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

Airborne Wind Energy Research and Development Act

Introduced by Congressman Jamaal Bowman (D-NY) and Randy Weber (R-TX)

The Airborne Wind Energy Research and Development Act would establish a research, development, demonstration, and commercial application program at the Department of Energy to improve understanding of the benefits, design, and impacts of airborne wind energy generation. Airborne wind energy (AWE) technologies convert wind energy into electricity using tethered flying devices. Designs for these technologies currently vary widely and are differentiated by generator location, wing structure, and takeoff and landing strategies.

This bill originated from a reporting requirement in the Energy Act of 2020 that required DOE to study the potential and viability of airborne wind to provide a significant source of energy for the United States. In *Challenges and Opportunities for Airborne Wind Energy in the United States,* DOE concluded that if captured economically, AWE could provide a significant source of energy. The report then laid out the necessary RD&D steps necessary to achieve a successful airborne wind energy industry. The Airborne Wind Energy Research and Development Act has been crafted based on these recommendations, which received input from over 100 stakeholders in the airborne wind space such as NGOs, academics, and the private sector.

A diverse portfolio of clean energy sources is essential to ensuring a reliable grid, and airborne wind has the potential to be a valuable resource, and provide steady energy generation, as winds at high altitudes can remain more constant than wind at ground level. AWE also has the key benefit of being flexible, and could provide power generation in areas that are not connected to the grid. Furthermore, unlike traditional wind turbines, AWE could be built out where land development opportunities are scarce, such as in densely populated areas. This bill supports research into the quantity and quality of wind resources above 200 meters, as well as seeks to improve understanding of various AWE technical designs that can maximize opportunities.

There are still many unknowns that remain in this emerging field, but that is why it is critical to invest our research dollars into ensuring that we get this right. This bill instructs the Department to research social and environmental impacts of airborne wind energy, as well as come up with solutions for any potential concerns. In order to create a successful AWE industry, social acceptance of the technology is key, and social scientists must be a part of every step of the development process.

Finally, the Airborne Wind Energy Research and Development Act authorizes appropriations at $5 million in FY23 rising to a little over $6 million in FY27.