

118TH CONGRESS
1ST SESSION

H. R. 6372

To amend the National Quantum Initiative Act to require the Secretary of Energy to conduct research on how quantum information science, technology, and engineering can enhance the resilience and security of the electric grid, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 13, 2023

Mr. BABIN (for himself and Ms. ROSS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To amend the National Quantum Initiative Act to require the Secretary of Energy to conduct research on how quantum information science, technology, and engineering can enhance the resilience and security of the electric grid, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Grid Resilience Innova-
5 tion and Development Act” or the “GRID Act”.

1 **SEC. 2. QUANTUM INFORMATION SCIENCE TO ENHANCE**
2 **THE RESILIENCE, SECURITY, AND EFFI-**
3 **CIENCY OF THE ELECTRIC GRID.**

4 (a) IN GENERAL.—Title IV of the National Quantum
5 Initiative Act (15 U.S.C. 8851 et seq.) is amended by add-
6 ing at the end the following:

7 **“SEC. 405. QUANTUM INFORMATION SCIENCE TO ENHANCE**
8 **THE RESILIENCE AND SECURITY OF THE**
9 **ELECTRIC GRID.**

10 “(a) IN GENERAL.—The Secretary of Energy (re-
11 ferred to in this section as the ‘Secretary’) shall conduct
12 research, development, and demonstration activities fo-
13 cused on the use of quantum information science, engi-
14 neering, and technology, including through quantum appli-
15 cations and quantum computing, to enhance the resilience,
16 security, and efficiency of the electric grid in the United
17 States.

18 “(b) RESEARCH AREAS.—In carrying out subsection
19 (a), the Secretary may conduct research in the following
20 areas:

21 “(1) Fault detection and prediction.

22 “(2) Grid security and safety, including through
23 post-quantum cryptography.

24 “(3) Integrated grid planning.

25 “(4) Grid optimization.

26 “(5) Enhanced modeling.

1 “(6) Energy storage.

2 “(7) Energy market optimization.

3 “(8) Any other area in which, in the determina-
4 tion of the Secretary, quantum information science,
5 engineering, and technology can enhance the resil-
6 ience, security, and efficiency of the electric grid in
7 the United States.

8 “(c) COOPERATION.—To the extent practicable, the
9 Secretary shall conduct research, development, and dem-
10 onstration activities under subsection (a) in cooperation,
11 including through partnerships, as the Secretary deter-
12 mines to be appropriate, with members of relevant indus-
13 tries, National Laboratories, institutions of higher edu-
14 cation, and other relevant institutions, including research
15 institutions, as determined by the Secretary.”.

16 (b) CLERICAL AMENDMENT.—The table of contents
17 in section 1(b) of the National Quantum Initiative Act
18 (Public Law 115–368; 132 Stat. 5092; 136 Stat. 1441)
19 is amended by inserting after the item relating to section
20 404 the following:

“Sec. 405. Quantum information science to enhance the resilience and security
of the electric grid.”.

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