

As Reported by the House Energy and Natural Resources Committee

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Representative Stein

Cosponsors: Representatives Callender, Carfagna, Carruthers, Click, Dean, Fowler Arthur, Fraizer, Grendell, Gross, Hillyer, Holmes, Johnson, Koehler, Lipps, McClain, Riedel, Seitz, Sheehy, Stephens, Swearingen, Wiggam, Wilkin

A BILL

To amend section 3748.03 and to enact sections 1
3748.23, 4164.01, 4164.02, 4164.04, 4164.05, 2
4164.051, 4164.052, 4164.053, 4164.06, 4164.07, 3
4164.08, 4164.09, 4164.091, 4164.092, 4164.093, 4
4164.094, 4164.096, 4164.097, 4164.098, 5
4164.099, 4164.0911, 4164.0912, 4164.0913, 6
4164.0914, 4164.0916, 4164.0917, 4164.0918, 7
4164.10, 4164.11, 4164.12, 4164.13, 4164.15, 8
4164.16, 4164.18, 4164.19, and 4164.20 of the 9
Revised Code to enact the Advanced Nuclear 10
Technology Helping Energize Mankind (ANTHEM) Act 11
by establishing the Ohio Nuclear Development 12
Authority. 13

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 3748.03 be amended and sections 14
3748.23, 4164.01, 4164.02, 4164.04, 4164.05, 4164.051, 4164.052, 15
4164.053, 4164.06, 4164.07, 4164.08, 4164.09, 4164.091, 16
4164.092, 4164.093, 4164.094, 4164.096, 4164.097, 4164.098, 17
4164.099, 4164.0911, 4164.0912, 4164.0913, 4164.0914, 4164.0916, 18

4164.0917, 4164.0918, 4164.10, 4164.11, 4164.12, 4164.13, 19
4164.15, 4164.16, 4164.18, 4164.19, and 4164.20 of the Revised 20
Code be enacted to read as follows: 21

Sec. 3748.03. (A) (1) (a) The governor, on behalf of the 22
state, may enter into agreements with the United States nuclear 23
regulatory commission as authorized by section 274(b) of the 24
"Atomic Energy Act of 1954," 68 Stat. 919, 42 U.S.C.A. 2011, as 25
amended, for the discontinuation of specified licensing and 26
related regulatory authority of the commission with respect to 27
byproduct material, source material, the commercial disposal of 28
low-level radioactive waste, and special nuclear material in 29
quantities not sufficient to form a critical mass and the 30
assumption of that authority by the state. 31

(b) The governor, on behalf of the state, may also enter 32
into agreements described in division (A) (1) (a) of this section 33
with the the United States department of energy or branches of 34
the United States military. 35

(2) The governor shall appoint a state liaison officer to 36
the United States nuclear regulatory commission, who shall serve 37
at the pleasure of the governor. 38

(B) ~~The general assembly hereby designates the department 39
of health, in addition to the Ohio nuclear development authority 40
as the agency authorized to by division (F) of section 4164.11 41
of the Revised Code, may pursue agreement state status, on 42
behalf of the governor, for the assumption by the state of 43
specified licensing and related regulatory authority from the 44
commission pursuant to division (A) of this section. The 45
department shall and the Ohio nuclear development authority may 46
enter into negotiations with the commission for that purpose. 47~~

(C) Any person who, on the effective date of an agreement 48
entered into by the state and the commission pursuant to 49
divisions (A) and (B) of this section, holds a license issued by 50
the commission for radioactive materials that are subject to the 51
agreement is deemed to hold a license issued under this chapter 52
and rules adopted under it. That license shall expire ninety 53
days after the holder receives a notice of expiration from the 54
department or on the date of expiration specified in the license 55
issued by the commission, whichever is later, provided that no 56
such license shall expire during the ninety days immediately 57
following the effective date of the agreement. 58

Sec. 3748.23. The rules adopted under this chapter shall 59
neither conflict with nor supersede the rules adopted under 60
Chapter 4164. of the Revised Code. 61

