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HOUSE BILL NO. 2537  
AMENDMENT IN THE NATURE OF A SUBSTITUTE  
(Proposed by the House Committee on Labor and Commerce  
on \_\_\_\_\_)

(Patron Prior to Substitute—Delegate Sullivan)

A BILL to amend and reenact § 56-585.5 of the Code of Virginia, relating to electric utilities; energy storage requirements; Department of Energy and Department of Environmental Quality to develop model ordinances; work group; reports.

Be it enacted by the General Assembly of Virginia:

1. That § 56-585.5 of the Code of Virginia is amended and reenacted as follows:  
§ 56-585.5. Generation of electricity from renewable and zero-carbon sources.

A. As used in this section:

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

"Aggregate load" means the combined electrical load associated with selected accounts of an accelerated renewable energy buyer with the same legal entity name as, or in the names of affiliated entities that control, are controlled by, or are under common control of, such legal entity or are the names of affiliated entities under a common parent.

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

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

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

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

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

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

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

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

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

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

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

C. Each Phase I and Phase II Utility shall participate in a renewable energy portfolio standard program (RPS Program) that establishes annual goals for the sale of renewable energy to all retail customers in the utility's service territory, other than accelerated renewable energy buyers pursuant to subsection G, regardless

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60 of whether such customers purchase electric supply service from the utility or from suppliers other than the  
 61 utility. To comply with the RPS Program, each Phase I and Phase II Utility shall procure and retire  
 62 Renewable Energy Certificates (RECs) originating from renewable energy standard eligible sources (RPS  
 63 eligible sources). For purposes of complying with the RPS Program from 2021 to 2024, a Phase I and Phase  
 64 II Utility may use RECs from any renewable energy facility, as defined in § 56-576, provided that such  
 65 facilities are located in the Commonwealth or are physically located within the PJM Interconnection, LLC  
 66 (PJM) region. However, at no time during this period or thereafter may any Phase I or Phase II Utility use  
 67 RECs from (i) renewable thermal energy, (ii) renewable thermal energy equivalent, or (iii) biomass-fired  
 68 facilities that are outside the Commonwealth. From compliance year 2025 and all years after, each Phase I  
 69 and Phase II Utility may only use RECs from RPS eligible sources for compliance with the RPS Program.

