

By Senator McClain

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A bill to be entitled

An act relating to advanced nuclear reactors; creating s. 403.541, F.S.; defining terms; granting the Florida Public Service Commission the sole authority to regulate advanced nuclear reactors in this state; requiring the commission to take certain regulatory actions; authorizing the Department of Health and the Department of Environmental Protection to exercise specified powers and duties and develop certain guidelines; requiring the commission, the Department of Health, and the Department of Environmental Protection to jointly establish criteria for the certification of laboratories that perform analysis on nuclear materials for certain purposes; authorizing the possession of nuclear material for specified purposes; providing an exception and limitation for such possession; requiring permits for the transfer, receipt, possession, use, storage, or disposal of nuclear materials; requiring the commission to make a certain determination before issuing such permits; requiring the commission to certify construction and significant design modifications of advanced nuclear reactors; requiring the commission to consider certain factors before issuing such certifications; requiring that the construction or significant design modification include certain control devices; authorizing the commission to issue a reciprocal permit or certification if certain conditions are met; providing penalties; requiring the commission, after

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30 consultation with the Department of Environmental
31 Protection and the Department of Health, to adopt
32 rules; providing requirements for such rules; amending
33 s. 186.801, F.S.; revising the criteria the commission
34 must consider in its preliminary study of electric
35 utility 10-year site plans; amending s. 366.02, F.S.;
36 revising the definition of the term "public utility";
37 amending s. 366.92, F.S.; revising legislative intent
38 for the state's renewable energy policy; revising
39 definitions; revising requirements for the development
40 of certain standards by electric utilities; deleting
41 such requirements for rural cooperatives; amending s.
42 377.601, F.S.; revising legislative intent for the
43 state's energy policy; amending s. 403.506, F.S.;
44 revising applicability of power plant capacity and
45 expansion thresholds; amending s. 403.519, F.S.;
46 revising the criteria the commission must consider in
47 making determinations for proposed power plants;
48 providing an effective date.

49
50 Be It Enacted by the Legislature of the State of Florida:

51
52 Section 1. Section 403.541, Florida Statutes, is created to
53 read:

54 403.541 Advanced nuclear reactors.—

55 (1) As used in this section, the term:

56 (a) "Advanced nuclear reactor" means a nuclear fusion
57 reactor, or a nuclear fission reactor that uses new or
58 significantly improved designs compared to commercial nuclear

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59 reactors in operation as of January 1, 2021, including
60 improvements such as:

- 61 1. Inherent or passive safety features;
- 62 2. Lower waste yields;
- 63 3. Improved fuel performance or efficiency;
- 64 4. Significantly improved designs, materials, fuels, or
65 cooling systems;
- 66 5. Reduced consumption of cooling water and other
67 environmental impacts; or
- 68 6. Flexibility in operational output or ability to
69 integrate into electric or nonelectric applications.

70 (b) "Commission" means the Florida Public Service
71 Commission.

72 (c) "Electrical power plant" has the same meaning as
73 provided in s. 403.503.

74 (d) "Nuclear material" means byproduct material, source
75 material, and special nuclear material as those terms are
76 defined in s. 404.031.

77 (2) (a) The authority to regulate advanced nuclear reactors
78 in this state is granted solely to the commission. At a minimum,
79 the commission shall do all of the following:

- 80 1. Evaluate and approve designs for advanced nuclear
81 reactors.
- 82 2. Issue permits for the possession, transportation,
83 transfer, and use of nuclear materials in sufficient quantities
84 to facilitate advanced nuclear reactor research, design,
85 testing, construction, and operation.
- 86 3. Prescribe safety and construction standards for the use
87 of nuclear materials in the development and operation of

