

SENATE BILL NO. _____ HOUSE BILL NO. _____

1 A BILL to amend and reenact § 56-585.5 of the Code of Virginia and to amend the Code of Virginia by
2 adding in Subtitle V of Title 45.2 a chapter numbered 22, consisting of a section numbered 45.2-
3 2120, relating to electric utilities; energy storage resources; Department of Energy to develop
4 model ordinances; work groups; reports.

5 **Be it enacted by the General Assembly of Virginia:**

6 **1. That § 56-585.5 of the Code of Virginia is amended and reenacted and that the Code of Virginia**
7 **is amended by adding in Subtitle V of Title 45.2 a chapter numbered 22, consisting of a section**
8 **numbered 45.2-2120, as follows:**

9 CHAPTER 22.

10 ENERGY STORAGE.

11 § 45.2-2120. Model ordinances for energy storage resources.

12 By December 1, 2026, the Department, in consultation with the Department of Environmental
13 Quality and the Department of Fire Programs, shall develop model ordinances suggested for use by
14 localities in their regulation of energy storage projects, as described in subdivision E of § 56-585.5, and
15 shall update such model ordinances every three years. Such model ordinances shall include minimum
16 safety standards in accordance with the most recently published edition of the National Fire Protection
17 Association 855 Standard for the Installation of Stationary Energy Storage Systems.

18 **§ 56-585.5. Generation of electricity from renewable and zero carbon sources.**

19 A. As used in this section:

20 "Accelerated renewable energy buyer" means a commercial or industrial customer of a Phase I or
21 Phase II Utility, irrespective of generation supplier, with an aggregate load over 25 megawatts in the prior
22 calendar year, that enters into arrangements pursuant to subsection G, as certified by the Commission.

23 "Aggregate load" means the combined electrical load associated with selected accounts of an
24 accelerated renewable energy buyer with the same legal entity name as, or in the names of affiliated

25 entities that control, are controlled by, or are under common control of, such legal entity or are the names
26 of affiliated entities under a common parent.

27 "Control" has the same meaning as provided in § 56-585.1:11.

28 "Elementary or secondary" has the same meaning as provided in § 22.1-1.

29 "Falling water" means hydroelectric resources, including run-of-river generation from a combined
30 pumped-storage and run-of-river facility. "Falling water" does not include electricity generated from
31 pumped-storage facilities.

32 "Low-income qualifying projects" means a project that provides a minimum of 50 percent of the
33 respective electric output to low-income utility customers as that term is defined in § 56-576.

34 "Phase I Utility" has the same meaning as provided in subdivision A 1 of § 56-585.1.

35 "Phase II Utility" has the same meaning as provided in subdivision A 1 of § 56-585.1.

36 "Previously developed project site" means any property, including related buffer areas, if any, that
37 has been previously disturbed or developed for non-single-family residential, nonagricultural, or
38 nonsilvicultural use, regardless of whether such property currently is being used for any purpose.
39 "Previously developed project site" includes a brownfield as defined in § 10.1-1230 or any parcel that has
40 been previously used (i) for a retail, commercial, or industrial purpose; (ii) as a parking lot; (iii) as the site
41 of a parking lot canopy or structure; (iv) for mining, which is any lands affected by coal mining that took
42 place before August 3, 1977, or any lands upon which extraction activities have been permitted by the
43 Department of Energy under Title 45.2; (v) for quarrying; or (vi) as a landfill.

44 "Total electric energy" means total electric energy sold to retail customers in the Commonwealth
45 service territory of a Phase I or Phase II Utility, other than accelerated renewable energy buyers, by the
46 incumbent electric utility or other retail supplier of electric energy in the previous calendar year, excluding
47 an amount equivalent to the annual percentages of the electric energy that was supplied to such customer
48 from nuclear generating plants located within the Commonwealth in the previous calendar year, provided
49 such nuclear units were operating by July 1, 2020, or from any zero-carbon electric generating facilities
50 not otherwise RPS eligible sources and placed into service in the Commonwealth after July 1, 2030.

51 "Zero-carbon electricity" means electricity generated by any generating unit that does not emit
52 carbon dioxide as a by-product of combusting fuel to generate electricity.

53 B. 1. By December 31, 2024, except for any coal-fired electric generating units (i) jointly owned
54 with a cooperative utility or (ii) owned and operated by a Phase II Utility located in the coalfield region
55 of the Commonwealth that co-fires with biomass, any Phase I and Phase II Utility shall retire all generating
56 units principally fueled by oil with a rated capacity in excess of 500 megawatts and all coal-fired electric
57 generating units operating in the Commonwealth.

58 2. By December 31, 2045, except for biomass-fired electric generating units that do not co-fire
59 with coal, each Phase I and II Utility shall retire all other electric generating units located in the
60 Commonwealth that emit carbon as a by-product of combusting fuel to generate electricity.

61 3. A Phase I or Phase II Utility may petition the Commission for relief from the requirements of
62 this subsection on the basis that the requirement would threaten the reliability or security of electric service
63 to customers. The Commission shall consider in-state and regional transmission entity resources and shall
64 evaluate the reliability of each proposed retirement on a case-by-case basis in ruling upon any such
65 petition.

