

# ASSEMBLY, No. 4483

## STATE OF NEW JERSEY 220th LEGISLATURE

INTRODUCED SEPTEMBER 15, 2022

**Sponsored by:**

**Assemblyman ROBERT J. KARABINCHAK**

**District 18 (Middlesex)**

**Assemblyman JOHN F. MCKEON**

**District 27 (Essex and Morris)**

**Assemblyman DONALD A. GUARDIAN**

**District 2 (Atlantic)**

**Co-Sponsored by:**

**Assemblywomen Piperno, Chaparro, Haider, Assemblymen Stanley, Verrelli and Spearman**

**SYNOPSIS**

Requires study of ocean energy potential; directs BPU to establish wave and tidal energy generation goals and take other action to establish NJ as nationwide leader in ocean energy.

**CURRENT VERSION OF TEXT**

As introduced.



**(Sponsorship Updated As Of: 10/3/2022)**

1 AN ACT concerning the study and promotion of wave and tidal  
2 energy, and supplementing 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 the following:

8 a. Ocean energy represents the third largest source of renewable  
9 energy and the largest source of underutilized renewable energy.  
10 Ocean energy primarily comes in two forms: (1) wave energy,  
11 harnessed by waves; and (2) tidal energy, harnessed by tides.

12 b. The State, through Executive Order No. 28 of 2018 and the  
13 2019 Energy Master Plan, prepared pursuant to Executive Order No.  
14 28 of 2018 and section 12 of P.L.1977, c.146 (C.52:27F-14), has  
15 established an ambitious goal of providing 100 percent clean energy  
16 in the State by 2050, with at least 50 percent of the State's electricity  
17 supply to be derived from renewable energy by 2030.

18 c. Executive Order No. 28 of 2018 and the 2019 Energy Master  
19 Plan each highlight and promote the need for the State to increase its  
20 development and use of renewable energy technologies, facilities,  
21 and resources, with efforts and goals directed towards solar and wind  
22 energy. To expand and enhance both Executive Order No. 28 of 2018  
23 and the 2019 Energy Master Plan, provisions specifically  
24 highlighting and promoting the need for, and benefits of, developing  
25 and using untapped ocean energy, including wave energy, tidal  
26 energy, or both, in the State, as a means to achieve the State's clean  
27 energy goals, should also be included.

28 d. In order to achieve the State's clean energy goals with the  
29 least cost and greatest benefit to consumers, it is critical that the State  
30 not only promote and facilitate investments in wind and solar energy  
31 technologies, infrastructure, and facilities, but also promote and  
32 facilitate concurrent investments in new wave and tidal energy  
33 technologies, infrastructure, and facilities, so that the State can begin  
34 to make full use of the ocean's inexhaustible and untapped sources  
35 of clean energy and, thereby, bolster and expand its renewable energy  
36 portfolio.

37 e. The generation of energy from ocean forces is a new and  
38 emerging field, and, going forward, the availability of effective and  
39 efficient technology and technological innovations will be essential  
40 to ensuring that ocean energy can be generated at the lowest cost to  
41 consumers and in sufficient amounts to meet the State's energy  
42 needs. By promoting and facilitating growth in the emerging wave  
43 and tidal energy sectors and incorporating ambitious, but achievable,  
44 wave and tidal energy generation goals into the State's Energy  
45 Master Plan, New Jersey can position itself as a nationwide leader in  
46 ocean energy, while facilitating the development of high quality jobs  
47 and technological advancements in this burgeoning industry.

1 f. Based on the foregoing, it is both reasonable and necessary,  
2 and in the public interest, for the State to enact legislation requiring:  
3 (1) a comprehensive study of the potential associated with the  
4 adoption and use of wave and tidal energy in New Jersey; (2) the  
5 amendment of the State's Energy Master Plan to incorporate the use  
6 of wave and tidal energy as an integral component of the State's clean  
7 energy planning and goals; and (3) the taking of additional steps, as  
8 may be necessary to position New Jersey as a leader in these  
9 emerging clean ocean energy sectors.

