

118TH CONGRESS
1ST SESSION

H. R. 5706

To direct the Architect of the Capitol, using existing funding, to study the feasibility of retrofitting the Capitol Power Plant to incorporate an advanced nuclear reactor.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 26, 2023

Mr. DONALDS introduced the following bill; which was referred to the
Committee on Transportation and Infrastructure

A BILL

To direct the Architect of the Capitol, using existing funding, to study the feasibility of retrofitting the Capitol Power Plant to incorporate an advanced nuclear reactor.

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 “U.S. Capitol Power
5 Plant Retrofit Act”.

6 **SEC. 2. FINDINGS; SENSE OF CONGRESS.**

7 (a) FINDINGS.—Congress finds the following:

8 (1) The Capitol Power Plant was originally
9 built in 1910 to provide electricity for the United

1 States Capitol Complex, and continued to provide
2 electricity for the Complex until 1951.

3 (2) In 1951, the Plant diverted its electricity
4 responsibilities to a local utility, but instead utilized
5 the Plant to provide steam and chilled water for
6 building heating and cooling systems throughout the
7 Complex.

8 (3) In 2018, the Architect of the Capitol com-
9 peted installation of a new combined heat and power
10 natural gas-fired co-generation system, which has a
11 natural gas-fired turbine that has the potential to
12 generate 7.5 MWe and be paired with a heat recov-
13 ery steam generator to produce steam.

14 (4) The electricity that the Plant generates
15 today is used to power certain internal operations in
16 the Complex and to supply some of the demands of
17 the chilled water system.

18 (5) On average, two-thirds of electricity for the
19 chilled water needs of the Complex is supplied by the
20 Plant, with the rest of the required electricity pur-
21 chased from a local utility.

22 (b) SENSE OF CONGRESS.—It is the sense of Con-
23 gress that—

24 (1) the Architect of the Capitol should be en-
25 couraged to collaborate with the Nuclear Regulatory

1 Commission and the Department of Energy to deter-
2 mine the feasibility of retrofitting the Capitol Power
3 Plant to incorporate an advanced nuclear reactor;

4 (2) the Architect of the Capitol should recog-
5 nize the inherent benefits that an advanced nuclear
6 power plant can provide, including zero-emissions
7 steam and chilled water production, grid resiliency,
8 and energy independence; and

9 (3) Congress understands that evaluating the
10 feasibility of retrofitting the Capitol Power Plant to
11 incorporate an advanced nuclear reactor will ulti-
12 mately assist with improving public support for ad-
13 vanced nuclear energy.

14 **SEC. 3. STUDY OF FEASIBILITY OF RETROFITTING CAPITOL**
15 **POWER PLANT TO INCORPORATE ADVANCED**
16 **NUCLEAR REACTOR.**

17 (a) IN GENERAL.—Not later than 120 days after the
18 date of the enactment of this Act, the Architect of the
19 Capitol shall begin consultation with the Nuclear Regu-
20 latory Commission and the Department of Energy about
21 developing and conducting a study of the feasibility of ret-
22 rofitting the Capitol Power Plant to incorporate an ad-
23 vanced nuclear reactor.

24 (b) SPECIFICS OF STUDY.—

1 (1) IN GENERAL.—The feasibility study con-
2 ducted under this section shall include, at a min-
3 imum, a general description of the background and
4 objective of the feasibility study, and may also in-
5 clude any of the following:

6 (A) Organizational responsibilities for the
7 preparation of the study preparation.

8 (B) Potential project stakeholders.

9 (C) An analysis of the following:

10 (i) The demand for electricity in the
11 region of the Capitol Power Plant.

12 (ii) The transmission capacity and
13 transmission facilities and systems in such
14 region.

15 (iii) The structure of the market for
16 electricity.

17 (iv) How the construction and oper-
18 ation of the advanced nuclear reactor at
19 the Plant would affect the issues described
20 in clauses (i), (ii), and (iii).

21 (v) The potential for the advanced nu-
22 clear reactor to produce electricity to not
23 only provide power for the Capitol Complex
24 but to produce chilled water and steam.

1 (vi) Whether the piping capacity of
2 the Plant is sufficient to produce and dis-
3 tribute heat through the Capitol Complex.

