

## CHAPTER 328

**AN ACT** directing the Board of Public Utilities to conduct a study on the feasibility, marketability, and costs of implementing large-scale geothermal heat pump systems in the State.

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

1. a. As used in this section:

“Geothermal energy” means energy derived from the earth, its surface, or natural geological features such as volcanos, fumaroles, hot springs, and geysers.

“Geothermal heat pump system” means infrastructure that employs geothermal heat pumps and ground heat exchangers to use the constant temperatures in the ground or water near the surface of the earth to heat and cool buildings.

“Geothermal heat pump” means a ground-source heat pump.

“Ground heat exchanger” means a network of underground pipes, water wells, or other infrastructure used in a geothermal heat pump system to draw heat from the ground into a building for heating the building during cooler months and draw heat from a building into the ground for cooling the building during warmer months.

“Ground-source heat pump” means a pump used to transfer heat to and from the ground or surface water and is a term commonly used for a geothermal heat pump that is part of a geothermal heat pump system.

b. The Board of Public Utilities shall conduct a study on the feasibility and benefits of implementing large-scale geothermal heat pump systems in the State.

c. In conducting the study, the board shall:

(1) assess the challenges and obstacles for the installation of large-scale geothermal heat pump systems in the State;

(2) consult with the United States Department of Energy concerning the department’s assessment of the possibility of the large-scale use of geothermal energy in the State and whether the State’s temperature resources can be tapped for ground-source heat pumps;

(3) consult with other states, including, but not limited to, Massachusetts and New York, concerning studies and pilot programs implemented or conducted in those states, and assess how other states’ experiences with large-scale geothermal heat pump systems may be used to inform effective program implementation in New Jersey;

(4) consult with geothermal experts and public and private entities with experience in the installation of geothermal heat pump systems on any scale and obtain information to evaluate the potential use and implementation of large-scale geothermal heat pump systems in the State;

(5) consult with public utilities in the State and other states concerning feasibility, costs, and benefits of the use of geothermal energy and large-scale geothermal heat pump systems;

(6) assess the energy efficiency measures that can be employed, and the costs of using geothermal energy and implementing large-scale geothermal heat pump systems, in new building construction;

(7) determine whether establishing a financial incentive system, or using other available means and methods, such as public-private partnerships, financial investments, or university involvement, is necessary to encourage and incentivize the development and successful deployment of geothermal energy and large-scale geothermal heat pump systems, and, if so, whether the requisite incentives or other means and methods would be affordable and to what extent their costs should be borne by ratepayers;

(8) evaluate the marketability of geothermal energy and large-scale geothermal heat pump systems, and consider methods to promote the use of geothermal energy and large-scale

geothermal heat pump systems to ratepayers, government entities, electric public utilities, and the builders of commercial and residential buildings;

(9) conduct an assessment to compare the energy efficiency and costs of common energy sources, such as, but not limited to, natural gas, propane, and fuel oil, to the energy efficiency and costs of geothermal energy, in commercial and residential buildings, while taking into consideration the following: (a) the square footage of commercial buildings and (b) the number of multi-family units and single family units in residential buildings;

(10) evaluate the costs and savings to ratepayers, government entities, electric public utilities, and the State associated with the implementation of the findings and recommendations of the written report submitted pursuant to subsection d. of this section, including the use of financial incentives or other means to encourage replacement of current heating and cooling systems with large-scale geothermal heat pump systems if determined to be necessary pursuant to paragraph (7) of this subsection, and incorporate into the written report any analysis or assessment thereof; and

(11) provide a recommendation on the feasibility of, need for, and design of a pilot program in the State for the installation of large-scale geothermal heat pump systems.

d. Within two years after the effective date of this section, the board shall prepare and submit a written report to the Governor and, pursuant to section 2 of P.L.1991, c.164 (C.52:14-19.1), to the Legislature summarizing the findings from the study, providing recommendations for the feasibility, need for, and design of a pilot program, and for legislative, executive, and other actions.

2. This act shall take effect immediately.

Approved January 16, 2024.