66 C. Each Phase I and Phase II Utility shall participate in a renewable energy portfolio standard
67 program (RPS Program) that establishes annual goals for the sale of renewable energy to all retail
68 customers in the utility's service territory, other than accelerated renewable energy buyers pursuant to
69 subsection G, regardless of whether such customers purchase electric supply service from the utility or
70 from suppliers other than the utility. To comply with the RPS Program, each Phase I and Phase II Utility
71 shall procure and retire Renewable Energy Certificates (RECs) originating from renewable energy
72 standard eligible sources (RPS eligible sources). For purposes of complying with the RPS Program from
73 2021 to 2024, a Phase I and Phase II Utility may use RECs from any renewable energy facility, as defined
74 in § 56-576, provided that such facilities are located in the Commonwealth or are physically located within
75 the PJM Interconnection, LLC (PJM) region. However, at no time during this period or thereafter may
76 any Phase I or Phase II Utility use RECs from (i) renewable thermal energy, (ii) renewable thermal energy
77 equivalent, or (iii) biomass-fired facilities that are outside the Commonwealth. From compliance year

78 2025 and all years after, each Phase I and Phase II Utility may only use RECs from RPS eligible sources
79 for compliance with the RPS Program.

80 In order to qualify as RPS eligible sources, such sources must be (a) electric-generating resources
81 that generate electric energy derived from solar or wind located in the Commonwealth or off the
82 Commonwealth's Atlantic shoreline or in federal waters and interconnected directly into the
83 Commonwealth or physically located within the PJM region; (b) falling water resources located in the
84 Commonwealth or physically located within the PJM region that were in operation as of January 1, 2020,
85 that are owned by a Phase I or Phase II Utility or for which a Phase I or Phase II Utility has entered into a
86 contract prior to January 1, 2020, to purchase the energy, capacity, and renewable attributes of such falling
87 water resources; (c) non-utility-owned resources from falling water that (1) are less than 65 megawatts,
88 (2) began commercial operation after December 31, 1979, or (3) added incremental generation
89 representing greater than 50 percent of the original nameplate capacity after December 31, 1979, provided
90 that such resources are located in the Commonwealth or are physically located within the PJM region; (d)
91 waste-to-energy or landfill gas-fired generating resources located in the Commonwealth and in operation
92 as of January 1, 2020, provided that such resources do not use waste heat from fossil fuel combustion; (e)
93 geothermal heating and cooling systems located in the Commonwealth; (f) geothermal electric generating
94 resources located in the Commonwealth or physically located within the PJM region; or (g) biomass-fired
95 facilities in operation in the Commonwealth and in operation as of January 1, 2023, that (1) supply no
96 more than 10 percent of their annual net electrical generation to the electric grid or no more than 15 percent
97 of their annual total useful energy to any entity other than the manufacturing facility to which the
98 generating source is interconnected and are fueled by forest-product manufacturing residuals, including
99 pulping liquor, bark, paper recycling residuals, biowastes, or biomass, as described in subdivisions A 1,
100 2, and 4 of § 10.1-1308.1, provided that biomass as described in subdivision A 1 of § 10.1-1308.1 results
101 from harvesting in accordance with best management practices for the sustainable harvesting of biomass
102 developed and enforced by the State Forester pursuant to § 10.1-1105, or (2) are owned by a Phase I or
103 Phase II Utility, have less than 52 megawatts capacity, and are fueled by forest-product manufacturing
104 residuals, biowastes, or biomass, as described in subdivisions A 1, 2, and 4 of § 10.1-1308.1, provided

105 that biomass as described in subdivision A 1 of § 10.1-1308.1 results from harvesting in accordance with
 106 best management practices for the sustainable harvesting of biomass developed and enforced by the State
 107 Forester pursuant to § 10.1-1105. Regardless of any future maintenance, expansion, or refurbishment
 108 activities, the total amount of RECs that may be sold by any RPS eligible source using biomass in any
 109 year shall be no more than the number of megawatt hours of electricity produced by that facility in 2022;
 110 however, in no year may any RPS eligible source using biomass sell RECs in excess of the actual
 111 megawatt-hours of electricity generated by such facility that year. In order to comply with the RPS
 112 Program, each Phase I and Phase II Utility may use and retire the environmental attributes associated with
 113 any existing owned or contracted solar, wind, falling water, or biomass electric generating resources in
 114 operation, or proposed for operation, in the Commonwealth or solar, wind, or falling water resources
 115 physically located within the PJM region, with such resource qualifying as a Commonwealth-located
 116 resource for purposes of this subsection, as of January 1, 2020, provided that such renewable attributes
 117 are verified as RECs consistent with the PJM-EIS Generation Attribute Tracking System.

118 1. The RPS Program requirements shall be a percentage of the total electric energy sold in the
 119 previous calendar year and shall be implemented in accordance with the following schedule:

120 a Phase I Utilities		Phase II Utilities	
a Year	RPS Program Requirement	Year	RPS Program Requirement
b 2021	6%	2021	14%
c 2022	7%	2022	17%
d 2023	8%	2023	20%
e 2024	10%	2024	23%
f 2025	14%	2025	26%
g 2026	17%	2026	29%
h 2027	20%	2027	32%
i 2028	24%	2028	35%

j	2029	27%	2029	38%
k	2030	30%	2030	41%
l	2031	33%	2031	45%
m	2032	36%	2032	49%
n	2033	39%	2033	52%
o	2034	42%	2034	55%
p	2035	45%	2035	59%
q	2036	53%	2036	63%
r	2037	53%	2037	67%
s	2038	57%	2038	71%
t	2039	61%	2039	75%
u	2040	65%	2040	79%
v	2041	68%	2041	83%
w	2042	71%	2042	87%
x	2043	74%	2043	91%
y	2044	77%	2044	95%
z	2045	80%	2045 and thereafter	100%
aa	2046	84%		
ab	2047	88%		
ac	2048	92%		
ad	2049	96%		
ae	2050 and thereafter	100%		

121 2. A Phase II Utility shall meet one percent of the RPS Program requirements in any given
122 compliance year with solar, wind, or anaerobic digestion resources of one megawatt or less located in the
123 Commonwealth, with not more than 3,000 kilowatts at any single location or at contiguous locations
124 owned by the same entity or affiliated entities and, to the extent that low-income qualifying projects are
125 available, then no less than 25 percent of such one percent shall be composed of low-income qualifying
126 projects. To the extent that low-income qualifying projects are not available and projects located on or
127 adjacent to public elementary or secondary schools are available, the remainder of no less than 25 percent
128 of such one percent shall be composed of projects located on or adjacent to public elementary or secondary
129 schools. A project located on or adjacent to a public elementary or secondary school shall have a
130 contractual relationship with such school in order to qualify for the provisions of this section.

