

**SENATE BILL NO. 194**

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTY-FIRST LEGISLATURE - SECOND SESSION

BY THE SENATE COMMUNITY AND REGIONAL AFFAIRS COMMITTEE

Introduced: 2/17/20

Referred: Community and Regional Affairs, Resources

**A BILL**

**FOR AN ACT ENTITLED**

1 **"An Act relating to advanced nuclear reactors."**

2 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

3 \* **Section 1.** AS 18.45.025(a) is amended to read:

4 (a) A person may not construct a nuclear fuel production facility, nuclear  
5 utilization facility, utilization facility, reprocessing facility, [OR] nuclear waste  
6 disposal facility, **or advanced nuclear reactor** in the state without first obtaining a  
7 permit from the Department of Environmental Conservation to construct the facility  
8 on land designated by the legislature under (b) of this section.

9 \* **Sec. 2.** AS 18.45.025 is amended by adding a new subsection to read:

10 (d) Subsection (b) of this section does not apply to a person constructing an  
11 advanced nuclear reactor.

12 \* **Sec. 3.** AS 18.45.900 is amended by adding a new paragraph to read:

13 (9) "advanced nuclear reactor" means

14 (A) a nuclear fission reactor with significant improvements  
15 compared to the most recent generation of fission reactors, such as

- 1 (i) additional inherent safety features;  
2 (ii) lower waste yields;  
3 (iii) improved fuel performance;  
4 (iv) increased tolerance to loss of fuel cooling;  
5 (v) enhanced reliability;  
6 (vi) increased proliferation resistance;  
7 (vii) increased thermal efficiency;  
8 (viii) reduced consumption of cooling water;  
9 (ix) the ability to integrate into electric applications and  
10 nonelectric applications;  
11 (x) modular sizes to allow for deployment that  
12 corresponds with the demand for electricity;  
13 (xi) operational flexibility to respond to changes in  
14 demand for electricity and to complement integration with intermittent  
15 renewable energy;
- 16 (B) a prototype nuclear fission reactor with significant  
17 improvements compared to the most recent generation of fission reactors, such  
18 as those listed in (A) of this paragraph; or  
19 (C) a fusion reactor.