70 In order to qualify as RPS eligible sources, such sources must be (a) electric-generating resources that  
 71 generate electric energy derived from solar or wind located in the Commonwealth or off the Commonwealth's  
 72 Atlantic shoreline or in federal waters and interconnected directly into the Commonwealth or physically  
 73 located within the PJM region; (b) falling water resources located in the Commonwealth or physically located  
 74 within the PJM region that were in operation as of January 1, 2020, that are owned by a Phase I or Phase II  
 75 Utility or for which a Phase I or Phase II Utility has entered into a contract prior to January 1, 2020, to  
 76 purchase the energy, capacity, and renewable attributes of such falling water resources; (c) non-utility-owned  
 77 resources from falling water that (1) are less than 65 megawatts, (2) began commercial operation after  
 78 December 31, 1979, or (3) added incremental generation representing greater than 50 percent of the original  
 79 nameplate capacity after December 31, 1979, provided that such resources are located in the Commonwealth  
 80 or are physically located within the PJM region; (d) waste-to-energy or landfill gas-fired generating resources  
 81 located in the Commonwealth and in operation as of January 1, 2020, provided that such resources do not use  
 82 waste heat from fossil fuel combustion; (e) geothermal heating and cooling systems located in the  
 83 Commonwealth; or (f) biomass-fired facilities in operation in the Commonwealth and in operation as of  
 84 January 1, 2023, that (1) supply no more than 10 percent of their annual net electrical generation to the  
 85 electric grid or no more than 15 percent of their annual total useful energy to any entity other than the  
 86 manufacturing facility to which the generating source is interconnected and are fueled by forest-product  
 87 manufacturing residuals, including pulping liquor, bark, paper recycling residuals, biowastes, or biomass, as  
 88 described in subdivisions A 1, 2, and 4 of § 10.1-1308.1, provided that biomass as described in subdivision A  
 89 1 of § 10.1-1308.1 results from harvesting in accordance with best management practices for the sustainable  
 90 harvesting of biomass developed and enforced by the State Forester pursuant to § 10.1-1105, or (2) are owned  
 91 by a Phase I or Phase II Utility, have less than 52 megawatts capacity, and are fueled by forest-product  
 92 manufacturing residuals, biowastes, or biomass, as described in subdivisions A 1, 2, and 4 of § 10.1-1308.1,  
 93 provided that biomass as described in subdivision A 1 of § 10.1-1308.1 results from harvesting in accordance  
 94 with best management practices for the sustainable harvesting of biomass developed and enforced by the  
 95 State Forester pursuant to § 10.1-1105. Regardless of any future maintenance, expansion, or refurbishment  
 96 activities, the total amount of RECs that may be sold by any RPS eligible source using biomass in any year  
 97 shall be no more than the number of megawatt hours of electricity produced by that facility in 2022; however,  
 98 in no year may any RPS eligible source using biomass sell RECs in excess of the actual megawatt-hours of  
 99 electricity generated by such facility that year. In order to comply with the RPS Program, each Phase I and  
 100 Phase II Utility may use and retire the environmental attributes associated with any existing owned or  
 101 contracted solar, wind, falling water, or biomass electric generating resources in operation, or proposed for  
 102 operation, in the Commonwealth or solar, wind, or falling water resources physically located within the PJM  
 103 region, with such resource qualifying as a Commonwealth-located resource for purposes of this subsection, as  
 104 of January 1, 2020, provided that such renewable attributes are verified as RECs consistent with the PJM-EIS  
 105 Generation Attribute Tracking System.

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

108 a Phase I Utilities		Phase II Utilities	
109 a Year	RPS Program Requirement	Year	RPS Program Requirement
110 b 2021	6%	2021	14%
111 c 2022	7%	2022	17%
112 d 2023	8%	2023	20%
113 e 2024	10%	2024	23%
114 f 2025	14%	2025	26%
115 g 2026	17%	2026	29%
116 h 2027	20%	2027	32%
117 i 2028	24%	2028	35%
118 j 2029	27%	2029	38%
119 k 2030	30%	2030	41%
120 l 2031	33%	2031	45%

121	m	2032	36%	2032	49%
122	n	2033	39%	2033	52%
123	o	2034	42%	2034	55%
124	p	2035	45%	2035	59%
125	q	2036	53%	2036	63%
126	r	2037	53%	2037	67%
127	s	2038	57%	2038	71%
128	t	2039	61%	2039	75%
129	u	2040	65%	2040	79%
130	v	2041	68%	2041	83%
131	w	2042	71%	2042	87%
132	x	2043	74%	2043	91%
133	y	2044	77%	2044	95%
134	z	2045	80%	2045 and	100%
135				thereafter	
136	aa	2046	84%		
137	ab	2047	88%		
138	ac	2048	92%		
139	ad	2049	96%		
140	ae	2050 and	100%		
141		thereafter			

142 2. A Phase II Utility shall meet one percent of the RPS Program requirements in any given compliance  
 143 year with solar, wind, or anaerobic digestion resources of one megawatt or less located in the  
 144 Commonwealth, with not more than 3,000 kilowatts at any single location or at contiguous locations owned  
 145 by the same entity or affiliated entities and, to the extent that low-income qualifying projects are available,  
 146 then no less than 25 percent of such one percent shall be composed of low-income qualifying projects.

