

House subcommittee holds hearing on the energy-water nexus

March 7, 2019

On March 7, the Subcommittee on Energy of the House Science, Space and Technology Committee met to discuss the complex web of connections between the energy and water sectors, as well as the implications of this nexus for society and the economy. The committee heard from experts in academia, industry, and the non-profit sector.

According to the Department of Energy (DOE), water and energy systems are interdependent and opportunities exist to co-optimize both systems. Kate Zerrenner, senior manager at the Environmental Defense Fund, emphasized the positives and negatives of this interdependence during the hearing, saying that “the two sectors simply cannot function without each other, but currently neither fully considers the needs and impacts of the other, which is having huge impacts on the availability of both resources.” Michael E. Webber, chief science and technology officer at ENGIE, agreed with this sentiment, affirming that increasing the efficiency of both sectors reduces environmental impacts and improves the resiliency of existing infrastructure because “saving water saves energy and saving energy saves water.”

Raman P. Singh, Associate Dean for Engineering at Oklahoma State University, made the case for a national focus on oil and natural gas production, which he argued offers the benefits of job creation, energy for economic and social development, and energy security while the U.S. transitions to more renewable forms of energy. Singh noted that just focusing on oil and gas would not suffice, and acknowledged the high levels of trans-disciplinary complexity associated with the engineering systems required to solve issues at the energy-water nexus. He proposed that there is not just one solution, and that a diverse, interdisciplinary effort is required to solve these large-scale issues.

Given the scale and rapid evolution of the national energy system, Zerrenner pointed to a lack of cohesive national policies that “incorporate water into energy policy discussions and vice versa,” with widely varying frameworks and objectives in energy and water policy from region to region. She highlighted that \$325 billion will be needed in the next 20 years to maintain and update water infrastructure, including pipes and meters, and that effective policy can play a key role in funding necessary updates to critical infrastructure.

The hearing was preceded by the introduction of the Energy and Water Research Integration Act (H.R. 34) on January 3 by Eddie Bernice Johnson (D-TX-30) and Frank Lucas (R-OK-3), with the intention of instructing the Department of Energy to consider water intensity in its energy research and development (R&D) programs. Energy Subcommittee Chair Conor Lamb (D-PA-17) has expressed that this bill is crucial as it aims to decrease water and energy intensity by assimilating water considerations into DOE’s energy R&D programs.

Sources: Department of Energy; Library of Congress; U.S. House, Subcommittee on Energy.