131 3. Beginning with the 2025 compliance year and thereafter, at least 75 percent of all RECs used
132 by a Phase II Utility in a compliance period shall come from RPS eligible resources located in the
133 Commonwealth.

134 4. Any Phase I or Phase II Utility may apply renewable energy sales achieved or RECs acquired
135 in excess of the sales requirement for that RPS Program to the sales requirements for RPS Program
136 requirements in the year in which it was generated and the five calendar years after the renewable energy
137 was generated or the RECs were created. To the extent that a Phase I or Phase II Utility procures RECs
138 for RPS Program compliance from resources the utility does not own, the utility shall be entitled to recover
139 the costs of such certificates at its election pursuant to § 56-249.6 or subdivision A 5 d of § 56-585.1.

140 5. Energy from a geothermal heating and cooling system is eligible for inclusion in meeting the
141 requirements of the RPS Program. RECs from a geothermal heating and cooling system are created based
142 on the amount of energy, converted from BTUs to kilowatt-hours, that is generated by a geothermal
143 heating and cooling system for space heating and cooling or water heating. The Commission shall
144 determine the form and manner in which such RECs are verified.

145 D. Each Phase I or Phase II Utility shall petition the Commission for necessary approvals to
146 procure zero-carbon electricity generating capacity as set forth in this subsection and energy storage
147 resources as set forth in subsection E. To the extent that a Phase I or Phase II Utility constructs or acquires

148 new zero-carbon generating facilities or energy storage resources, the utility shall petition the Commission
149 for the recovery of the costs of such facilities, at the utility's election, either through its rates for generation
150 and distribution services or through a rate adjustment clause pursuant to subdivision A 6 of § 56-585.1.
151 All costs not sought for recovery through a rate adjustment clause pursuant to subdivision A 6 of § 56-
152 585.1 associated with generating facilities provided by sunlight or onshore or offshore wind are also
153 eligible to be applied by the utility as a customer credit reinvestment offset as provided in subdivision A
154 8 of § 56-585.1. Costs associated with the purchase of energy, capacity, or environmental attributes from
155 facilities owned by the persons other than the utility required by this subsection shall be recovered by the
156 utility either through its rates for generation and distribution services or pursuant to § 56-249.6.

157 1. Each Phase I Utility shall petition the Commission for necessary approvals to construct, acquire,
158 or enter into agreements to purchase the energy, capacity, and environmental attributes of 600 megawatts
159 of generating capacity using energy derived from sunlight or onshore wind.

160 a. By December 31, 2023, each Phase I Utility shall petition the Commission for necessary
161 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
162 environmental attributes of at least 200 megawatts of generating capacity located in the Commonwealth
163 using energy derived from sunlight or onshore wind, and 35 percent of such generating capacity procured
164 shall be from the purchase of energy, capacity, and environmental attributes from solar or onshore wind
165 facilities owned by persons other than the utility, with the remainder, in the aggregate, being from
166 construction or acquisition by such Phase I Utility.

167 b. By December 31, 2027, each Phase I Utility shall petition the Commission for necessary
168 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
169 environmental attributes of at least 200 megawatts of additional generating capacity located in the
170 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
171 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
172 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
173 being from construction or acquisition by such Phase I Utility.

174 c. By December 31, 2030, each Phase I Utility shall petition the Commission for necessary
175 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
176 environmental attributes of at least 200 megawatts of additional generating capacity located in the
177 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
178 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
179 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
180 being from construction or acquisition by such Phase I Utility.

181 d. Nothing in this subdivision 1 shall prohibit such Phase I Utility from constructing, acquiring, or
182 entering into agreements to purchase the energy, capacity, and environmental attributes of more than 600
183 megawatts of generating capacity located in the Commonwealth using energy derived from sunlight or
184 onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-580 and 56-
185 585.1.

186 2. By December 31, 2035, each Phase II Utility shall petition the Commission for necessary
187 approvals to (i) construct, acquire, or enter into agreements to purchase the energy, capacity, and
188 environmental attributes of 16,100 megawatts of generating capacity located in the Commonwealth using
189 energy derived from sunlight or onshore wind, which shall include 1,100 megawatts of solar generation
190 of a nameplate capacity not to exceed three megawatts per individual project and 35 percent of such
191 generating capacity procured shall be from the purchase of energy, capacity, and environmental attributes
192 from solar facilities owned by persons other than a utility, including utility affiliates and deregulated
193 affiliates and (ii) pursuant to § 56-585.1:11, construct or purchase one or more offshore wind generation
194 facilities located off the Commonwealth's Atlantic shoreline or in federal waters and interconnected
195 directly into the Commonwealth with an aggregate capacity of up to 5,200 megawatts. At least 200
196 megawatts of the 16,100 megawatts shall be placed on previously developed project sites.