4 (vii) Site analysis, including prelimi-
5 nary site layout and site preparation and
6 potential effects of the advanced nuclear
7 reactor and supporting facilities on the ap-
8 plicable region, including population dis-
9 tribution and current uses of land and
10 water.

11 (viii) Environmental analysis of con-
12 structing and operating the advanced nu-
13 clear reactor, including—

14 (I) a comparison of similar char-
15 acteristics in the applicable region;
16 and

17 (II) an overview of environmental
18 protection requirements in the region.

19 (ix) How to approach the licensing
20 process and authorization for the siting,
21 construction, and operation of the ad-
22 vanced nuclear reactor.

23 (x) Potential contractual approaches,
24 procurement plans, project schedules,

1 project management, and risk management
2 plans.

3 (xi) Organizational requirements and
4 responsibilities for each phase of retro-
5 fitting the Plant with an advanced nuclear
6 reactor, including requirements and re-
7 sponsibilities relating to human resources
8 and training, workforce logistics and staff-
9 ing requirements, and maintenance of the
10 advanced nuclear reactor.

11 (xii) Economic feasibility of retro-
12 fitting the Plant with an advanced nuclear
13 reactor, including a cost-benefit analysis.

14 (xiii) Plans for emergency prepared-
15 ness and coordination, including on-site
16 emergency planning and coordination with
17 off-site emergency response organizations.

18 (xiv) Co-generation opportunities
19 which may arise after the Plant is retro-
20 fitted with an advanced nuclear reactor.

21 (xv) Safety and performance analysis,
22 including—

23 (I) fuel cycle evaluation and im-
24 pact assessment;

1 (II) radioactive and conventional
2 waste management assessment; and
3 (III) interim waste storage and
4 related issues.

5 (xvi) Decommissioning analysis for
6 the advanced nuclear reactor, including the
7 cost of decommissioning the advanced nu-
8 clear reactor, and the environmental im-
9 pact of decommissioning the advanced nu-
10 clear reactor.

11 (2) OTHER CONSIDERATIONS.—The Architect
12 of the Capitol may incorporate in the study the fol-
13 lowing additional considerations:

14 (A) How retrofitting the Capitol Power
15 Plant would affect other Federal and District of
16 Columbia laws, including the Clean Air Act,
17 and what would be needed in terms of regu-
18 latory clarity and licensing to retrofit the Plant
19 with an advanced nuclear reactor.

20 (B) Economic considerations relating to
21 how the retrofitted power plant compares with
22 the current combined heat and power natural
23 gas-fired co-generation system, as well as how
24 the retrofitted Plant compares with Plant when
25 it was powered by coal and an analysis of how

1 much retrofitting the plant with an advanced
2 nuclear reactor would save the Federal Govern-
3 ment and the American taxpayer annually.

4 (C) How such feasibility would impact the
5 utility energy service contract between the Ar-
6 chitect of the Capitol and the local utility, in-
7 cluding potential Federal funding opportunities
8 to pay off the utility energy service contract be-
9 fore the May 2037 anticipated timeline.

10 (D) How local power outages currently af-
11 fect the Plant, and how the power outage im-
12 pacts could be alleviated from retrofitting the
13 Plant with an advanced nuclear reactor.

14 (E) The potential for the retrofitted Plant
15 to once again provide electricity, along with
16 steam and chilled water, to the Capitol Com-
17 plex, and how this would benefit the Complex in
18 terms of grid security and protection against
19 cyberattacks and digital data infiltration ef-
20 forts.

21 (F) How retrofitting the Plant to incor-
22 porate an advanced nuclear reactor would fit
23 within the “Greening the Capitol Initiative”,
24 which was created in March 2007 to “provide

1 an environmentally responsible and healthy
2 working environment for employees”.

3 (G) How the retrofitted Plant can take ad-
4 vantage of the high-energy waste heat and
5 other biproducts of operating an advanced nu-
6 clear reactor.

7 (H) The extent to which there is an oppor-
8 tunity to keep the existing combined heat and
9 power natural gas-fired co-generation system
10 infrastructure, and the extent to which there is
11 a possibility for the advanced nuclear reactor to
12 provide electricity, chilled water, and steam (or
13 any combination thereof).

14 (I) The role of thermal combustion re-
15 sources and infrastructure in the Plant’s exist-
16 ing operational capacity, and what the role of
17 such resources and infrastructure would be if
18 the Plant was retrofitted with an advanced nu-
19 clear reactor.

