

As Reported by the House Energy and Natural Resources Committee

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Representative Stein

**Cosponsors: Representatives Arndt, Becker, Carfagna, Cupp, Dean, Hambley,
Hood, Koehler, Lang, LaTourette, Lipps, Manning, G., McClain, Riedel,
Romanchuk, Seitz, Wiggam, Wilkin**

A BILL

To amend section 3748.03 and to enact sections 1
3748.23, 4164.01, 4164.04, 4164.05, 4164.07, 2
4164.08, 4164.10, 4164.11, 4164.12, 4164.13, 3
4164.15, 4164.16, 4164.18, 4164.19, and 4164.20 4
of the Revised Code to enact the Advanced 5
Nuclear Technology Helping Energize Mankind 6
(ANTHEM) Act by establishing the Ohio Nuclear 7
Development Authority. 8

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

Section 1. That section 3748.03 be amended and sections 9
3748.23, 4164.01, 4164.04, 4164.05, 4164.07, 4164.08, 4164.10, 10
4164.11, 4164.12, 4164.13, 4164.15, 4164.16, 4164.18, 4164.19, 11
and 4164.20 of the Revised Code be enacted to read as follows: 12

Sec. 3748.03. (A) (1) The governor, on behalf of the state, 13
may enter into agreements with the United States nuclear 14
regulatory commission as authorized by section 274(b) of the 15
"Atomic Energy Act of 1954," 68 Stat. 919, 42 U.S.C.A. 2011, as 16
amended, for the discontinuation of specified licensing and 17

related regulatory authority of the commission with respect to 18
byproduct material, source material, the commercial disposal of 19
low-level radioactive waste, and special nuclear material in 20
quantities not sufficient to form a critical mass and the 21
assumption of that authority by the state. 22

(2) The governor shall appoint a state liaison officer to 23
the United States nuclear regulatory commission, who shall serve 24
at the pleasure of the governor. 25

(B) ~~The general assembly hereby designates the department~~ 26
~~of health, in addition to the Ohio nuclear development authority~~ 27
~~as the agency authorized to by division (F) of section 4164.11~~ 28
~~of the Revised Code, may pursue agreement state status, on~~ 29
behalf of the governor, for the assumption by the state of 30
specified licensing and related regulatory authority from the 31
commission pursuant to division (A) of this section. The 32
department shall and the Ohio nuclear development authority may 33
enter into negotiations with the commission for that purpose. 34

(C) Any person who, on the effective date of an agreement 35
entered into by the state and the commission pursuant to 36
divisions (A) and (B) of this section, holds a license issued by 37
the commission for radioactive materials that are subject to the 38
agreement is deemed to hold a license issued under this chapter 39
and rules adopted under it. That license shall expire ninety 40
days after the holder receives a notice of expiration from the 41
department or on the date of expiration specified in the license 42
issued by the commission, whichever is later, provided that no 43
such license shall expire during the ninety days immediately 44
following the effective date of the agreement. 45

Sec. 3748.23. The rules adopted under this chapter shall 46
neither conflict with nor supersede the rules adopted under 47

Chapter 4164. of the Revised Code. 48

Sec. 4164.01. As used in this chapter, unless the context 49
otherwise requires, "authority" means the Ohio nuclear 50
development authority created and constituted under section 51
4164.04 of the Revised Code. 52

Sec. 4164.04. There is hereby created and constituted 53
within the department of commerce, the Ohio nuclear development 54
authority. The authority's exercise of powers conferred by this 55
chapter is the performance of an essential governmental function 56
and address matters of public necessity for which public moneys 57
may be spent and private property acquired. 58

Sec. 4164.05. (A) The authority shall consist of nine 59
members, appointed by the governor and confirmed by the senate, 60
representing the following three stakeholder groups within the 61
nuclear-engineering-and-manufacturing industry: 62

(1) Safety; 63

(2) Industry; 64

(3) Engineering research and development. 65

(B) (1) A member appointed from the safety group shall hold 66
at least a bachelor's degree in nuclear, mechanical, chemical, 67
or electrical engineering and at least one of the following 68
shall also apply: 69

(a) The member is a recognized professional in nuclear- 70
reactor safety or developing ISO 9000 standards. 71

(b) The member has been employed by or has worked closely 72
with the United States department of energy or the nuclear 73
regulatory commission and the member also has a professional 74
background in nuclear-energy-technology development or advanced- 75