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88 advanced nuclear reactors.89 (b) The Department of Health may exercise its powers and
90 duties granted under chapter 404 for the regulation of advanced
91 nuclear reactors under this section. The Department of Health
92 shall develop appropriate guidelines for nuclear facilities and
93 advanced nuclear reactors to mitigate harm to human health
94 resulting from radiological exposure.95 (c) The Department of Environmental Protection may exercise
96 its powers and duties granted under this chapter for the
97 regulation of advanced nuclear reactors under this section. The
98 Department of Environmental Protection shall develop appropriate
99 guidelines for nuclear facilities and advanced nuclear reactors
100 to mitigate environmental harm and promote the efficient and
101 sustainable use of water and other natural resources.102 (d) The commission, the Department of Health, and the
103 Department of Environmental Protection shall jointly establish
104 criteria for the certification of laboratories that perform
105 analysis on nuclear materials for the purpose of researching,
106 designing, testing, or otherwise developing technology for
107 nuclear power plants under this section.108 (3) A person, a corporation, or an entity may possess
109 nuclear materials for, and in quantities sufficient to
110 facilitate, the research, design, testing, construction, and
111 operation of advanced nuclear reactors. However, except for
112 active military personnel or contractors acting pursuant to a
113 lawful military order, a person, a corporation, or an entity may
114 not possess nuclear materials in quantities that pose a danger
115 to national defense and security or public health and safety.116 (4) (a) The operator of a facility conducting research and

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117 testing of advanced nuclear reactors must obtain a permit from
118 the commission for the use and storage of nuclear materials to
119 facilitate such research and testing.

120 (b) A person, a corporation, or an entity must obtain a
121 permit from the commission for the transfer, receipt,
122 possession, use, or disposal of nuclear materials relating to
123 the operation of advanced nuclear reactors.

124 (c) Before issuing a permit under this subsection, the
125 commission shall determine whether the facility or reactor is
126 equipped with radiation control devices that will abate or
127 prevent radiological contamination in compliance with the
128 standards and rules established under this section.

129 (5) (a) The construction or significant design modification
130 of an advanced nuclear reactor must be certified by the
131 commission before such construction or modification may begin.

132 (b) Before issuing a certification under this subsection,
133 the commission must, at a minimum, consider all of the
134 following:

135 1. The extent to which the design will effectively mitigate
136 and prevent danger to the public health and safety.

137 2. The compliance of the design with the safety standards
138 prescribed by the commission.

139 3. The ability of the design to address known or reasonably
140 foreseeable risks, including system failures, accidents, natural
141 disasters, and extreme weather events.

142 4. The completeness and accuracy of engineering
143 calculations and testing data for the design.

144 5. The ability of the design to promote the efficient and
145 sustainable use of water and other natural resources.

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146 (c) The construction or significant design modification of
147 an advanced nuclear reactor must include radiation control
148 devices that will abate or prevent radiological contamination in
149 compliance with the standards and rules established under this
150 section.

151 (6) If an applicant has been issued a permit or
152 certification from another state or a federal agency for the
153 activities under this section, the commission may issue a
154 reciprocal permit or certification if the safety standards of
155 the other state or federal agency are no less stringent than the
156 standards and rules established under this section.

157 (7) A person, a corporation, or an entity that violates
158 this section or any rule adopted hereunder is subject to a civil
159 penalty not to exceed \$100,000 for each violation for each day
160 the violation persists, except that the maximum civil penalty
161 may not exceed \$1 million for any related series of violations.

162 (8) The commission, after consultation with the Department
163 of Health and the Department of Environmental Protection, shall
164 adopt rules to implement this section. In developing such rules,
165 the commission shall refer to part II of this chapter and the
166 rules and regulations established thereunder.