Sec. 4164.01. As used in this chapter, unless the context 62
otherwise requires: 63

(A) "Authority" means the Ohio nuclear development 64
authority created and constituted under section 4164.04 of the 65
Revised Code. 66

(B) "Council" means the Ohio nuclear development authority 67
nominating council created and constituted under section 4164.09 68
of the Revised Code. 69

Sec. 4164.02. It is the intent of the general assembly in 70
enacting this chapter of the Revised Code to encourage its use 71
as a model for future legislation to further the pursuit of 72
innovative research and development for any industry in this 73
state. 74

Sec. 4164.04. There is hereby created and constituted 75
within the department of development, the Ohio nuclear 76

development authority. The authority's exercise of powers 77
conferred by this chapter is the performance of an essential 78
governmental function and addresses matters of public necessity 79
for which public moneys may be spent and private property 80
acquired. 81

Sec. 4164.05. (A) The authority shall consist of nine 82
members appointed by the governor, representing the following 83
three stakeholder groups within the nuclear-engineering-and- 84
manufacturing industry: 85

(1) Safety; 86

(2) Industry; 87

(3) Engineering research and development. 88

(B) (1) A member appointed from the safety group shall hold 89
at least a bachelor's degree in nuclear, mechanical, chemical, 90
or electrical engineering and at least one of the following 91
shall also apply: 92

(a) The member is a recognized professional in nuclear- 93
reactor safety or developing ISO 9000 standards. 94

(b) The member has been employed by or has worked closely 95
with the United States department of energy or the nuclear 96
regulatory commission and the member also has a professional 97
background in nuclear-energy-technology development or advanced- 98
nuclear-reactor concepts. 99

(c) The member has been employed by a contractor that has 100
built concept reactors and the member also worked with hazardous 101
substances, either nuclear or chemical, during that employment. 102

(2) A member appointed from the industry group shall have 103
at least five years of experience in one or more of the 104

<u>following:</u>	105
<u>(a) Nuclear-power-plant operation;</u>	106
<u>(b) Processing and extracting isotopes;</u>	107
<u>(c) Managing a facility that deals with hazardous</u> <u>substances, either nuclear or chemical;</u>	108 109
<u>(d) Handling and storing nuclear waste.</u>	110
<u>(3) A member appointed from the engineering research and</u> <u>development group shall hold at least a bachelor's degree in</u> <u>nuclear, mechanical, chemical, or electrical engineering and the</u> <u>member shall also be a recognized professional in at least one</u> <u>of the following areas of study:</u>	111 112 113 114 115
<u>(a) Advanced nuclear reactors;</u>	116
<u>(b) Materials science involving the study of alloys and</u> <u>metallurgy, ceramics, or composites;</u>	117 118
<u>(c) Molten-salt chemistry;</u>	119
<u>(d) Solid-state chemistry;</u>	120
<u>(e) Chemical physics;</u>	121
<u>(f) Actinide chemistry;</u>	122
<u>(g) Instrumentation and sensors;</u>	123
<u>(h) Control systems.</u>	124
<u>(C) The members shall be United States citizens and</u> <u>residents of this state.</u>	125 126
<u>(D) The members shall serve five-year terms.</u>	127
<u>(E) Any appointment to fill a vacancy on the authority</u> <u>shall be made for the unexpired term of the member whose death,</u>	128 129

resignation, or removal created the vacancy. 130

(F) Initial appointments under this section shall be made 131
not later than sixty days after the effective date of an 132
agreement made with the United States nuclear regulatory 133
commission, the United States department of energy, or branches 134
of the United States military under section 3748.03 of the 135
Revised Code. 136

Sec. 4164.051. The governor shall appoint members, and 137
fill vacancies in the membership, of the authority from lists of 138
nominees recommended by the council. The governor shall fill a 139
vacancy not later than thirty days after receipt of the 140
council's recommendations. 141

Sec. 4164.052. The governor, in the governor's discretion, 142
may reject all of the nominees recommended by the council and 143
reconvene the council for it to recommend additional nominees. 144
If the governor reconvenes the council and the council provides 145
a second list of nominees, the governor shall make the required 146
appointment from one of the names on the first or second list. 147