<u>nuclear-reactor concepts.</u>	76
<u>(c) The member has been employed by a contractor that has</u>	77
<u>built concept reactors and the member also worked with hazardous</u>	78
<u>substances, either nuclear or chemical, during that employment.</u>	79
<u>(2) A member appointed from the industry group shall have</u>	80
<u>at least five years of experience in one or more of the</u>	81
<u>following:</u>	82
<u>(a) Nuclear-power-plant operation;</u>	83
<u>(b) Processing and extracting isotopes;</u>	84
<u>(c) Managing a facility that deals with hazardous</u>	85
<u>substances, either nuclear or chemical;</u>	86
<u>(d) Handling and storing nuclear waste.</u>	87
<u>(3) A member appointed from the engineering research and</u>	88
<u>development group shall hold at least a bachelor's degree in</u>	89
<u>nuclear, mechanical, chemical, or electrical engineering and the</u>	90
<u>member shall also be a recognized professional in at least one</u>	91
<u>of the following areas of study:</u>	92
<u>(a) Advanced nuclear reactors;</u>	93
<u>(b) Materials science involving the study of alloys and</u>	94
<u>metallurgy, ceramics, or composites;</u>	95
<u>(c) Molten-salt chemistry;</u>	96
<u>(d) Solid-state chemistry;</u>	97
<u>(e) Chemical physics;</u>	98
<u>(f) Actinide chemistry;</u>	99
<u>(g) Instrumentation and sensors;</u>	100

<u>(h) Control systems.</u>	101
<u>(C) The members shall be United States citizens and residents of this state.</u>	102 103
<u>(D) The members shall serve five-year terms.</u>	104
<u>(E) Any appointment to fill a vacancy on the authority shall be made for the unexpired term of the member whose death, resignation, or removal created the vacancy.</u>	105 106 107
<u>(F) Initial appointments under this section shall be made not later than sixty days after the effective date of an agreement with any of the following entities regarding the delegation of authority relating to nuclear energy:</u>	108 109 110 111
<u>(1) The United States nuclear regulatory commission pursuant to section 3748.03 of the Revised Code;</u>	112 113
<u>(2) The United States department of energy;</u>	114
<u>(3) Any branch of the United States military;</u>	115
<u>(4) Any other federal agency, department, or program governing the construction and operation of noncommercial power-producing nuclear reactors and the handling of radioactive materials.</u>	116 117 118 119
<u>Sec. 4164.07. Immediately after appointment to the authority under section 4164.05 of the Revised Code, the members shall enter upon the performance of their duties.</u>	120 121 122
<u>Sec. 4164.08. Notwithstanding any law to the contrary, no officer or employee of this state shall be deemed to have forfeited, or shall have forfeited, the officer's or employee's office or employment due to acceptance of membership on the authority or by providing service to the authority.</u>	123 124 125 126 127

<u>Sec. 4164.10. The authority is established for both of the</u>	128
<u>following purposes:</u>	129
<u>(A) To be an information resource for this state, the</u>	130
<u>United States nuclear regulatory commission, all branches of the</u>	131
<u>United States military, and the United States department of</u>	132
<u>energy on advanced-nuclear-research reactors, isotopes, and</u>	133
<u>isotope technologies;</u>	134
<u>(B) To make this state all of the following:</u>	135
<u>(1) A leader in the development and construction of new-</u>	136
<u>type advanced-nuclear-research reactors;</u>	137
<u>(2) A national and global leader in the commercial</u>	138
<u>production of isotopes and research;</u>	139
<u>(3) A leader in the research and development of high-</u>	140
<u>level-nuclear-waste reduction and storage technology.</u>	141
<u>Sec. 4164.11. The authority shall have all powers</u>	142
<u>necessary and convenient for carrying out its statutory</u>	143
<u>purposes, including the following powers:</u>	144
<u>(A) To adopt bylaws for the management and regulation of</u>	145
<u>its affairs;</u>	146
<u>(B) To develop and adopt a strategic plan for carrying out</u>	147
<u>the purposes set forth in this chapter;</u>	148
<u>(C) To foster innovative partnerships and relationships in</u>	149
<u>the state and among the state's public institutions of higher</u>	150
<u>education, private companies, federal laboratories, and</u>	151
<u>nonprofit organizations, to accomplish the purposes set forth in</u>	152
<u>this chapter;</u>	153
<u>(D) To identify and support, in cooperation with the</u>	154

<u>public and private sectors, the development of education</u>	155
<u>programs related to Ohio's isotope industry;</u>	156
<u>(E) To assume any regulatory powers delegated from the</u>	157
<u>United States nuclear regulatory commission, the United States</u>	158
<u>department of energy, or any branch of the United States</u>	159
<u>military, or similar federal agencies, departments, or programs,</u>	160
<u>governing the construction and operation of noncommercial power-</u>	161
<u>producing nuclear reactors and the handling of radioactive</u>	162
<u>materials;</u>	163
<u>(F) To act in place of the governor in approving</u>	164
<u>agreements with the United States nuclear regulatory commission</u>	165
<u>and joint-development agreements with the United States</u>	166
<u>department of energy or an equivalent regulatory agency in the</u>	167
<u>event that any of the following occur:</u>	168
<u>(1) The authority requests the commission to delegate</u>	169
<u>rules for a state-based nuclear research-and-development</u>	170
<u>program.</u>	171
<u>(2) The authority requests to jointly develop advanced-</u>	172
<u>nuclear-research-reactor technology with the department under</u>	173
<u>the department's authority.</u>	174
<u>(3) The authority requests to jointly develop advanced-</u>	175
<u>nuclear-research-reactor technology with the United States</u>	176
<u>department of defense or another United States military agency</u>	177
<u>under the authority of the department or agency.</u>	178
<u>Sec. 4164.12.</u> <u>For the purpose of carrying out the Ohio</u>	179
<u>nuclear development authority's duties under sections 4164.01 to</u>	180
<u>4164.20 of the Revised Code, the authority may make use of the</u>	181
<u>staff and experts employed at the department of commerce in such</u>	182
<u>manner as is provided by mutual arrangement between the</u>	183