197 a. By December 31, 2024, each Phase II Utility shall petition the Commission for necessary
198 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
199 environmental attributes of at least 3,000 megawatts of generating capacity located in the Commonwealth
200 using energy derived from sunlight or onshore wind, and 35 percent of such generating capacity procured

201 shall be from the purchase of energy, capacity, and environmental attributes from solar or onshore wind
202 facilities owned by persons other than the utility, with the remainder, in the aggregate, being from
203 construction or acquisition by such Phase II Utility.

204 b. By December 31, 2027, each Phase II Utility shall petition the Commission for necessary
205 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
206 environmental attributes of at least 3,000 megawatts of additional generating capacity located in the
207 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
208 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
209 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
210 being from construction or acquisition by such Phase II Utility.

211 c. By December 31, 2030, each Phase II Utility shall petition the Commission for necessary
212 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
213 environmental attributes of at least 4,000 megawatts of additional generating capacity located in the
214 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
215 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
216 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
217 being from construction or acquisition by such Phase II Utility.

218 d. By December 31, 2035, each Phase II Utility shall petition the Commission for necessary
219 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and
220 environmental attributes of at least 6,100 megawatts of additional generating capacity located in the
221 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
222 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
223 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
224 being from construction or acquisition by such Phase II Utility.

225 e. Nothing in this subdivision 2 shall prohibit such Phase II Utility from constructing, acquiring,
226 or entering into agreements to purchase the energy, capacity, and environmental attributes of more than
227 16,100 megawatts of generating capacity located in the Commonwealth using energy derived from

228 sunlight or onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-
229 580 and 56-585.1.

230 3. Nothing in this section shall prohibit a utility from petitioning the Commission to construct or
231 acquire zero-carbon electricity or from entering into contracts to procure the energy, capacity, and
232 environmental attributes of zero-carbon electricity generating resources in excess of the requirements in
233 subsection B. The Commission shall determine whether to approve such petitions on a stand-alone basis
234 pursuant to §§ 56-580 and 56-585.1, provided that the Commission's review shall also consider whether
235 the proposed generating capacity (i) is necessary to meet the utility's native load, (ii) is likely to lower
236 customer fuel costs, (iii) will provide economic development opportunities in the Commonwealth, and
237 (iv) serves a need that cannot be more affordably met with demand-side or energy storage resources.

238 Each Phase I and Phase II Utility shall, at least once every year, conduct a request for proposals
239 for new solar and wind resources. Such requests shall quantify and describe the utility's need for energy,
240 capacity, or renewable energy certificates. The requests for proposals shall be publicly announced and
241 made available for public review on the utility's website at least 45 days prior to the closing of such request
242 for proposals. The requests for proposals shall provide, at a minimum, the following information: (a) the
243 size, type, and timing of resources for which the utility anticipates contracting; (b) any minimum
244 thresholds that must be met by respondents; (c) major assumptions to be used by the utility in the bid
245 evaluation process, including environmental emission standards; (d) detailed instructions for preparing
246 bids so that bids can be evaluated on a consistent basis; (e) the preferred general location of additional
247 capacity; and (f) specific information concerning the factors involved in determining the price and non-
248 price criteria used for selecting winning bids. A utility may evaluate responses to requests for proposals
249 based on any criteria that it deems reasonable but shall at a minimum consider the following in its selection
250 process: (1) the status of a particular project's development; (2) the age of existing generation facilities;
251 (3) the demonstrated financial viability of a project and the developer; (4) a developer's prior experience
252 in the field; (5) the location and effect on the transmission grid of a generation facility; (6) benefits to the
253 Commonwealth that are associated with particular projects, including regional economic development and
254 the use of goods and services from Virginia businesses; and (7) the environmental impacts of particular

255 resources, including impacts on air quality within the Commonwealth and the carbon intensity of the
256 utility's generation portfolio.

257 4. In connection with the requirements of this subsection, each Phase I and Phase II Utility shall,
258 commencing in 2020 and concluding in 2035, submit annually a plan and petition for approval for the
259 development of new solar and onshore wind generation capacity. Such plan shall reflect, in the aggregate
260 and over its duration, the requirements of subsection D concerning the allocation percentages for
261 construction or purchase of such capacity. Such petition shall contain any request for approval to construct
262 such facilities pursuant to subsection D of § 56-580 and a request for approval or update of a rate
263 adjustment clause pursuant to subdivision A 6 of § 56-585.1 to recover the costs of such facilities. Such
264 plan shall also include the utility's plan to meet the energy storage project targets of subsection E, including
265 the goal of installing at least 10 percent of such energy storage projects [petitioned for pursuant to](#)
266 [subdivisions E 1 and 2](#) behind the meter. In determining whether to approve the utility's plan and any
267 associated petition requests, the Commission shall determine whether they are reasonable and prudent and
268 shall give due consideration to (i) the RPS and carbon dioxide reduction requirements in this section; (ii)
269 the promotion of new renewable generation and energy storage resources within the Commonwealth, and
270 associated economic development; and (iii) fuel savings projected to be achieved by the plan.
271 Notwithstanding any other provision of this title, the Commission's final order regarding any such petition
272 and associated requests shall be entered by the Commission not more than six months after the date of the
273 filing of such petition.

