordance with Governor's recommendations January 12, 2026.

1 heat and to complement integration with intermittent renewable
 2 energy or energy storage] ⁵[the ability to significantly reduce the
 3 total system cost of a reliable power system⁴] modular sizes to
 4 allow for deployment that corresponds with the demand for
 5 electricity or process heat; and (11) operational flexibility to
 6 respond to changes in demand for electricity or process heat and to
 7 complement integration with intermittent renewable energy or
 8 energy storage⁵ .²

9 “Board” means the Board of Public Utilities.

10 ²“Nuclear reactor” means an apparatus required to be licensed by
 11 the United States Nuclear Regulatory Commission that is designed
 12 or used to sustain nuclear fission in a self-supporting chain
 13 reaction.²

14 “Small modular reactor” or “SMR” means ²[a nuclear fission]
 15 an advanced² reactor that: (1) has a rated electric generating
 16 capacity of ³[²no less than 50 megawatts electric (MWe) and²]³ no
 17 more than ³[300] 1,000³ megawatts ³[²electric (MWe)²] thermal³ ;
 18 (2) ²may be of modular design; ³and³ (3)² is capable of being
 19 constructed and operated either alone or in combination with one or
 20 more similar reactors if additional reactors are or became necessary
 21 at a single site ³]; and ²[(3)] (4)² is required to be licensed by the
 22 United States Nuclear Regulatory Commission]³.

23
 24 3. a. The Board of Public Utilities, in consultation with the
 25 Department of Environmental Protection and the New Jersey
 26 Economic Development Authority, shall conduct a study and
 27 prepare and submit, within 18 months of the effective date of this
 28 act, to the Governor and to the Legislature, pursuant to section 2 of
 29 P.L.1991, c.164 (C.52:14-19.1), a written report concerning the
 30 feasibility of developing ²[small modular] advanced² reactors
 31 throughout the State, including recommendations for the feasibility
 32 of, need for, and design of a ²[pilot]² program for developing small
 33 modular ²or advanced² reactors ²[Statewide]².

34 b. In conducting the study, the board shall:

35 (1) determine suitable locations for deploying ²[small modular]
 36 advanced² reactors, including ⁴current and⁴ former industrial sites
 37 ⁴[and],⁴ retired fossil fuel generation facilities ⁴, and locations on
 38 or near former and current nuclear sites⁴;

39 (2) consult the United States Nuclear Regulatory Commission
 40 for regulatory and permitting requirements;

41 (3) examine the economic viability and potential cost-saving
 42 mechanisms available for ²[SMRs] advanced reactors², including
 43 any federal programs, private investments, and State funding
 44 opportunities;

45 (4) consider safety precautions and environmental impacts,
 46 including, but not limited to ²compliance with applicable laws and

1 regulators² ¹**[:]** ,¹emergency preparedness ²and response²,
2 biohazard waste management, ²cyber security,² and water usage;
3 (5) evaluate the ability to integrate ²**[SMRs]** advanced reactors²
4 with existing energy infrastructure ²and associated cost recovery
5 mechanisms to pay for upgrades or other non-wire alternatives²;
6 (6) conduct a minimum of three public ²**[hearings]** stakeholder
7 sessions² in order to assess public perception, environmental
8 impacts, and stakeholder value in the Statewide development of
9 ²**[SMRs]** advanced reactors²;
10 (7) provide a recommendation on the feasibility of, need for, and
11 design of a ²**[pilot]**² program in the State for deploying ²**[SMRs]**
12 advanced reactors² Statewide; and
13 (8) publish ¹its¹ findings on the board's Internet website.
14 c. ¹**[In addition to the funds appropriated by section 4 of this**
15 **act, the board may also]** The board may¹ secure any sources of
16 funding provided by federal and State grants, ¹**[private sector]**
17 private-sector¹ investments, and public-private partnerships in order
18 to effectuate the provisions of this act.
19
20 ¹**[4. There is appropriated the sum of \$5,000,000 from the**
21 **General Fund to the Board of Public Utilities to effectuate the**
22 **provisions of this act.]**¹
23
24 ¹**[5.]** 4.¹ This act shall take effect immediately ¹**[,]**¹ and shall
25 expire 30 days after the board submits the report required pursuant to
26 subsection a. of section 3 of this act.