ISE Student Chapter Newsletter

September 2025

I hope you all had a wonderful, warm, and sunny summer. This newsletter will hopefully ease us back into thinking about some of the fast-changing sustainable energy news and what's happening with the ISE.

Here are the highlights:

The modern space race, bringing nuclear energy to the Moon.

Upcoming ISE student chapter events and sustainable energy courses

An attack against New England's nearly complete offshore wind farm

Upcoming ISE student chapter events

Sustainable energy in Rhode Island. Abigail Hasenfus, *RI Office of Energy Resources*.

Friday September 26th @ 10:30 am ERC 125

A Renewable Energy Crash Course. *Round table discussion*.

Some October date and time

How sustainable energy projects get funded. *Round table disscussion*

Some November date and time

Sustainable energy courses offered this fall

ENGN 1705/2705: Sustainable Energy: Science and Technology

ENGN 1931P: Energy and the Environment

ENVS 1925: Energy Policy and Politics

PHYS 1570/2570: Physics of Climate and Energy

ENGN 1931A: Photovoltaics Engineering

ENVS 1400: Sustainable Design in the Built Environment

The modern space race: Nuclear reactors on the Moon

"There's a certain part of the moon that everyone knows is the best... We wanna get there first and claim that for America," -Sean Duffy, US transportation secretary and Trump's appointed NASA administrator

NASA has announced new ambitious goals to establish the first nuclear reactor on the Moon by 2030. Similar announcements made by China and Russia earlier this year to build nuclear reactors on the Moon by 2035 motivate the USA to build the first reactor and avoid other countries declaring a keep-out zone on the Moon. However, the power generated on the Moon isn't being sent back to Earth; it's supposedly intended to power a long-term lunar human base.

"NASA Plans to Put a Nuclear Reactor on the Moon. Here's What That Means." Npr, 8 Aug. 2025.

The modern space race: Nuclear reactors on the Moon

Why nuclear and not solar power?

If NASA intends to build a base for long-term human occupation on the Moon, nuclear is a better power solution than solar and batteries. The Moon's orbital and rotational patterns around the Earth result in two weeks of sunlight and two weeks of darkness, over its 28-day orbit, making solar power inefficient long-term.