274 5. If, in any year, a Phase I or Phase II Utility is unable to meet the compliance obligation of the
275 RPS Program requirements or if the cost of RECs necessary to comply with RPS Program requirements
276 exceeds \$45 per megawatt hour, such supplier shall be obligated to make a deficiency payment equal to
277 \$45 for each megawatt-hour shortfall for the year of noncompliance, except that the deficiency payment
278 for any shortfall in procuring RECs for solar, wind, or anaerobic digesters located in the Commonwealth
279 shall be \$75 per megawatts hour for resources one megawatt and lower. The amount of any deficiency
280 payment shall increase by one percent annually after 2021. A Phase I or Phase II Utility shall be entitled
281 to recover the costs of such payments as a cost of compliance with the requirements of this subsection

282 pursuant to subdivision A 5 d of § 56-585.1. All proceeds from the deficiency payments shall be deposited
283 into an interest-bearing account administered by the Department of Energy. In administering this account,
284 the Department of Energy shall manage the account as follows: (i) 50 percent of total revenue shall be
285 directed to job training programs in historically economically disadvantaged communities; (ii) 16 percent
286 of total revenue shall be directed to energy efficiency measures for public facilities; (iii) 30 percent of
287 total revenue shall be directed to renewable energy programs located in historically economically
288 disadvantaged communities; and (iv) four percent of total revenue shall be directed to administrative costs.

289 For any project constructed pursuant to this subsection or subsection E, a utility shall, subject to a
290 competitive procurement process, procure equipment from a Virginia-based or United States-based
291 manufacturer using materials or product components made in Virginia or the United States, if reasonably
292 available and competitively priced.

293 E. To enhance reliability and performance of the utility's generation and distribution system, each
294 Phase I and Phase II Utility shall petition the Commission for necessary approvals to construct ~~or~~, acquire
295 new, or procure utility-owned energy storage resources. For the purposes of this subsection, "long-
296 duration energy storage" means energy storage resources with 10 hours or more of generation capacity
297 operating at full nameplate capacity and "short-duration energy storage" means energy storage resources
298 with less than 10 hours of generation capacity.

299 1. By December 31, ~~2035~~ 2040, each Phase I Utility shall petition the Commission for necessary
300 approvals to construct ~~or~~, acquire ~~400, or procure 780~~ megawatts of short-duration energy storage
301 capacity. Nothing in this subdivision shall prohibit a Phase I Utility from constructing ~~or~~, acquiring, or
302 procuring more than ~~400~~ 780 megawatts of short-duration energy storage, provided that the utility receives
303 approval from the Commission pursuant to §§ 56-580 and 56-585.1.

304 2. By December 31, ~~2035~~ 2040, each Phase II Utility shall petition the Commission for necessary
305 approvals to construct ~~or~~, acquire ~~2,700, or procure 4,000~~ megawatts of short-duration energy storage
306 capacity, and by December 31, 2045, each Phase II Utility shall petition the Commission for necessary
307 approvals to construct, acquire, or procure 5,220 megawatts of short-duration energy storage capacity.
308 Nothing in this subdivision shall prohibit a Phase II Utility from constructing ~~or~~, acquiring, or procuring

309 more than ~~2,700~~ 5,220 megawatts of short-duration energy storage, provided that the utility receives
310 approval from the Commission pursuant to §§ 56-580 and 56-585.1.

311 3. By December 31, 2045, each Phase I Utility shall petition the Commission for necessary
312 approvals to construct, acquire, or procure 520 megawatts of long-duration energy storage capacity, half
313 of which shall be petitioned to the Commission for necessary approvals to be constructed, acquired, or
314 procured by December 31, 2035. Of such 520 megawatts, half shall have between 10 and 24 hours of
315 storage capacity and the other half shall have more than 24 hours of storage capacity. Nothing in this
316 subdivision shall prohibit a Phase I Utility from constructing, acquiring, or procuring more than 520
317 megawatts of long-duration energy storage, provided that the utility receives approval from the
318 Commission pursuant to §§ 56-580 and 56-585.1.

319 4. By December 31, 2045, each Phase II Utility shall petition the Commission for necessary
320 approvals to construct, acquire, or procure 3,480 megawatts of long-duration energy storage capacity, half
321 of which shall be petitioned to the Commission for necessary approvals to be constructed, acquired, or
322 procured by December 31, 2035. Of such 3,480 megawatts, half shall have between 10 and 24 hours of
323 storage capacity and the other half shall have more than 24 hours of storage capacity. Nothing in this
324 subdivision shall prohibit a Phase II Utility from constructing, acquiring, or procuring more than 3,480
325 megawatts of long-duration energy storage, provided that the utility receives approval from the
326 Commission pursuant to §§ 56-580 and 56-585.1.

327 5. For all energy storage projects proposed for construction, acquisition, or procurement pursuant
328 to this subsection, the Phase I or Phase II Utility shall demonstrate compliance with the minimum safety
329 standards set forth in the most recently published edition of the National Fire Protection Association 855
330 Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). However, if the safety
331 standards included in the utility's proposal exceed NFPA 855 and implementation of such proposed safety
332 standards is expected to increase total project costs by more than ten percent compared to implementation
333 of NFPA 855, the Commission may reject the utility's petition or require that the proposed safety standards
334 be revised to more closely align with NFPA 855 to reduce total project costs and ensure project safety.

335 6. No single energy storage project shall exceed 500 megawatts in size, except that a Phase II
336 Utility may procure a single energy storage project up to 800 megawatts.

337 ~~4-7.~~ All energy storage projects procured pursuant to this subsection shall meet the competitive
338 procurement protocols established in subdivision D 3.

339 ~~5-8.~~ After July 1, 2020, at least 35 percent of the energy storage facilities placed into service shall
340 be (i) purchased by the public utility from a party other than the public utility or (ii) owned by a party
341 other than a public utility, with the capacity from such facilities sold to the public utility. By January 1,
342 2021, the Commission shall adopt regulations to achieve the deployment of energy storage for the
343 Commonwealth required in subdivisions 1 and 2, including regulations that set interim targets and update
344 existing utility planning and procurement rules. The regulations shall include programs and mechanisms
345 to deploy energy storage, including competitive solicitations, behind-the-meter incentives, non-wires
346 alternatives programs, and peak demand reduction programs. The Commission shall update such
347 regulations every five years.