10  
11 2. a. Within 30 days after the effective date of this act, the Board  
12 of Public Utilities and the Department of Environmental Protection  
13 shall commence a comprehensive, collaborative study to evaluate the  
14 feasibility and benefits of using wave and tidal energy as forms of  
15 clean energy in the State. The study shall include an evaluation of:

16 (1) the actual and potential impacts associated with the increased  
17 use of wave and tidal energy in the State, including, but not limited  
18 to, the impacts to labor markets, energy prices, air quality and  
19 greenhouse gas emissions, ocean ecosystems and water quality, grid  
20 transmission, PJM grid operation, grid reliability, and grid security;

21 (2) the feasibility and desirability of establishing a renewable  
22 energy credit program, like the solar renewable energy credit (SREC)  
23 program established pursuant to section 38 of P.L.1999, c.23 (C.48:3-  
24 87), the SREC-II program established pursuant to P.L.2021, c.169  
25 (C.48:3-114 et seq.), and the offshore wind renewable energy  
26 certificate (OREC) program established pursuant to section 38 of  
27 P.L.1999, c.23 (C.48:3-87), by which Wave Renewable Energy  
28 Credits (WRECs) can be used to encourage the development and  
29 successful deployment of wave or tidal energy technologies,  
30 infrastructure, and facilities in the State;

31 (3) the feasibility and desirability of using alternative means and  
32 methods, other than renewable energy credits, such as public-private  
33 partnerships, financial investments, or university involvement, to  
34 encourage and incentivize the development of wave and tidal energy  
35 technologies, infrastructure, and facilities, as well as the creation of  
36 private sector wave and tidal energy jobs, in the State and otherwise  
37 facilitate the establishment of New Jersey a national leader in the  
38 growing wave and tidal energy sectors; and

39 (4) the factors that should be considered, and determinations that  
40 should be made, by the board, when soliciting and approving  
41 proposals for wave and tidal energy projects in the State, including,  
42 at a minimum, the evaluation of existing wave and tidal projects  
43 around the globe that produce technical data, and the determination  
44 that each proposed project in the State will result in a positive net  
45 economic and environmental benefit to the State.

46 b. The board and department shall authorize individuals and  
47 entities to engage in pilot wave and tidal energy projects in the State,  
48 as provided by subsection a. of section 3 of this act, with associated

1 data to be included in the study conducted pursuant to subsection a.  
2 of this section and in the report produced pursuant to subsection d. of  
3 this section.

4 c. In conducting the wave and tidal energy study pursuant to  
5 subsection a. of this section, the board and department shall  
6 cooperatively engage in a robust stakeholder engagement process,  
7 which process shall include consultation with, and the solicitation of  
8 testimony and information from: professionals, businesses,  
9 organizations, and agencies having particular experience or expertise  
10 in the wave and tidal energy sectors; marine biologists,  
11 oceanographers, environmental scientists, and other members of  
12 appropriate scientific fields; representatives of the commercial and  
13 recreational fishing industries; members of the public; and other  
14 relevant and interested parties.

15 d. Not more than three months after the effective date of this act,  
16 the President of the Board of Public Utilities and the Commissioner  
17 of Environmental Protection shall cooperatively prepare and submit  
18 a written report to the Governor and, pursuant to section 2 of  
19 P.L.1991, c.164 (C.52:14-19.2), to the Legislature, identifying the  
20 findings from the study conducted pursuant to subsection a. of this  
21 section, including any findings and relevant data associated with pilot  
22 projects undertaken pursuant to subsection b. of this section, and  
23 providing recommendations for legislative, executive, and other  
24 actions that can be taken to facilitate, encourage, and promote the  
25 development and increased use of wave and tidal energy  
26 technologies, infrastructure, and facilities in the State. At a  
27 minimum, the report shall:

28 (1) include a strategic plan for the deployment of wave and tidal  
29 energy technologies, infrastructure, and facilities in the State, which  
30 shall identify, at a minimum, specific wave energy generation goals,  
31 tidal energy generation goals, or both, in megawatts (MW), that the  
32 State should endeavor to meet by 2030, 2040, and 2050, in order to  
33 ensure the timely and effective deployment of wave and tidal energy  
34 technologies and the sufficient incorporation of wave and tidal  
35 energy into the State's energy portfolio;

36 (2) identify the procedures and standards that will be used by the  
37 board in soliciting and approving proposals for wave and tidal energy  
38 projects in the State; and

39 (3) describe the renewable energy financial incentives, if any, and  
40 any other alternative means and methods, that should or will be used  
41 by the board and the department to: (a) facilitate the development of  
42 wave and tidal energy technologies, infrastructure, and facilities in  
43 the State; (b) promote technological innovation in the wave and tidal  
44 energy sectors; (c) ensure the achievement of the goals established  
45 pursuant to paragraph (1) of this subsection; and (d) otherwise  
46 establish New Jersey as a nationwide leader in the wave and tidal  
47 energy sectors.

1 e. The Energy Master Plan Committee, in its adoption of the first  
2 update of the Energy Master Plan, pursuant to section 12 of P.L.1977,  
3 c.146 (C.52:27F-14), following the effective date of this act, shall  
4 incorporate, into the Energy Master Plan, information regarding the  
5 wave and tidal energy strategic plan that has been developed pursuant  
6 to paragraph (1) of subsection c. of this section, and, to the extent  
7 practicable, the wave and tidal energy generation goals recommended  
8 by the strategic plan.

9  
10 3. a. Pilot project data shall be included in the wave and tidal  
11 energy study completed, and in the wave and tidal energy report  
12 produced, pursuant to section 2 of this act. The Board of Public  
13 Utilities shall solicit and approve applications for, and take other  
14 appropriate action to facilitate, the implementation of pilot wave and  
15 tidal energy projects, in the State, for these purposes.

16 b. Acting in accordance with the recommendations set forth in  
17 the report produced pursuant to section 2 of this act, the Board of  
18 Public Utilities shall:

19 (1) solicit and approve applications for, and take appropriate  
20 action to facilitate, through the use of renewable energy credits or  
21 other financial or non-financial incentives, the continuation of pilot  
22 projects commenced under this act, and the initiation of new wave  
23 and tidal energy projects that will result in a positive net economic  
24 and environmental benefit to the State;

25 (2) promote, and take appropriate action to facilitate, the creation  
26 of private sector jobs in the wave and tidal energy sectors;

27 (3) promote, and take appropriate action to facilitate, the  
28 stabilization of energy costs, the enhancement of grid security and  
29 reliability, and the enhancement of environmental quality, through  
30 the increased use of wave and tidal energy;

31 (4) engage in an ongoing public education and awareness  
32 campaign, and take other appropriate action, both in order to  
33 highlight the importance of wave and tidal energy as new components  
34 of the State's clean energy plans and in order to promote the  
35 increased harnessing and use of ocean energy, the advancement of  
36 wave and tidal energy technologies, and the increased construction  
37 and development of new wave and tidal energy infrastructure and  
38 facilities in the State, as a means to enhance energy grid reliability  
39 and security, meet the State's clean energy goals, enhance  
40 environmental quality, and develop a high quality, next-generation  
41 job market in wave and tidal energy; and

42 (5) take other appropriate actions, as may be necessary to  
43 establish New Jersey as a nationwide leader in the emerging wave  
44 and tidal energy sectors.