authority and the department. 184

Sec. 4164.13. Meetings of the authority shall be held in 185
compliance with section 121.22 of the Revised Code. 186

Sec. 4164.15. The authority shall work with industrial and 187
academic institutions and the United States department of energy 188
or branches of the United States military to approve designs for 189
the commercialization of advanced-nuclear-reactor components, 190
which may include any of the following: 191

(A) Advanced-nuclear-reactor-neutronics analysis and 192
experimentation, including reactor, plant, shielding, nuclear 193
data, source-program software, nuclear database, conceptual 194
design, core and system design, certification in the phases, 195
core-management and fuel-management technology, modeling, and 196
calculation; 197

(B) Advanced-nuclear-reactor safety and plant safety, 198
including reactor-system safety standards, accident-analysis 199
software, and accident-management regulations; 200

(C) Advanced-nuclear-reactor fuels and materials, 201
including long-life fuel, clad materials, structural materials, 202
component materials, absorber materials, circuit materials, raw 203
materials, fuels-and-materials research and development, testing 204
programs used to develop fuels and materials-manufacturing 205
processes, experimental data, formulae, technological processes, 206
and facilities and equipment used to manufacture advanced- 207
nuclear-reactor fuels and materials; 208

(D) Advanced-nuclear-reactor-nuclear-steam-supply systems 209
and their associated components and equipment, including design 210
standards, component, equipment, and systems design, thermal 211
hydraulics, mechanics, and chemistry analysis; 212

<u>(E) Advanced-nuclear-reactor engineered-safety features</u>	213
<u>and their associated components, including design standards,</u>	214
<u>component design, system design, and structural design;</u>	215
<u>(F) Advanced-nuclear-reactor building, including</u>	216
<u>containment design, structural analysis, and architectural</u>	217
<u>analysis;</u>	218
<u>(G) Advanced-nuclear-reactor instrumentation and control</u>	219
<u>and application of computer science, including survey, monitor,</u>	220
<u>control, and protection systems;</u>	221
<u>(H) Advanced-nuclear-reactor-quality practices,</u>	222
<u>nondestructive-inspection practices, and in-service-inspection</u>	223
<u>technology;</u>	224
<u>(I) Advanced-nuclear-reactor plant design and</u>	225
<u>construction, debug, test-run, operation, maintenance, and</u>	226
<u>decommissioning technology;</u>	227
<u>(J) Advanced-nuclear-reactor economic methodology and</u>	228
<u>evaluation technology;</u>	229
<u>(K) Treatment, storage, recycling, and disposal technology</u>	230
<u>for advanced-nuclear-reactor and system-spent fuel;</u>	231
<u>(L) Treatment, storage, and disposal technology for</u>	232
<u>advanced-nuclear-reactor and system radioactive waste;</u>	233
<u>(M) Other areas that the parties or their executive agents</u>	234
<u>agree upon in writing.</u>	235
<u>Sec. 4164.16.</u> The authority shall give priority to	236
<u>projects that reduce nuclear waste and produce isotopes.</u>	237
<u>Sec. 4164.18.</u> On or before the fourth day of July of each	238
<u>year, the authority shall submit an annual report of its</u>	239

activities to the governor, the speaker of the house of 240
representatives, the president of the senate, and the chairs of 241
the house and senate committees that oversee energy-related 242
issues. The report shall be posted to the authority's web site. 243

Sec. 4164.19. Nothing in this chapter shall be construed 244
to supersede any agreement between the department of health and 245
the United States nuclear regulatory commission entered into 246
under section 3748.03 of the Revised Code with respect to 247
regulating activities not within the scope of activities of the 248
authority. 249

Sec. 4164.20. The authority shall, under Chapter 119. of 250
the Revised Code, adopt rules provided for by the United States 251
nuclear regulatory commission, department of energy, department 252
of defense or another United States military agency, or a 253
comparable federal agency for an Ohio state nuclear technology 254
research program for the purposes of developing and studying 255
advanced-nuclear research reactors to produce isotopes and to 256
reduce this state's high-level nuclear waste. The rules shall 257
reasonably ensure Ohioans of their safety in respect to nuclear 258
technology research and development and radioactive materials. 259

Section 2. That existing section 3748.03 of the Revised 260
Code is hereby repealed. 261