



U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY

Opening Statement

**Chairman Conor Lamb (D-PA)
of the Subcommittee on Energy**

Subcommittee on Energy Hearing:

Water and Geothermal Power: Unearthing the Next Wave of Energy Innovation

Wednesday, November 14, 2019

Good afternoon and thank you to this distinguished panel of witnesses for joining us today. This afternoon we'll be holding another hearing on clean energy technology research and development. I believe this will be our eighth hearing this Subcommittee has held this Congress to help us focus our scientific research priorities, create major new job opportunities, and address and mitigate the growing impacts of climate change. Today's hearing focuses on two draft bills that would support critical research activities to provide cleaner electricity by utilizing geothermal energy and water power technologies.

The Earth contains vast amounts of heat just under its surface, which can be tapped and turned into electricity. Today, just 0.4% of total U.S. utility-scale electricity generation is produced by geothermal power plants. The Department of Energy Geothermal Technologies Office has programs focused on conventional geothermal energy production from hydrothermal resources, such as geysers, as well as research focused on enhanced geothermal systems research, which could help us access the higher temperatures deeper underground. This has the potential to increase geothermal electric power generation to 60 gigawatts of installed capacity by 2050, up from about 4 gigawatts today. This growth potential is why it is important for us to focus research and development on this promising clean energy technology.

The draft Geothermal Energy Research and Development Act of 2019 would reauthorize the activities of the DOE Geothermal Technologies Office. In addition to laying out focus areas for both conventional and enhanced geothermal energy systems, this legislation also instructs the Secretary to establish a demonstration initiative for enhanced geothermal energy systems. At least one of the demonstration projects in this initiative must be located in the Eastern U.S., which currently has no such facility. Finally, the bill would authorize two Frontier Observatory for Research in Geothermal Energy, or FORGE sites, including the site DOE selected in Milford, Utah. Today we will hear from Dr. Joseph Moore, who is the project manager at this site. The FORGE initiative is crucial for demonstrating and testing geothermal technologies.

Another clean energy technology we will be discussing today is water power technologies, which include conventional hydropower, pumped storage, and marine energy technologies. Around 7% of total U.S. utility-scale electricity generation is produced by conventional hydropower. Pairing this technology with pumped storage systems allows energy produced by hydropower plants to be deployed to the grid flexibly.

Marine energy, which includes wave, tidal, and current power, is another water power technology that has great potential. DOE's "Powering the Blue Economy" initiative highlights the importance of each maritime industry to the success of other such industries. Investing in marine energy technology can improve other areas of coastal and maritime markets, such as underwater vehicle charging and aquaculture. Given the overlap and interdependence between these industries, it makes sense to address the "blue economy" as a whole.

The Water Power Technologies Office at DOE supports research across a wide range of technologies. The draft Water Power Research and Development Act of 2019 emphasizes key R&D focus areas and supports important technology demonstration activities. It also authorizes existing and new National Marine Energy Centers, which are testing sites for marine energy technologies hosted by academic institutions and funded by both government and private industry. Today we are lucky to have Dr. Bryson Robertson, co-director of the Pacific Marine Energy Center, testify about the important research done at these Centers.

I thank our panel of witnesses again for being here today and I look forward to their input and feedback on these important topics and this draft legislation.