Sec. 4164.053. All appointments by the governor to the 148
authority are subject to the advice and consent of the senate. 149

Sec. 4164.06. No member shall be appointed to the 150
authority until an agreement is reached under section 3748.03 of 151
the Revised Code, consistent with division (F) of section 152
4164.05 of the Revised Code. 153

Sec. 4164.07. Immediately after appointment to the 154
authority under section 4164.05 of the Revised Code, the members 155
shall enter upon the performance of their duties. 156

Sec. 4164.08. Notwithstanding any law to the contrary, no 157
officer or employee of this state shall be deemed to have 158

forfeited, or shall have forfeited, the officer's or employee's 159
office or employment due to acceptance of membership on the 160
authority or by providing service to the authority. 161

Sec. 4164.09. There is hereby created the Ohio nuclear 162
development authority nominating council. 163

Sec. 4164.091. The council shall review, evaluate, and 164
make recommendations to the governor regarding potential 165
appointees to serve as members of the authority. 166

Sec. 4164.092. (A) Consistent with division (B) of section 167
4164.05 of the Revised Code, and for the purpose of making 168
initial and subsequent appointments, and for filling vacancies, 169
the council shall provide the governor with a list of 170
individuals who are, in the judgment of the council, the most 171
fully qualified to become members of the authority. 172

(B) For each initial appointment, and for each subsequent 173
or vacancy appointment, the council shall provide a list of four 174
possible appointees. 175

(C) The council shall provide the lists at the following 176
times: 177

(1) For each subsequent appointment, not more than eighty- 178
five, nor less than sixty, days before the expiration of the 179
term of an authority member to be renewed or replaced; 180

(2) For each vacancy appointment, not more than thirty 181
days after the death of, resignation of, or termination of 182
service by, an authority member for whom a vacancy exists. 183

Sec. 4164.093. In reviewing, evaluating, and recommending 184
potential appointees to serve as members of the authority, the 185
council may solicit and accept comments from, and cooperate 186

with, any individual. 187

Sec. 4164.094. The council may make recommendations to the 188
general assembly concerning changes in law to assist the council 189
in the performance of its duties. 190

Sec. 4164.096. The council shall consist of seven members: 191

(A) The president of the senate, or the president's 192
designee; 193

(B) The speaker of the house of representatives, or the 194
speaker's designee. 195

(C) Five members of the Ohio state university's nuclear 196
engineering external advisory board. 197

Sec. 4164.097. (A) Of the seven members of the council, 198
the five members from the Ohio state university's nuclear 199
engineering external advisory board shall be appointed by the 200
governor. 201

(B) Initial appointments under this section shall be made 202
not later than thirty days after the effective date of this 203
section. 204

Sec. 4164.098. The term of office for council members 205
appointed by the governor shall be two years. Each appointed 206
member shall serve as a member of the council from the date of 207
appointment until the end of the term for which the member was 208
appointed. 209

The president of the senate, or the president's designee, 210
and the speaker of the house of representatives, or the 211
speaker's designee, shall serve on the council only during the 212
tenure of the president or speaker. 213

Sec. 4164.099. Any member appointed to fill a vacancy 214
occurring before the expiration of the term for which the member 215
was appointed shall hold office for the remainder of such term. 216
Any member shall continue in office after the expiration date of 217
the term for which the member was appointed until the member's 218
successor takes office, or until a period of sixty days has 219
elapsed, whichever occurs first. Each vacancy of an appointed 220
member shall be filled by appointment not later than sixty days 221
after the vacancy occurs and shall be filled in the same manner 222
as the original appointment. 223

Sec. 4164.0911. The council shall elect a chairperson and 224
a secretary at its initial meeting. 225

Sec. 4164.0912. The council shall hold its initial meeting 226
not later than thirty days after an agreement is reached under 227
section 3748.03 of the Revised Code. Subsequent meetings of the 228
council may be called by the chairperson. Special meetings shall 229
be called by the chairperson upon receipt of a written request 230
for a meeting signed by two or more members of the council. 231