45 c. In implementing the provisions of this section, the board shall  
46 coordinate with the Bureau of Ocean Energy Management in the  
47 United States Department of the Interior to facilitate the leasing or  
48 permitting of offshore areas, under federal jurisdiction, for wave or

1 tidal energy projects, and shall coordinate with the Department of  
2 Environmental Protection to facilitate the leasing or permitting of  
3 coastal or onshore areas, under State jurisdiction, for such purposes.

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5 4. This act shall take effect immediately.

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8 STATEMENT

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10 This bill would require a study of the ocean's energy potential in  
11 the State, and it would further provide for the State's clean energy  
12 plans and goals to be updated to incorporate new goals related to the  
13 generation of wave and tidal energy, which are both forms of clean  
14 energy that are derived from untapped and inexhaustible ocean  
15 resources.

16 Specifically, the bill would require the Board of Public Utilities  
17 (BPU) and the Department of Environmental Protection (DEP),  
18 within 30 days after the bill's effective date, to commence a  
19 comprehensive, collaborative study to evaluate the feasibility and  
20 benefits of using wave and tidal energy as forms of clean energy in  
21 the State. The BPU and DEP would be required, in conducting the  
22 study, to: (1) evaluate various factors related to the increased use of  
23 wave and tidal energy in the State; and (2) authorize individuals and  
24 entities to engage in pilot wave and tidal energy projects in the State.

25 Not more than three months after the bill's effective date, the  
26 President of the BPU and the DEP Commissioner would be required  
27 to cooperatively prepare and submit a written report, to the Governor  
28 and the Legislature, identifying the findings from the wave and tidal  
29 energy study, and providing recommendations for legislative,  
30 executive, and other actions that can be taken to facilitate, encourage,  
31 and promote the development and increased use of wave and tidal  
32 energy technologies, infrastructure, and facilities in the State.  
33 Among other things, the report would be required to include a  
34 strategic plan for the deployment of wave and tidal energy  
35 technologies, infrastructure, and facilities in the State, which  
36 strategic plan is to identify, at a minimum, specific wave energy  
37 generation goals, tidal energy generation goals, or both, in megawatts  
38 (MW), that the State should endeavor to meet by 2030, 2040, and  
39 2050, in order to ensure the timely and effective deployment of wave  
40 and tidal energy technologies and the sufficient incorporation of  
41 wave and tidal energy into the State's energy portfolio.

42 The bill would require the Energy Master Plan Committee, in its  
43 adoption of the first update of the State's Energy Master Plan  
44 following the bill's effective date, to incorporate, into the Energy  
45 Master Plan, information regarding the wave and tidal energy  
46 strategic plan developed under the bill, and, to the extent practicable,  
47 the wave and tidal energy generation goals recommended by the  
48 strategic plan.

1       The bill would require the BPU to solicit and approve applications  
2 for, and to take appropriate action to facilitate, the initiation of pilot  
3 wave and tidal energy projects in the State as part of the wave and  
4 tidal energy study conducted under the bill, with data from the pilot  
5 projects to be included in the study, as well as in the report that is  
6 prepared pursuant to the bill. The bill would further require the BPU,  
7 acting in accordance with the recommendations set forth in the  
8 report, to solicit and approve applications for, and to take other  
9 appropriate action to facilitate, through the use of renewable energy  
10 credits or other financial or non-financial incentives, the continuation  
11 of pilot projects commenced under the study, as well as the initiation  
12 of new wave and tidal energy projects that will result in a positive  
13 net economic and environmental benefit to the State. The BPU would  
14 further be required to take certain other affirmative agency actions to  
15 facilitate the development of the wave and tidal energy sectors in this  
16 State.

17       The BPU would be required to coordinate with the Bureau of  
18 Ocean Energy Management in the U.S. Department of the Interior to  
19 facilitate the leasing or permitting of offshore areas, under federal  
20 jurisdiction, for wave or tidal energy projects, and it would be  
21 required to coordinate with the DEP to facilitate the leasing or  
22 permitting of coastal or onshore areas, under State jurisdiction, for  
23 such purposes.