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

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

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

161 D. Each Phase I or Phase II Utility shall petition the Commission for necessary approvals to procure  
 162 zero-carbon electricity generating capacity as set forth in this subsection and energy storage resources as set  
 163 forth in subsection E. To the extent that a Phase I or Phase II Utility constructs or acquires new zero-carbon  
 164 generating facilities or energy storage resources, the utility shall petition the Commission for the recovery of  
 165 the costs of such facilities, at the utility's election, either through its rates for generation and distribution  
 166 services or through a rate adjustment clause pursuant to subdivision A 6 of § 56-585.1. All costs not sought  
 167 for recovery through a rate adjustment clause pursuant to subdivision A 6 of § 56-585.1 associated with  
 168 generating facilities provided by sunlight or onshore or offshore wind are also eligible to be applied by the  
 169 utility as a customer credit reinvestment offset as provided in subdivision A 8 of § 56-585.1. Costs associated  
 170 with the purchase of energy, capacity, or environmental attributes from facilities owned by the persons other  
 171 than the utility required by this subsection shall be recovered by the utility either through its rates for  
 172 generation and distribution services or pursuant to § 56-249.6.

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

176 a. By December 31, 2023, each Phase I Utility shall petition the Commission for necessary approvals to  
 177 construct, acquire, or enter into agreements to purchase the energy, capacity, and environmental attributes of  
 178 at least 200 megawatts of generating capacity located in the Commonwealth using energy derived from  
 179 sunlight or onshore wind, and 35 percent of such generating capacity procured shall be from the purchase of  
 180 energy, capacity, and environmental attributes from solar or onshore wind facilities owned by persons other

181 than the utility, with the remainder, in the aggregate, being from construction or acquisition by such Phase I  
182 Utility.

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

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

197 d. Nothing in this subdivision 1 shall prohibit such Phase I Utility from constructing, acquiring, or  
198 entering into agreements to purchase the energy, capacity, and environmental attributes of more than 600  
199 megawatts of generating capacity located in the Commonwealth using energy derived from sunlight or  
200 onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-580 and  
201 56-585.1.

202 2. By December 31, 2035, each Phase II Utility shall petition the Commission for necessary approvals to  
203 (i) construct, acquire, or enter into agreements to purchase the energy, capacity, and environmental attributes  
204 of 16,100 megawatts of generating capacity located in the Commonwealth using energy derived from  
205 sunlight or onshore wind, which shall include 1,100 megawatts of solar generation of a nameplate capacity  
206 not to exceed three megawatts per individual project and 35 percent of such generating capacity procured  
207 shall be from the purchase of energy, capacity, and environmental attributes from solar facilities owned by  
208 persons other than a utility, including utility affiliates and deregulated affiliates and (ii) pursuant to §  
209 56-585.1:11, construct or purchase one or more offshore wind generation facilities located off the  
210 Commonwealth's Atlantic shoreline or in federal waters and interconnected directly into the Commonwealth  
211 with an aggregate capacity of up to 5,200 megawatts. At least 200 megawatts of the 16,100 megawatts shall  
212 be placed on previously developed project sites.

213 a. By December 31, 2024, each Phase II Utility shall petition the Commission for necessary approvals to  
214 construct, acquire, or enter into agreements to purchase the energy, capacity, and environmental attributes of  
215 at least 3,000 megawatts of generating capacity located in the Commonwealth using energy derived from  
216 sunlight or onshore wind, and 35 percent of such generating capacity procured shall be from the purchase of  
217 energy, capacity, and environmental attributes from solar or onshore wind facilities owned by persons other  
218 than the utility, with the remainder, in the aggregate, being from construction or acquisition by such Phase II  
219 Utility.

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

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

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

241 e. Nothing in this subdivision 2 shall prohibit such Phase II Utility from constructing, acquiring, or

242 entering into agreements to purchase the energy, capacity, and environmental attributes of more than 16,100  
243 megawatts of generating capacity located in the Commonwealth using energy derived from sunlight or  
244 onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-580 and  
245 56-585.1.