348 F. All costs incurred by a Phase I or Phase II Utility related to compliance with the requirements
349 of this section or pursuant to § 56-585.1:11, including (i) costs of generation facilities powered by sunlight
350 or onshore or offshore wind, or energy storage facilities, that are constructed or acquired by a Phase I or
351 Phase II Utility after July 1, 2020, (ii) costs of capacity, energy, or environmental attributes from
352 generation facilities powered by sunlight or onshore or offshore wind, or falling water, or energy storage
353 facilities purchased by the utility from persons other than the utility through agreements after July 1, 2020,
354 and (iii) all other costs of compliance, including costs associated with the purchase of RECs associated
355 with RPS Program requirements pursuant to this section shall be recovered from all retail customers in
356 the service territory of a Phase I or Phase II Utility as a non-bypassable charge, irrespective of the
357 generation supplier of such customer, except (a) as provided in subsection G for an accelerated renewable
358 energy buyer or (b) as provided in subdivision C 3 of § 56-585.1:11, with respect to the costs of an offshore
359 wind generation facility, for a PIPP eligible utility customer or an advanced clean energy buyer or
360 qualifying large general service customer, as those terms are defined in § 56-585.1:11. If a Phase I or
361 Phase II Utility serves customers in more than one jurisdiction, such utility shall recover all of the costs

362 of compliance with the RPS Program requirements from its Virginia customers through the applicable
363 cost recovery mechanism, and all associated energy, capacity, and environmental attributes shall be
364 assigned to Virginia to the extent that such costs are requested but not recovered from any system
365 customers outside the Commonwealth.

366 By September 1, 2020, the Commission shall direct the initiation of a proceeding for each Phase I
367 and Phase II Utility to review and determine the amount of such costs, net of benefits, that should be
368 allocated to retail customers within the utility's service territory which have elected to receive electric
369 supply service from a supplier of electric energy other than the utility, and shall direct that tariff provisions
370 be implemented to recover those costs from such customers beginning no later than January 1, 2021.
371 Thereafter, such charges and tariff provisions shall be updated and trued up by the utility on an annual
372 basis, subject to continuing review and approval by the Commission.

373 G. 1. An accelerated renewable energy buyer may contract with a Phase I or Phase II Utility, or a
374 person other than a Phase I or Phase II Utility, to obtain (i) RECs from RPS eligible resources or (ii)
375 bundled capacity, energy, and RECs from solar or, wind, or zero-carbon electricity generation resources
376 located within the PJM region and initially placed in commercial operation after January 1, 2015,
377 including any contract with a utility for such generation resources that does not allocate the cost of such
378 resources to or recover the cost of such resources from any other customers of the utility that have not
379 voluntarily agreed to pay such cost. Such an accelerated renewable energy buyer may offset all or a portion
380 of its electric load for purposes of RPS compliance through such arrangements. An accelerated renewable
381 energy buyer shall be exempt from the assignment of non-bypassable RPS compliance costs pursuant to
382 subsection F, with the exception of the costs of an offshore wind generating facility pursuant to § 56-
383 585.1:11, based on the amount of RECs obtained pursuant to this subsection in proportion to the
384 customer's total electric energy consumption, on an annual basis. An accelerated renewable energy buyer
385 may also contract with a Phase I or Phase II Utility, or a person other than a Phase I or Phase II Utility, to
386 obtain capacity from energy storage facilities located within the network service area of the utility pursuant
387 to this subsection, provided that the costs of such resources are not recovered from any of the utility's
388 customers who have not voluntarily agreed to pay for such costs. Such accelerated renewable energy buyer

389 shall be exempt from the assignment of non-bypassable RPS Program compliance costs specifically
390 associated with energy storage facilities pursuant to this subsection in proportion to the customer's total
391 capacity demand on an annual basis. An accelerated renewable energy buyer obtaining RECs only shall
392 not be exempt from costs related to procurement of new solar or onshore wind generation capacity, energy,
393 or environmental attributes, or energy storage facilities, by the utility pursuant to subsections D and E,
394 however, an accelerated renewable energy buyer that is a customer of a Phase II Utility and was
395 subscribed, as of March 1, 2020, to a voluntary companion experimental tariff offering of the utility for
396 the purchase of renewable attributes from renewable energy facilities that requires a renewable facilities
397 agreement and the purchase of a minimum of 2,000 renewable attributes annually, shall be exempt from
398 allocation of the net costs related to procurement of new solar or onshore wind generation capacity, energy,
399 or environmental attributes, or energy storage facilities, by the utility pursuant to subsections D and E,
400 based on the amount of RECs associated with the customer's renewable facilities agreements associated
401 with such tariff offering as of that date in proportion to the customer's total electric energy consumption,
402 on an annual basis. To the extent that an accelerated renewable energy buyer contracts for the capacity of
403 new solar or wind generation resources or energy storage facilities pursuant to this subsection, the
404 aggregate amount of such nameplate capacity shall be offset from the utility's procurement requirements
405 pursuant to subsection D. All RECs associated with contracts entered into by an accelerated renewable
406 energy buyer with the utility, or a person other than the utility, for an RPS Program shall not be credited
407 to the utility's compliance with its RPS requirements, and the calculation of the utility's RPS Program
408 requirements shall not include the electric load covered by customers certified as accelerated renewable
409 energy buyers.