Sec. 4164.0913. Before each meeting of the council, 232
written notice of the time and place of each meeting shall be 233
sent to each member of the council by mail or electronic mail. 234

Sec. 4164.0914. Four members of the council, or their 235
alternates, constitute a quorum. No measure shall be voted on, 236
or any action taken by the council unless a quorum is present. 237

Sec. 4164.0916. The council shall keep a record of its 238
proceedings. 239

Sec. 4164.0917. The council may adopt bylaws governing its 240
proceedings. 241

Sec. 4164.0918. Members of the council shall serve without 242

<u>compensation.</u>	243
<u>Sec. 4164.10. The authority is established for both of the</u>	244
<u>following purposes:</u>	245
<u>(A) To be an information resource for this state, the</u>	246
<u>United States nuclear regulatory commission, all branches of the</u>	247
<u>United States military, and the United States department of</u>	248
<u>energy on advanced-nuclear-research reactors, isotopes, and</u>	249
<u>isotope technologies;</u>	250
<u>(B) To make this state all of the following:</u>	251
<u>(1) A leader in the development and construction of new-</u>	252
<u>type advanced-nuclear-research reactors;</u>	253
<u>(2) A national and global leader in the commercial</u>	254
<u>production of isotopes and research;</u>	255
<u>(3) A leader in the research and development of high-</u>	256
<u>level-nuclear-waste reduction and storage technology.</u>	257
<u>Sec. 4164.11. The authority shall have all powers</u>	258
<u>necessary and convenient for carrying out its statutory</u>	259
<u>purposes, including the following powers:</u>	260
<u>(A) To adopt bylaws for the management and regulation of</u>	261
<u>its affairs;</u>	262
<u>(B) To develop and adopt a strategic plan for carrying out</u>	263
<u>the purposes set forth in this chapter;</u>	264
<u>(C) To foster innovative partnerships and relationships in</u>	265
<u>the state and among the state's public institutions of higher</u>	266
<u>education, private companies, federal laboratories, and</u>	267
<u>nonprofit organizations, to accomplish the purposes set forth in</u>	268
<u>this chapter;</u>	269

(D) To identify and support, in cooperation with the 270
public and private sectors, the development of education 271
programs related to Ohio's isotope industry; 272

(E) To assume any regulatory powers delegated from the 273
United States nuclear regulatory commission, the United States 274
department of energy, or any branch of the United States 275
military, or similar federal agencies, departments, or programs, 276
governing the construction and operation of noncommercial power- 277
producing nuclear reactors and the handling of radioactive 278
materials; 279

(F) To act in place of the governor in approving 280
agreements with the United States nuclear regulatory commission 281
and joint-development agreements with the United States 282
department of energy or an equivalent regulatory agency in the 283
event that any of the following occur: 284

(1) The authority requests the commission to delegate 285
rules for a state-based nuclear research-and-development 286
program. 287

(2) The authority requests to jointly develop advanced- 288
nuclear-research-reactor technology with the department under 289
the department's authority. 290

(3) The authority requests to jointly develop advanced- 291
nuclear-research-reactor technology with the United States 292
department of defense or another United States military agency 293
under the authority of the department or agency. 294

Sec. 4164.12. For the purpose of carrying out the Ohio 295
nuclear development authority's duties under sections 4164.01 to 296
4164.20 of the Revised Code, the authority may make use of the 297
staff and experts employed at the department of development in 298

such manner as is provided by mutual arrangement between the 299
authority and the department. 300

Sec. 4164.13. Meetings of the authority shall be held in 301
compliance with section 121.22 of the Revised Code. 302

Sec. 4164.15. The authority shall work with industrial and 303
academic institutions and the United States department of energy 304
or branches of the United States military to approve designs for 305
the commercialization of advanced-nuclear-reactor components, 306
which may include any of the following: 307