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

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

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

288 5. If, in any year, a Phase I or Phase II Utility is unable to meet the compliance obligation of the RPS  
289 Program requirements or if the cost of RECs necessary to comply with RPS Program requirements exceeds  
290 \$45 per megawatt hour, such supplier shall be obligated to make a deficiency payment equal to \$45 for each  
291 megawatt-hour shortfall for the year of noncompliance, except that the deficiency payment for any shortfall  
292 in procuring RECs for solar, wind, or anaerobic digesters located in the Commonwealth shall be \$75 per  
293 megawatts hour for resources one megawatt and lower. The amount of any deficiency payment shall increase  
294 by one percent annually after 2021. A Phase I or Phase II Utility shall be entitled to recover the costs of such  
295 payments as a cost of compliance with the requirements of this subsection pursuant to subdivision A 5 d of §  
296 56-585.1. All proceeds from the deficiency payments shall be deposited into an interest-bearing account  
297 administered by the Department of Energy. In administering this account, the Department of Energy shall  
298 manage the account as follows: (i) 50 percent of total revenue shall be directed to job training programs in  
299 historically economically disadvantaged communities; (ii) 16 percent of total revenue shall be directed to  
300 energy efficiency measures for public facilities; (iii) 30 percent of total revenue shall be directed to renewable  
301 energy programs located in historically economically disadvantaged communities; and (iv) four percent of  
302 total revenue shall be directed to administrative costs.

303 For any project constructed pursuant to this subsection or subsection E, a utility shall, subject to a

304 competitive procurement process, procure equipment from a Virginia-based or United States-based  
305 manufacturer using materials or product components made in Virginia or the United States, if reasonably  
306 available and competitively priced.

307 E. To enhance reliability and performance of the utility's generation and distribution system, each Phase I  
308 and Phase II Utility shall petition the Commission for necessary approvals to construct ~~or~~, acquire ~~new~~, or  
309 procure utility-owned energy storage resources. *For the purposes of this subsection, "long-duration energy*  
310 *storage" means energy storage resources with 10 hours or more of generation capacity and "short-duration*  
311 *energy storage" means energy storage resources with less than 10 hours of generation capacity.*

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

317 2. By December 31, ~~2035~~ 2040, each Phase II Utility shall petition the Commission for necessary  
318 approvals to construct ~~or~~, acquire ~~2,700~~, or procure 4,000 megawatts of short-duration energy storage  
319 capacity, and by December 31, 2045, each Phase II Utility shall petition the Commission for necessary  
320 approvals to construct, acquire, or procure 5,220 megawatts of short-duration energy storage capacity.  
321 Nothing in this subdivision shall prohibit a Phase II Utility from constructing ~~or~~, acquiring, or procuring  
322 more than ~~2,700~~ 5,220 megawatts of short-duration energy storage, provided that the utility receives approval  
323 from the Commission pursuant to §§ 56-580 and 56-585.1.

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

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

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

340 ~~4.~~ 6. All energy storage projects procured pursuant to this subsection shall meet the competitive  
341 procurement protocols established in subdivision D 3.

342 ~~5.~~ 7. After July 1, 2020, at least 35 percent of the energy storage facilities placed into service shall be (i)  
343 purchased by the public utility from a party other than the public utility or (ii) owned by a party other than a  
344 public utility, with the capacity from such facilities sold to the public utility. By January 1, 2021, the  
345 Commission shall adopt regulations to achieve the deployment of energy storage for the Commonwealth  
346 required in subdivisions 1 and 2, including regulations that set interim targets and update existing utility  
347 planning and procurement rules. The regulations shall include programs and mechanisms to deploy energy  
348 storage, including competitive solicitations, behind-the-meter incentives, non-wires alternatives programs,  
349 and peak demand reduction programs. *The Commission shall update these regulations every five years.*

350 8. By December 1, 2025, the Department of Energy, in consultation with the Department of  
351 Environmental Quality and the Department of Fire Programs, shall create model ordinances suggested for  
352 use by localities in their regulation of energy storage projects and shall update such model ordinances every  
353 three years.