410 2. Each Phase I or Phase II Utility shall certify, and verify as necessary, to the Commission that
411 the accelerated renewable energy buyer has satisfied the exemption requirements of this subsection for
412 each year, or an accelerated renewable energy buyer may choose to certify satisfaction of this exemption
413 by reporting to the Commission individually. The Commission may promulgate such rules and regulations
414 as may be necessary to implement the provisions of this subsection.

415 3. Provided that no incremental costs associated with any contract between a Phase I or Phase II
416 Utility and an accelerated renewable energy buyer is allocated to or recovered from any other customer of
417 the utility, any such contract with an accelerated renewable energy buyer that is a jurisdictional customer
418 of the utility shall not be deemed a special rate or contract requiring Commission approval pursuant to §
419 56-235.2.

420 4. The State Corporation Commission shall ensure that any distribution and transmission costs
421 associated with new energy generation resources procured pursuant to subsection G of § 56-585.5 of the
422 Code of Virginia, as amended by this act, are justly and reasonably allocated.

423 H. No customer of a Phase II Utility with a peak demand in excess of 100 megawatts in 2019 that
424 elected pursuant to subdivision A 3 of § 56-577 to purchase electric energy from a competitive service
425 provider prior to April 1, 2019, shall be allocated any non-bypassable charges pursuant to subsection F
426 for such period that the customer is not purchasing electric energy from the utility, and such customer's
427 electric load shall not be included in the utility's RPS Program requirements. No customer of a Phase I
428 Utility that elected pursuant to subdivision A 3 of § 56-577 to purchase electric energy from a competitive
429 service provider prior to February 1, 2019, shall be allocated any non-bypassable charges pursuant to
430 subsection F for such period that the customer is not purchasing electric energy from the utility, and such
431 customer's electric load shall not be included in the utility's RPS Program requirements.

432 I. In any petition by a Phase I or Phase II Utility for a certificate of public convenience and
433 necessity to construct and operate an electrical generating facility that generates electric energy derived
434 from sunlight submitted pursuant to § 56-580, such utility shall demonstrate that the proposed facility was
435 subject to competitive procurement or solicitation as set forth in subdivision D 3.

436 J. Notwithstanding any contrary provision of law, for the purposes of this section, any falling water
437 generation facility located in the Commonwealth and commencing commercial operations prior to July 1,
438 2024, shall be considered a renewable energy portfolio standard (RPS) eligible source.

439 K. Nothing in this section shall apply to any entity organized under Chapter 9.1 (§ 56-231.15 et
440 seq.).

441 L. The Commission shall adopt such rules and regulations as may be necessary to implement the
442 provisions of this section, including a requirement that participants verify whether the RPS Program
443 requirements are met in accordance with this section.

444 **2. That it is the policy of the Commonwealth to further the evaluation and growth of existing and**
445 **new energy storage technologies, including short-duration energy storage and long-duration energy**
446 **storage, as those terms are defined in subsection E of § 56-585.5 of the Code of Virginia, as amended**
447 **by this act, in bolstering reliability of the electric grid and resource adequacy needs. The State**
448 **Corporation Commission shall consider such policy in evaluating petitions by a Phase I or Phase II**
449 **Utility, as those terms are defined in subdivision A 1 of § 56-585.1 of the Code of Virginia, to**
450 **construct, acquire, or procure short-duration or long-duration energy storage resources pursuant**
451 **to subsection E of § 56-585.5 of the Code of Virginia, as amended by this act.**

452 **3. That the Department of Energy, in consultation with the Department of Environmental Quality**
453 **(the Departments), shall convene a work group to determine recommendations and financial**
454 **incentives for the development of long-duration energy storage projects, as defined in subsection E**
455 **of § 56-585.5 of the Code of Virginia, as amended by this act. The work group shall include**
456 **representatives from electric utilities, localities, interest groups, private businesses, and other**
457 **stakeholders to develop recommendations and financial incentives related to the development of**
458 **long-duration energy storage projects. In developing such recommendations and financial**
459 **incentives, the work group shall give special consideration to projects on previously disturbed land,**
460 **projects that connect directly to the electric distribution grid, and projects seeking to leverage the**
461 **exemption for storage facilities provided in subsection G of § 58.1-3660 of the Code of Virginia and**
462 **whether the threshold for such exemption should change. The Departments shall submit a report**
463 **from the work group to the Chairs of the House Committee on Labor and Commerce and the Senate**
464 **Committee on Commerce and Labor no later than December 1, 2026.**

465 **4. That the Department of Energy, in consultation with the Department of Environmental Quality**
466 **and the Department of Fire Programs (the Departments), shall convene a work group to develop**
467 **energy storage model ordinances suggested for use by localities in their regulation of energy storage**

468 projects pursuant to § 45.2-2120 of the Code of Virginia, as amended by this act. The work
469 group shall include representatives from the Departments, Virginia Association of Counties, the
470 Virginia Fire Prevention Association, the Virginia Farm Bureau Federation, the Piedmont
471 Environmental Council, the Chesapeake Solar and Storage Association, the Solar Energy Industries
472 Association, the American Clean Power Association, Advanced Energy United, storage project
473 engineers, electric utilities, and any other stakeholders deemed relevant by the Departments, the
474 State Corporation Commission, or the Virginia Economic Development Partnership Authority. The
475 Departments shall make available online the resources and studies developed by the work group
476 and shall develop and maintain online resources to educate localities, developers, contractors,
477 residents, businesses, researchers, and other stakeholders about energy storage. The Departments
478 shall publish the final model ordinance and submit a report from the work group to the Chairs of
479 the House Committee on Labor and Commerce and the Senate Committee on Commerce and Labor
480 no later than December 1, 2026.