167 Section 2. Present paragraph (j) of subsection (2) of
168 section 186.801, Florida Statutes, is redesignated as paragraph
169 (l), and a new paragraph (j) and paragraph (k) are added to that
170 section, to read:

171 186.801 Ten-year site plans.—

172 (2) Within 9 months after the receipt of the proposed plan,
173 the commission shall make a preliminary study of such plan and
174 classify it as "suitable" or "unsuitable." The commission may

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175 suggest alternatives to the plan. All findings of the commission
176 shall be made available to the Department of Environmental
177 Protection for its consideration at any subsequent electrical
178 power plant site certification proceedings. It is recognized
179 that 10-year site plans submitted by an electric utility are
180 tentative information for planning purposes only and may be
181 amended at any time at the discretion of the utility upon
182 written notification to the commission. A complete application
183 for certification of an electrical power plant site under
184 chapter 403, when such site is not designated in the current 10-
185 year site plan of the applicant, shall constitute an amendment
186 to the 10-year site plan. In its preliminary study of each 10-
187 year site plan, the commission shall consider such plan as a
188 planning document and shall review:

189 (j) The amount of nuclear energy resources the utility
190 produces or purchases.

191 (k) The amount of nuclear energy resources the utility
192 plans to produce or purchase over the 10-year planning horizon
193 and the means by which the production or purchases will be
194 achieved.

195 Section 3. Subsection (8) of section 366.02, Florida
196 Statutes, is amended to read:

197 366.02 Definitions.—As used in this chapter:

198 (8) "Public utility" means every person, corporation,
199 partnership, association, or other legal entity and their
200 lessees, trustees, or receivers supplying electricity or gas
201 (natural, manufactured, or similar gaseous substance) to or for
202 the public within this state; but the term "public utility" does
203 not include either a cooperative now or hereafter organized and

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204 existing under the Rural Electric Cooperative Law of the state;
205 a municipality or any agency thereof; any entity other than an
206 electric utility that produces electricity from an advanced
207 nuclear reactor that is not interconnected to this state's
208 electrical power grid for its own consumption or supplies such
209 electricity for consumption by a single consumer; any dependent
210 or independent special natural gas district; any natural gas
211 transmission pipeline company making only sales or
212 transportation delivery of natural gas at wholesale and to
213 direct industrial consumers; any entity selling or arranging for
214 sales of natural gas which neither owns nor operates natural gas
215 transmission or distribution facilities within the state; or a
216 person supplying liquefied petroleum gas, in either liquid or
217 gaseous form, irrespective of the method of distribution or
218 delivery, or owning or operating facilities beyond the outlet of
219 a meter through which natural gas is supplied for compression
220 and delivery into motor vehicle fuel tanks or other
221 transportation containers, unless such person also supplies
222 electricity or manufactured or natural gas.

223 Section 4. Subsections (1), (2), and (3) of section 366.92,
224 Florida Statutes, are amended to read:

225 366.92 Florida renewable energy policy.—

226 (1) It is the intent of the Legislature to promote the
227 development of clean renewable energy; protect the economic
228 viability of Florida's existing clean renewable energy
229 facilities; diversify the types of fuel used to generate
230 electricity in Florida; lessen Florida's dependence on natural
231 gas and fuel oil for the production of electricity; minimize the
232 volatility of fuel costs; encourage investment within the state;

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233 improve environmental conditions; and, at the same time,
234 minimize the costs of power supply to electric utilities and
235 their customers.

236 (2) As used in this section, the term:

237 (a) "Clean energy" includes energy produced by advanced
238 nuclear reactors as that term is defined in s. 403.541, and
239 renewable energy and renewable natural gas as those terms are
240 defined in s. 366.91.

241 (b) ~~(a)~~ "Provider" means a "utility" as defined in s.
242 366.8255(1)(a).

243 (b) ~~"Renewable energy"~~ includes renewable energy and
244 ~~renewable natural gas~~ as those terms are defined in s.
245 366.91(2).

246 (3) Each ~~municipal~~ electric utility and ~~rural electric~~
247 ~~cooperative~~ shall develop standards for the promotion,
248 encouragement, and expansion of the use of clean renewable
249 energy resources and energy conservation and efficiency
250 measures. On or before April 1, annually, each ~~municipal~~
251 electric utility and ~~electric cooperative~~ shall submit to the
252 commission a report that identifies such standards.