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

365 facility, for a PIPP eligible utility customer or an advanced clean energy buyer or qualifying large general  
 366 service customer, as those terms are defined in § 56-585.1:11. If a Phase I or Phase II Utility serves  
 367 customers in more than one jurisdiction, such utility shall recover all of the costs of compliance with the RPS  
 368 Program requirements from its Virginia customers through the applicable cost recovery mechanism, and all  
 369 associated energy, capacity, and environmental attributes shall be assigned to Virginia to the extent that such  
 370 costs are requested but not recovered from any system customers outside the Commonwealth.

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

378 G. 1. An accelerated renewable energy buyer may contract with a Phase I or Phase II Utility, or a person  
 379 other than a Phase I or Phase II Utility, to obtain (i) RECs from RPS eligible resources or (ii) bundled  
 380 capacity, energy, and RECs from solar or wind generation resources located within the PJM region and  
 381 initially placed in commercial operation after January 1, 2015, including any contract with a utility for such  
 382 generation resources that does not allocate to or recover from any other customer of the utility the cost of  
 383 such resources. Such an accelerated renewable energy buyer may offset all or a portion of its electric load for  
 384 purposes of RPS compliance through such arrangements. An accelerated renewable energy buyer shall be  
 385 exempt from the assignment of non-bypassable RPS compliance costs pursuant to subsection F, with the  
 386 exception of the costs of an offshore wind generating facility pursuant to § 56-585.1:11, based on the amount  
 387 of RECs obtained pursuant to this subsection in proportion to the customer's total electric energy  
 388 consumption, on an annual basis. An accelerated renewable energy buyer obtaining RECs only shall not be  
 389 exempt from costs related to procurement of new solar or onshore wind generation capacity, energy, or  
 390 environmental attributes, or energy storage facilities, by the utility pursuant to subsections D and E, however,  
 391 an accelerated renewable energy buyer that is a customer of a Phase II Utility and was subscribed, as of  
 392 March 1, 2020, to a voluntary companion experimental tariff offering of the utility for the purchase of  
 393 renewable attributes from renewable energy facilities that requires a renewable facilities agreement and the  
 394 purchase of a minimum of 2,000 renewable attributes annually, shall be exempt from allocation of the net  
 395 costs related to procurement of new solar or onshore wind generation capacity, energy, or environmental  
 396 attributes, or energy storage facilities, by the utility pursuant to subsections D and E, based on the amount of  
 397 RECs associated with the customer's renewable facilities agreements associated with such tariff offering as of  
 398 that date in proportion to the customer's total electric energy consumption, on an annual basis. To the extent  
 399 that an accelerated renewable energy buyer contracts for the capacity of new solar or wind generation  
 400 resources pursuant to this subsection, the aggregate amount of such nameplate capacity shall be offset from  
 401 the utility's procurement requirements pursuant to subsection D. All RECs associated with contracts entered  
 402 into by an accelerated renewable energy buyer with the utility, or a person other than the utility, for an RPS  
 403 Program shall not be credited to the utility's compliance with its RPS requirements, and the calculation of the  
 404 utility's RPS Program requirements shall not include the electric load covered by customers certified as  
 405 accelerated renewable energy buyers.

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

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

415 H. No customer of a Phase II Utility with a peak demand in excess of 100 megawatts in 2019 that elected  
 416 pursuant to subdivision A 3 of § 56-577 to purchase electric energy from a competitive service provider prior  
 417 to April 1, 2019, shall be allocated any non-bypassable charges pursuant to subsection F for such period that  
 418 the customer is not purchasing electric energy from the utility, and such customer's electric load shall not be  
 419 included in the utility's RPS Program requirements. No customer of a Phase I Utility that elected pursuant to  
 420 subdivision A 3 of § 56-577 to purchase electric energy from a competitive service provider prior to February  
 421 1, 2019, shall be allocated any non-bypassable charges pursuant to subsection F for such period that the  
 422 customer is not purchasing electric energy from the utility, and such customer's electric load shall not be  
 423 included in the utility's RPS Program requirements.

