

**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:

1 **TITLE VII—FUSION INNOVATION**

2 **SEC. 7001. SHORT TITLE.**

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

5 **SEC. 7002. FUSION INNOVATION INITIATIVE.**

6 (a) **IN GENERAL.**—Not later than 6 months after the
7 date of enactment of this Act, the Director of the Office
8 of Science of the Department of Energy shall establish a
9 Fusion Innovation Initiative. Under the Initiative, the Di-
10 rector shall issue a competitive, merit-reviewed funding
11 opportunity announcement to solicit proposals for engi-
12 neering designs for innovative fusion energy systems, in-
13 cluding upgrades to existing facilities, which have the po-
14 tential to demonstrate net energy production not later
15 than 7 years after the start of construction.

16 (b) **APPLICATION REQUIREMENTS.**—In order to be
17 eligible to receive an award under this section, an appli-
18 cant shall submit an application to the Director that in-
19 cludes—

1 (1) a detailed cost estimate and schedule for
2 construction of the design, including a summary of
3 any design modifications that would accelerate the
4 achievement of net energy production; and

5 (2) an assessment of the scalability of the de-
6 sign.

7 (c) AWARD AND DESIGN SUBMISSION.—

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

13 (2) DESIGN SUBMISSION.—As a condition of re-
14 ceiving such award, the Director shall require any
15 such applicant to submit the design upon which the
16 application is based to the Director not later than
17 18 months after receipt of the award.

18 (d) ASSESSMENT.—The Director shall carry out an
19 assessment of each design submitted under subsection
20 (c)(2) to determine which designs, if any, merit support
21 from the Department due to their potential to dem-
22 onstrate net energy production not later than 7 years after
23 the start of construction, and shall—

1 (1) submit the assessment to Congress not later
2 than 30 months after the date of enactment of this
3 Act; and

4 (2) assign top priority to, and provide expedited
5 financial support (to the extent provided in advance
6 in appropriations Acts) for, relevant construction ac-
7 tivities for any design that the Director determines
8 merits such support, based on the project manage-
9 ment practices of the Office of Science.

10 **SEC. 7003. RESOURCE AND INFORMATION SHARING.**

11 (a) IN GENERAL.—To the extent practicable, the Sec-
12 retary of Energy shall establish open, transparent proc-
13 esses to share unclassified resources and information that
14 will accelerate the advancement of fusion energy tech-
15 nologies among researchers from the National Labora-
16 tories, institutions of higher education, and the private
17 sector. Such resources and information shall include—

18 (1) advanced computing platforms and simula-
19 tion codes;

20 (2) diagnostic equipment information; and

21 (3) pulsed power system information.

22 (b) COMPUTING.—

23 (1) IN GENERAL.—The Secretary shall establish
24 processes to make unclassified, proprietary simula-
25 tion codes relevant to the development of a fusion

1 energy system, that are controlled by a National
2 Laboratory, available to researchers from other Na-
3 tional Laboratories, institutions of higher education,
4 and the private sector.

5 (2) SHARED PLATFORMS.—The Secretary shall
6 support shared platforms for the codevelopment of
7 simulation codes for fusion energy systems among
8 researchers from the National Laboratories, institu-
9 tions of higher education, and the private sector.

10 (c) PERSONNEL EXCHANGES.—The Secretary shall
11 establish a process for fusion researchers from the Na-
12 tional Laboratories to serve limited-term residencies at
13 private sector companies working to advance fusion tech-
14 nologies. Such residencies shall be entirely supported by
15 the host companies.

16 **SEC. 7004. FUSION DEMONSTRATION SITES.**

17 (a) REPORT REQUIRED.—Not later than 180 days
18 after the date of enactment of this Act, the Secretary of
19 Energy, in consultation with the National Laboratories,
20 relevant Federal agencies, and stakeholders, shall transmit
21 to the Committee on Science, Space, and Technology of
22 the House of Representatives and the Committee on En-
23 ergy and Natural Resources of the Senate a report assess-
24 ing the Department of Energy's capabilities to authorize,
25 host, and oversee privately funded fusion prototypes with

1 up to 20 megawatts thermal output and related dem-
2 onstration facilities at sites owned by the Department.

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

5 (1) The Department’s safety review and over-
6 sight capabilities.

7 (2) Potential sites capable of hosting research,
8 development, and demonstration of prototype reac-
9 tors and related facilities, for the purpose of reduc-
10 ing technical risk.

11 (3) The Department’s and the National Lab-
12 oratories’ existing physical and technical capabilities
13 relevant to research, development, and oversight.

14 (4) The efficacy of the Department’s available
15 contractual mechanisms, including cooperative re-
16 search and development agreements, work-for-others
17 agreements, and agreements for commercializing
18 technology.

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

22 (6) Other challenges or considerations identified
23 by the Secretary, including issues related to poten-
24 tial cases of demonstration reactors with up to 2
25 gigawatts of thermal output.

1 **SEC. 7005. NATIONAL LABORATORIES.**

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