20 (J) How to incorporate a consent-based,
21 community-focused approach for conducting
22 this feasibility study, including sharing the facts
23 with surrounding businesses, residents, and the
24 general public, including tourists and other in-
25 dividuals that visit the Capitol Complex for

1 business purposes, and how to alleviate con-
2 cerns relating to the feasibility of retrofitting
3 the Plant with an advanced nuclear reactor.

4 (K) Whether energy savings performance
5 contracts available to the Architect of the Cap-
6 itol, and which are currently used mostly for
7 building improvements, can be utilized to ret-
8 rofit the Plant with an advanced nuclear reac-
9 tor.

10 (L) Whether the Plant can continue oper-
11 ations during the process of retrofitting the
12 plant with an advanced nuclear reactor, and re-
13 lated concerns.

14 (M) How to secure the Plant from sabo-
15 tage and other forms of attack, including phys-
16 ical and cyber attack.

17 (N) How to ensure that the emergency
18 planning zone surrounding the advanced nu-
19 clear reactor, as required under regulations of
20 the Nuclear Regulatory Commission, is small
21 enough to ensure the safety of the Plant.

22 (c) PUBLIC SESSIONS.—During the course of con-
23 ducting the feasibility study under this section, the Archi-
24 tect of the Capitol, in conjunction with the Department
25 of Energy and the Nuclear Regulatory Commission, shall

1 hold at least two in-person public sessions to give members
2 of the public the opportunity to learn about the study, and
3 shall provide the public with notice of such sessions to the
4 greatest extent possible.

5 (d) DEADLINE FOR COMPLETION.—The Architect of
6 the Capitol shall complete the feasibility study under this
7 section not later than 2 years after the date of the enact-
8 ment of this Act.

9 (e) ADVANCED NUCLEAR REACTOR DEFINED.—The
10 term “advanced nuclear reactor” means—

11 (1) a nuclear fission reactor, including a proto-
12 type plant (as defined in sections 50.2 and 52.1 of
13 title 10, Code of Federal Regulations (or successor
14 regulations)), with significant improvements com-
15 pared to reactors operating on October 19, 2016, in-
16 cluding improvements such as—

17 (A) additional inherent safety features, in-
18 cluding features designed to prevent the release
19 of radioactive material;

20 (B) lower waste yields;

21 (C) improved fuel and material perform-
22 ance;

23 (D) increased tolerance to loss of fuel cool-
24 ing;

1 (E) enhanced reliability or improved resili-
2 ence;

3 (F) increased proliferation resistance;

4 (G) increased thermal efficiency;

5 (H) reduced consumption of cooling water
6 and other environmental impacts;

7 (I) the ability to integrate into electric ap-
8 plications and nonelectric applications;

9 (J) modular sizes to allow for deployment
10 that corresponds with the demand for electricity
11 or process heat; and

12 (K) operational flexibility to respond to
13 changes in demand for electricity or process
14 heat and to complement integration with inter-
15 mittent renewable energy or energy storage;

16 (2) a fusion reactor; and

17 (3) a radioisotope power system that utilizes
18 heat from radioactive decay to generate energy.

19 **SEC. 4. REPORT.**

20 (a) REPORT.—Not later than 60 days after com-
21 pleting the feasibility study under section 3, the Architect
22 of the Capitol shall submit a report to the appropriate con-
23 gressional committees that outlines the findings of the fea-
24 sibility study, along with the Architect's final determina-
25 tion as to the whether it is feasible to retrofit the current

1 Capitol Power Plant to encompass an advanced nuclear
2 reactor.

3 (b) APPROPRIATE CONGRESSIONAL COMMITTEES
4 DEFINED.—The term “appropriate congressional commit-
5 tees” means—

6 (1) the Committee on Energy and Commerce
7 and the Committee on House Administration of the
8 House of Representatives; and

9 (2) the Committee on Energy and Natural Re-
10 sources, the Committee on Environment and Public
11 Works, and the Committee on Rules and Adminis-
12 tration of the Senate.

13 **SEC. 5. USE OF EXISTING FUNDS.**

14 The Architect of the Capitol shall carry out this Act
15 using funds appropriated for the Office of the Architect
16 of the Capitol prior to the date of the enactment of this
17 Act which remain unobligated as of such date.

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