Amendment to the Rules Committee Print

For H.R. 8

Offered by Mr. Grayson of Florida

At the end of the bill, add the following new title:

Title VII—Fusion Innovation

Sec. 7001. Short Title.

This title may be cited as the “Fusion Innovation Act of 2015”.

Sec. 7002. Fusion Innovation Initiative.

(a) In General.—Not later than 6 months after the date of enactment of this Act, the Director of the Office of Science of the Department of Energy shall establish a Fusion Innovation Initiative. Under the Initiative, the Director shall issue a competitive, merit-reviewed funding opportunity announcement to solicit proposals for engineering designs for innovative fusion energy systems, including upgrades to existing facilities, which have the potential to demonstrate net energy production not later than 7 years after the start of construction.

(b) Application Requirements.—In order to be eligible to receive an award under this section, an applicant shall submit an application to the Director that includes—
(1) a detailed cost estimate and schedule for construction of the design, including a summary of any design modifications that would accelerate the achievement of net energy production; and

(2) an assessment of the scalability of the design.

(c) AWARD AND DESIGN SUBMISSION.—

(1) AWARD.—The Director shall review each application submitted under subsection (b) and shall provide awards to applicants with design concepts that the Director considers to have potential based on the criteria described in subsection (a).

(2) DESIGN SUBMISSION.—As a condition of receiving such award, the Director shall require any such applicant to submit the design upon which the application is based to the Director not later than 18 months after receipt of the award.

(d) ASSESSMENT.—The Director shall carry out an assessment of each design submitted under subsection (c)(2) to determine which designs, if any, merit support from the Department due to their potential to demonstrate net energy production not later than 7 years after the start of construction, and shall—
(1) submit the assessment to Congress not later than 30 months after the date of enactment of this Act; and

(2) assign top priority to, and provide expedited financial support (to the extent provided in advance in appropriations Acts) for, relevant construction activities for any design that the Director determines merits such support, based on the project management practices of the Office of Science.

SEC. 7003. RESOURCE AND INFORMATION SHARING.

(a) IN GENERAL.—To the extent practicable, the Secretary of Energy shall establish open, transparent processes to share unclassified resources and information that will accelerate the advancement of fusion energy technologies among researchers from the National Laboratories, institutions of higher education, and the private sector. Such resources and information shall include—

(1) advanced computing platforms and simulation codes;

(2) diagnostic equipment information; and

(3) pulsed power system information.

(b) COMPUTING.—

(1) IN GENERAL.—The Secretary shall establish processes to make unclassified, proprietary simulation codes relevant to the development of a fusion
energy system, that are controlled by a National Laboratory, available to researchers from other National Laboratories, institutions of higher education, and the private sector.

(2) Shared Platforms.—The Secretary shall support shared platforms for the codevelopment of simulation codes for fusion energy systems among researchers from the National Laboratories, institutions of higher education, and the private sector.

(c) Personnel Exchanges.—The Secretary shall establish a process for fusion researchers from the National Laboratories to serve limited-term residencies at private sector companies working to advance fusion technologies. Such residencies shall be entirely supported by the host companies.

SEC. 7004. FUSION DEMONSTRATION SITES.

(a) Report Required.—Not later than 180 days after the date of enactment of this Act, the Secretary of Energy, in consultation with the National Laboratories, relevant Federal agencies, and stakeholders, shall transmit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report assessing the Department of Energy’s capabilities to authorize, host, and oversee privately funded fusion prototypes with
up to 20 megawatts thermal output and related demonstration facilities at sites owned by the Department.

(b) REPORT ELEMENTS.—The report described in subsection (a) shall address the following:

(1) The Department’s safety review and oversight capabilities.

(2) Potential sites capable of hosting research, development, and demonstration of prototype reactors and related facilities, for the purpose of reducing technical risk.

(3) The Department’s and the National Laboratories’ existing physical and technical capabilities relevant to research, development, and oversight.

(4) The efficacy of the Department’s available contractual mechanisms, including cooperative research and development agreements, work-for-others agreements, and agreements for commercializing technology.

(5) Potential cost structures related to physical security, decommissioning, liability, and other long-term project costs.

(6) Other challenges or considerations identified by the Secretary, including issues related to potential cases of demonstration reactors with up to 2 gigawatts of thermal output.
SEC. 7005. NATIONAL LABORATORIES.

In this title, the term “National Laboratories” has the meaning given the term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).