

CS FOR SENATE BILL NO. 194(CRA)

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTY-FIRST LEGISLATURE - SECOND SESSION

BY THE SENATE COMMUNITY AND REGIONAL AFFAIRS COMMITTEE

Offered: 3/11/20

Referred: Resources

Sponsor(s): SENATE COMMUNITY AND REGIONAL AFFAIRS COMMITTEE

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) Notwithstanding (a) or (b) of this section, the Department of
11 Environmental Conservation may issue a permit to a person to construct an advanced
12 nuclear reactor that has a power output of less than 300 megawatts on land not
13 designated by the legislature under (b) of this section.

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

15 (9) "advanced nuclear reactor" means

1 (A) a nuclear fission reactor with significant improvements
2 compared to fission reactors in operation before January 1, 2020, such as

- 3 (i) additional inherent safety features;
- 4 (ii) lower waste yields;
- 5 (iii) improved fuel performance;
- 6 (iv) increased tolerance to loss of fuel cooling;
- 7 (v) enhanced reliability;
- 8 (vi) increased proliferation resistance;
- 9 (vii) increased thermal efficiency;
- 10 (viii) reduced consumption of cooling water;
- 11 (ix) the ability to integrate into electric applications and
12 nonelectric applications;
- 13 (x) modular sizes to allow for deployment that
14 corresponds with the demand for electricity;
- 15 (xi) operational flexibility to respond to changes in
16 demand for electricity and to complement integration with intermittent
17 renewable energy;

18 (B) a prototype nuclear fission reactor with significant
19 improvements compared to fission reactors in operation before January 1,
20 2020, such as those listed in (A) of this paragraph; or

21 (C) a fusion reactor.