253 Section 5. Paragraph (m) is added to subsection (3) of
254 section 377.601, Florida Statutes, to read:

255 377.601 Legislative intent.—

256 (3) In furtherance of the goals in subsection (2), it is
257 the policy of the state to:

258 (m) Encourage the research, development, demonstration, and
259 application of domestic advanced nuclear energy resources.

260 Section 6. Subsection (1) of section 403.506, Florida
261 Statutes, is amended to read:

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262 403.506 Applicability, thresholds, and certification.—

263 (1) (a) The provisions of this act applies shall apply to
264 any electrical power plant as defined herein, except that the
265 provisions of this act does shall not apply to the following,
266 unless the applicant has elected to apply for certification
267 under this act:

268 1. Any electrical power plant of less than 75 megawatts in
269 gross capacity, including its associated facilities, unless the
270 applicant has elected to apply for certification of such
271 electrical power plant under this act.

272 2. The provisions of this act shall not apply to Capacity
273 expansions of 75 megawatts or less, in the aggregate, of an
274 existing exothermic reaction cogeneration electrical generating
275 facility that was exempt from this act when it was originally
276 built; however, this exemption shall not apply if the unit uses
277 oil or natural gas for purposes other than unit startup.

278 3. Capacity expansions of 75 megawatts or less, in the
279 aggregate, of one or more advanced nuclear reactors as defined
280 in s. 403.541 installed within the boundaries of an electrical
281 power plant site previously certified under this act.

282 4. One or more advanced nuclear reactors as defined in s.
283 403.541 to be located within the boundaries of an electrical
284 power plant site previously certified under this act, provided
285 that:

286 a. The advanced nuclear reactor or reactors are intended to
287 replace an existing electrical power plant located on the site.

288 b. The certificate holder intends to retire the existing
289 electrical power plant from service.

290 c. The gross capacity of the advanced nuclear reactor or

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291 reactors, in the aggregate, does not exceed the gross capacity
292 of the electrical power plant to be retired.

293 5. One or more advanced nuclear reactors as defined in s.
294 403.541 that are not interconnected to this state's electrical
295 power grid and that are owned and operated by an entity other
296 than an electric utility for purposes of producing power for its
297 own consumption or for use by a single consumer of electrical
298 power.

299 (b) The No construction of any new electrical power plant
300 or expansion in steam generating capacity as measured by an
301 increase in the maximum electrical generator rating of any
302 existing electrical power plant may not be undertaken after
303 October 1, 1973, without first obtaining certification in the
304 manner as herein provided, except that this act shall not apply
305 to any such electrical power plant which is presently operating
306 or under construction or which has, upon the effective date of
307 chapter 73-33, Laws of Florida, applied for a permit or
308 certification under requirements in force prior to the effective
309 date of such act.

310 Section 7. Subsection (3) of section 403.519, Florida
311 Statutes, is amended to read:

312 403.519 Exclusive forum for determination of need.—

313 (3) The commission shall be the sole forum for the
314 determination of this matter, which accordingly may shall not be
315 raised in any other forum or in the review of proceedings in
316 such other forum. In making its determination, the commission
317 shall take into account the need for electric system reliability
318 and integrity, the need for adequate electricity at a reasonable
319 cost, the need for fuel diversity and supply reliability,

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320 whether the proposed plant is the most cost-effective
321 alternative available, and whether nuclear renewable energy
322 resources sources and technologies, as well as conservation
323 measures, are used utilized to the extent reasonably available.
324 The commission shall also expressly consider the conservation
325 measures taken by or reasonably available to the applicant or
326 its members which might mitigate the need for the proposed plant
327 and other matters within its jurisdiction which it deems
328 relevant. The commission's determination of need for an
329 electrical power plant shall create a presumption of public need
330 and necessity and shall serve as the commission's report
331 required by s. 403.507(4). An order entered pursuant to this
332 section constitutes final agency action.

333 Section 8. This act shall take effect July 1, 2026.