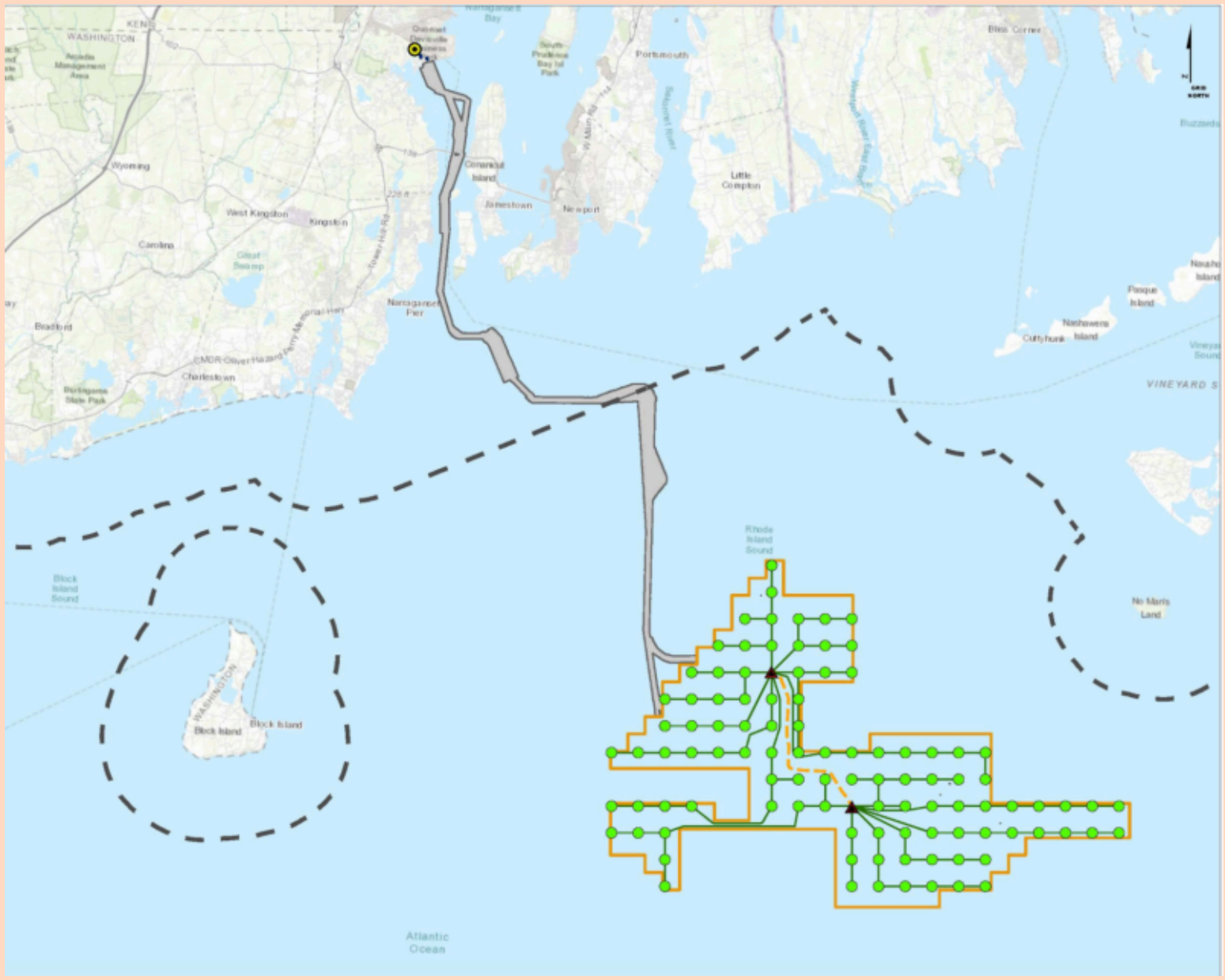
How will the reactor work?

The reactor built on the Moon would operate similarly to the reactors in the USA. The largest difference is the cooling and heat rejection processes. Without an atmosphere or large amounts of water, the nuclear reactor on the Moon would have to radiate the excess heat directly into space in a controlled and safe manner. Another challenge posed is the transportation of the radioactive uranium fuel through Earth's atmosphere to the Moon.

"NASA to put nuclear reactor on the Moon by 2030 - US media." BBC, 5 Aug. 2025.

"NASA's Fission Surface Power Project Energizes Lunar Exploration." NASA, 21 Jan. 2024.

Trump halted all work on the RI/MA offshore wind farm, which was 80% complete.



Revolution Wind is a 704-megawatt (MW) offshore wind farm off the coast of Massachusetts and Rhode Island that was ordered to halt ongoing construction on August 22, 2025.

The 65 turbines were estimated to deliver electricity to power 350,000 New England homes.

https://www.boem.gov/renewable-energy/state-activities/revolution-wind

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How will this impact New England?

The Connecticut Department of Energy and Environmental Protection (DEEP) conducted an analysis on the economic impact of the stop-work order. DEEP estimates that preventing the turbines from producing electricity will **add $500 million per year to the predicted consumer energy costs**.

DEEP Press Release, 09/09/2025

ISO New England (the regional electricity transmission organization) has been expecting this project to come online. The additional 704 MW capacity has been factored into the ISO grid planning and reliability analyses, **increasing electricity uncertainty in already uncertain energy times.**

“US halt of wind project defies explanation, New England officials say.” Nichola Groom, Reuters, 26 August. 2025.

Places to learn more

Canary Media: Free daily, weekly, monthly newsletters on the clean energy transition.

The Energy Gang Podcast: A Wood Mackenzie bi-weekly podcast of current stories and developments in energy and clean tech.