

August 8th, 2019

Dear New Jersey EMP Committee:

Aquatherm Industries, Inc. is a solar manufacturing company located in Lakewood, New Jersey. Our company was founded in 1989, and its roots in this State stretch back to the mid 1970's to the beginning of this country's modern solar industry.

Aquatherm Industries fully supports New Jersey's goal of de-carbonization, and we commend the EMP Committee's inclusion of renewables its strategies thus far.

Sadly, though the word "solar" appears 140 times in the 108-page Draft EMP document, Aquatherm and others like it are excluded; our company represents the thermal, or heating and cooling, sector of the solar industry. Instead of converting photons to electrons, solar thermal transfers solar heat energy directly to an end use – in the case of our products, pool water.

Our core market is the heating of swimming pools, both residential and commercial. Our products provide a 100% clean, renewable alternative to heating a pool with fossil-fuels, with a three to five year payback when compared to the operating costs of a natural gas pool heater.

In New Jersey, the average residential pool that is heated to 83 degrees with natural gas from Memorial Day to Labor Day consumes 1,300 therms of gas and results in 7 metric tons of carbon emissions annually. According to the EPA that's equivalent to the emissions caused by driving a passenger vehicle 17,000 miles a year.

NESPA – the Northeast Spa and Pool Association – estimates New Jersey is home to as many as 100,000 inground residential pools. Assuming that just 50% of these are heated with natural gas would indicate a resultant carbon footprint of 350,000 metric tons every year. If those same pools were heated instead by heat pump pool heaters operating at a COP of 6, the resultant new load on the electric grid would be 275 gigawatt hours annually.

Moving beyond pools at private homes, there are an additional 7,000 commercial pools in the state, located at hotels and motels, apartment complexes and condo associations, health clubs, camps, and schools. At many of these facilities, a heated pool is considered a regular cost of doing business, an amenity they have little choice in providing to their customers.

The typical commercial pool, heated seasonally, can easily consume 2 to 3 times the energy of a residential pool. Further, many of the state's commercial pools are indoor and open year round, requiring even more energy to heat them to the same temperature as open air pools.

For natural gas, the beginning of the end is here. As I'm sure this Committee is well aware, last month the City of Berkeley California became the first in the country to ban natural gas in new construction. San Francisco recently announced it's trying to do the same. Closer to home, Westchester County in New York put a moratorium on new gas connections in March of this year.

We often hear that heating a residential pool is a luxury. If that's true, then we say heating a pool with natural gas is a luxury we can no longer afford. A ban on the use of natural gas for residential pool heating truly is low hanging fruit.

Commercial pool heating, on the other hand, is a good candidate for financial incentives. One example of a success story is the California Solar Initiative, a ratepayer-funded program which provided a rebate to commercial pool facilities that installed a solar heater, based on threms of natural gas displaced. Over the next 15-20 years, the systems installed as a result of the program are expected to displace nearly 33 million therms, and avoid 173,000 metric tons of carbon emissions, at a program cost of just \$12,000,000 over the past 6 years.

In closing, we ask the Committee to please consider *all* solar technologies, including solar thermal, when finalizing the Energy Master Plan and determining the future of this state's clean energy economy.

Sincerely,



Dan Szelove
Sales & Marketing Manager
Aquatherm Industries, Inc.