481 5. That the State Corporation Commission (the Commission) shall establish a technology
482 demonstration program for long-duration energy storage resources, as defined in subsection E of §
483 56-585.5 of the Code of Virginia, as amended by this act, to evaluate the feasibility, effectiveness,
484 and reliability benefits of such resources. Such program shall provide for a Phase II Utility, as
485 defined in subdivision A 1 of § 56-585.1 of the Code of Virginia, to petition the Commission for
486 approval to construct, acquire, or procure one or more long-duration energy storage resources with
487 a discharge capacity of at least 3,000 megawatt-hours, unless the Commission in its discretion
488 determines that long-duration energy storage resources are not reasonably available in sufficient
489 quantities to support such petitions. Such program shall also provide that the Phase II Utility may
490 include any long-duration energy storage resources existing at the time of such petition in such
491 aggregate capacity. In performing the technology demonstration as established by the Commission,
492 a Phase II Utility shall make a reasonable good-faith effort to secure appropriate sources of funding
493 from the U.S. Department of Energy. A Phase II Utility shall report technology demonstration
494 program outcomes to the Commission no later than October 1, 2029. Such report may include data

495 regarding the costs of projects included in the technology demonstration program, the ease and
496 ability to procure necessary supply chain elements supporting long-duration energy storage, the
497 relative ease associated with siting long-duration energy storage resources, and any other data that
498 the Commission deems relevant.

499 6. That the provisions of subdivisions E 3 and 4 of § 56-585.5 of the Code of Virginia, as amended
500 by this act, shall become effective only upon a determination by the State Corporation Commission
501 (the Commission) that the technology referenced in such subdivisions is technically viable and that
502 the construction, acquisition, or procurement targets referenced in such subdivisions are reasonably
503 achievable. The Commission shall initiate a proceeding to make such determination or alternatively
504 propose modified targets for the construction, acquisition, or procurement of such technology upon
505 receipt of the report by a Phase II Utility as required by the fifth enactment of this act and shall
506 enter its final order in such proceeding no later than March 1, 2030. As part of such proceeding, the
507 Commission shall also determine whether an additional technology demonstration program for
508 long-duration energy storage is necessary to further the goal of evaluating the role for energy
509 storage technologies in bolstering reliability of the electric grid. If the Commission so determines,
510 the Commission shall establish the duration and scope of an additional technology demonstration
511 program, including an incremental amount of discharge capacity from long-duration energy
512 storage projects eligible to be deployed. The Commission shall use all available data and information
513 relating to such technology in the proceeding. In the event the Commission does not determine that
514 such technology and targets are viable and achievable, nothing in this act shall prohibit the
515 Commission from initiating future proceedings in its own discretion or upon a petition by an
516 interested party to assess such technology and targets.

517 7. That the State Corporation Commission (the Commission) shall update its regulations to achieve
518 the deployment of energy storage in the Commonwealth, including regulations that set interim
519 targets consistent with the provisions of subdivisions E 3 and 4 of § 56-585.5 of the Code of Virginia,
520 as amended by this act. Upon making the determination pursuant to the sixth enactment of this act,

521 the Commission shall promulgate regulations, including interim targets, reflecting the provisions of
522 subdivisions E 3 and 4 of § 56-585.5 of the Code of Virginia, as amended by this act.

523 8. That the Department of Energy shall, through the Independent State Agencies Committee, engage
524 with PJM Interconnection, LLC, and other state-level utility regulators within the PJM region in
525 reviewing regional market conditions for the energy storage market, including existing cost signals
526 and interconnection related to energy storage technology.

527 9. That, in order to promote research and workforce development in the energy storage industry, a
528 Phase II Utility, as defined in subdivision A 1 of § 56-585.1 of the Code of Virginia, may propose an
529 energy storage partnership with institutions of higher education in the Commonwealth, which may
530 include energy storage deployment at such institutions, internships related to the energy storage
531 industry, and involvement as appropriate in new and ongoing research in the energy storage
532 industry. Such proposal shall be subject to approval by the State Corporation Commission and shall
533 include at least one historically black college or university, as defined in § 2.2-1604 of the Code of
534 Virginia, and one comprehensive community college, as defined in § 23.1-100 of the Code of
535 Virginia.

536 10. That the Department of Energy shall develop a full-time staff position to support the
537 development of short-duration energy storage and long-duration energy storage projects, as defined
538 in subsection E of § 56-585.5 of the Code of Virginia, as amended by this act, in the Commonwealth
539 and local review of such development in accordance with the provisions of this act.

540 11. That the Weldon Cooper Center for Public Service shall monitor the deployment of short-
541 duration energy storage and long-duration energy storage projects, as defined in subsection E of §
542 56-585.5 of the Code of Virginia, as amended by this act, including by tracking energy storage
543 project applications, approvals, and denials.

544 12. That the Department of Fire Programs (the Department) shall convene a work group to review
545 requirements and develop recommendations for state and local regulations related to fire safety and
546 suppression for short-duration energy storage and long-duration energy storage projects, as defined
547 in subsection E of § 56-585.5 of the Code of Virginia, as amended by this act. The work group shall

548 include representatives from other agencies, localities, industry partners, and other stakeholders to
549 assess the demands that an increased volume of energy storage projects will place on fire safety and
550 to develop recommendations to ensure fire safety throughout the Commonwealth. The Department
551 shall submit a report from the work group to the Chairs of the House Committee on Labor and
552 Commerce and the Senate Committee on Commerce and Labor no later than December 1, 2026.

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