(A) Advanced-nuclear-reactor-neutronics analysis and 308
experimentation, including reactor, plant, shielding, nuclear 309
data, source-program software, nuclear database, conceptual 310
design, core and system design, certification in the phases, 311
core-management and fuel-management technology, modeling, and 312
calculation; 313

(B) Advanced-nuclear-reactor safety and plant safety, 314
including reactor-system safety standards, accident-analysis 315
software, and accident-management regulations; 316

(C) Advanced-nuclear-reactor fuels and materials, 317
including long-life fuel, clad materials, structural materials, 318
component materials, absorber materials, circuit materials, raw 319
materials, fuels-and-materials research and development, testing 320
programs used to develop fuels and materials-manufacturing 321
processes, experimental data, formulae, technological processes, 322
and facilities and equipment used to manufacture advanced- 323
nuclear-reactor fuels and materials; 324

(D) Advanced-nuclear-reactor-nuclear-steam-supply systems 325
and their associated components and equipment, including design 326
standards, component, equipment, and systems design, thermal 327

<u>hydraulics, mechanics, and chemistry analysis;</u>	328
<u>(E) Advanced-nuclear-reactor engineered-safety features</u>	329
<u>and their associated components, including design standards,</u>	330
<u>component design, system design, and structural design;</u>	331
<u>(F) Advanced-nuclear-reactor building, including</u>	332
<u>containment design, structural analysis, and architectural</u>	333
<u>analysis;</u>	334
<u>(G) Advanced-nuclear-reactor instrumentation and control</u>	335
<u>and application of computer science, including survey, monitor,</u>	336
<u>control, and protection systems;</u>	337
<u>(H) Advanced-nuclear-reactor-quality practices,</u>	338
<u>nondestructive-inspection practices, and in-service-inspection</u>	339
<u>technology;</u>	340
<u>(I) Advanced-nuclear-reactor plant design and</u>	341
<u>construction, debug, test-run, operation, maintenance, and</u>	342
<u>decommissioning technology;</u>	343
<u>(J) Advanced-nuclear-reactor economic methodology and</u>	344
<u>evaluation technology;</u>	345
<u>(K) Treatment, storage, recycling, and disposal technology</u>	346
<u>for advanced-nuclear-reactor and system-spent fuel;</u>	347
<u>(L) Treatment, storage, and disposal technology for</u>	348
<u>advanced-nuclear-reactor and system radioactive waste;</u>	349
<u>(M) Other areas that the parties or their executive agents</u>	350
<u>agree upon in writing.</u>	351
<u>Sec. 4164.16.</u> <u>The authority shall give priority to</u>	352
<u>projects that reduce nuclear waste and produce isotopes.</u>	353
<u>Sec. 4164.18.</u> <u>On or before the fourth day of July of each</u>	354

year, the authority shall submit an annual report of its 355
activities to the governor, the speaker of the house of 356
representatives, the president of the senate, and the chairs of 357
the house and senate committees that oversee energy-related 358
issues. The report shall be posted to the authority's web site. 359

Sec. 4164.19. Nothing in this chapter shall be construed 360
to supersede any agreement between the department of health and 361
the United States nuclear regulatory commission entered into 362
under section 3748.03 of the Revised Code with respect to 363
regulating activities not within the scope of activities of the 364
authority. 365

Sec. 4164.20. The authority shall, under Chapter 119. of 366
the Revised Code, adopt rules provided for by the United States 367
nuclear regulatory commission, department of energy, department 368
of defense or another United States military agency, or a 369
comparable federal agency for an Ohio state nuclear technology 370
research program for the purposes of developing and studying 371
advanced-nuclear research reactors to produce isotopes and to 372
reduce this state's high-level nuclear waste. The rules shall 373
reasonably ensure Ohioans of their safety in respect to nuclear 374
technology research and development and radioactive materials. 375

Section 2. That existing section 3748.03 of the Revised 376
Code is hereby repealed. 377

Section 3. Not later than thirty days after the effective 378
date of this section, the Ohio nuclear development authority 379
nominating council shall provide the governor with a list of 380
possible initial appointees. 381