

Area of Interest Announcement: Hydrogen Production and End Use Demonstration

NE and DOE's Office of Energy Efficiency and Renewable Energy (EERE) - [Hydrogen and Fuel Cell Technologies Office \(HFTO\)](#) intend to make available up to \$20 million (M) for 1 to 2 projects that demonstrate the integration of nuclear energy with hydrogen production systems and end use applications. While applications will be continuously accepted for work meeting the FOA objectives until it closes in December 2022, it is DOE's intent to award up to \$12M from EERE and \$6M from NE for projects demonstrating integrated hydrogen production and utilization from applications received during Cycle 2021-1, which closes on April 30, 2021, 5:00 p.m. Eastern Time (ET). If projects are not awarded or if funding remains, DOE will announce the continued availability of funding in this area and request additional applications.

Activities of interest include nuclear-powered hydrogen production (at least 1 megawatt (MW)), with flexible operation to manage electrical demand and intermittent renewable energy on the grid. Proposed projects must also include integration of a specific hydrogen end use demonstration, focusing on applications that offer potential for significant greenhouse gas emission reduction, as well as cost competitive market potential. End use applications may include, but are not limited to transportation, power generation, or industrial processes. Examples include using hydrogen for the production of chemicals such as ammonia or other hydrogen carriers, or for manufacturing products such as steel or cement. Proposed projects must demonstrate full system integration with emphasis on end use application, and include energy storage systems, distribution, fueling, and/or sale of the hydrogen (or hydrogen carrier) as necessary. Nuclear facilities that leverage electrolyzers currently available (or planned) are encouraged. Applications should address system design and cost analysis, safety and risk assessment, integration with reactor operations if required, system optimization and controls, cybersecurity, regulatory engagement, and power acquisition or end use/offtake agreements as appropriate.

This solicitation aligns with [DOE's Hydrogen Program Plan](#) and with EERE HFTO's H2@Scale vision to enable clean and affordable hydrogen production, storage, transport and use across multiple sectors in the economy. EERE is funding numerous H2@scale projects including [demonstrations of large-scale hydrogen utilization](#) at ports and data centers and across industrial sectors like steel making.

[Learn more](#) about the synergies between hydrogen and nuclear energy, and apply for this funding opportunity by April 30, 2021 5:00 p.m. ET.