424 I. In any petition by a Phase I or Phase II Utility for a certificate of public convenience and necessity to  
 425 construct and operate an electrical generating facility that generates electric energy derived from sunlight

426 submitted pursuant to § 56-580, such utility shall demonstrate that the proposed facility was subject to  
427 competitive procurement or solicitation as set forth in subdivision D 3.

428 J. Notwithstanding any contrary provision of law, for the purposes of this section, any falling water  
429 generation facility located in the Commonwealth and commencing commercial operations prior to July 1,  
430 2024, shall be considered a renewable energy portfolio standard (RPS) eligible source.

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

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

435 **2. That it is the policy of the Commonwealth to encourage thoughtful evaluation of the potential role**  
436 **for energy storage technologies, including short-duration energy storage and long-duration energy**  
437 **storage, as those terms are defined in subsection E of § 56-585.5 of the Code of Virginia, as amended by**  
438 **this act, in bolstering reliability of the electric grid and resource adequacy needs. The State**  
439 **Corporation Commission shall consider such policy in evaluating petitions by a Phase I or Phase II**  
440 **Utility, as those terms are defined in subdivision A 1 of § 56-585.1 of the Code of Virginia, to construct,**  
441 **acquire, or procure short-duration or long-duration energy storage resources pursuant to subsection E**  
442 **of § 56-585.5 of the Code of Virginia, as amended by this act.**

443 **3. That the Department of Energy, in consultation with the Department of Environmental Quality (the**  
444 **Departments), shall convene a work group to determine recommendations and financial incentives for**  
445 **the development of long-duration energy storage projects, as defined in subsection E of § 56-585.5 of**  
446 **the Code of Virginia, as amended by this act. The work group shall include representatives from**  
447 **electric utilities, localities, interest groups, private businesses, and other stakeholders to develop**  
448 **recommendations and financial incentives related to the development of long-duration energy storage**  
449 **projects. In developing such recommendations and financial incentives, the work group shall give**  
450 **special consideration to projects on previously disturbed land, projects that connect directly to the**  
451 **electric distribution grid, and projects seeking to leverage the exemption for storage facilities provided**  
452 **in subsection G of § 58.1-3660 of the Code of Virginia and whether the threshold for such exemption**  
453 **should change. The Departments shall submit a report from the work group to the Chairmen of the**  
454 **House Committee on Labor and Commerce and the Senate Committee on Commerce and Labor no**  
455 **later than December 1, 2025.**

456 **4. That the Department of Energy, in consultation with the Department of Environmental Quality and**  
457 **the Department of Fire Programs (the Departments), shall convene a work group to develop model**  
458 **ordinances suggested for use by localities in their regulation of energy storage projects pursuant to**  
459 **subdivision E 8 of § 56-585.5 of the Code of Virginia, as amended by this act. The work group shall**  
460 **include representatives from the Virginia Association of Counties, the Virginia Fire Prevention**  
461 **Association, the Virginia Farm Bureau Federation, the Piedmont Environmental Council, the**  
462 **Chesapeake Solar and Storage Association, the Solar Energy Industries Association, the American**  
463 **Clean Power Association, Advanced Energy United, storage project engineers, electric utilities, and**  
464 **any other stakeholders deemed relevant by the Departments, the State Corporation Commission, or**  
465 **the Virginia Economic Development Partnership Authority. The Departments shall make available**  
466 **online the resources and studies that inform the model ordinances developed by the work group. The**  
467 **Departments shall submit a report from the work group to the Chairmen of the House Committee on**  
468 **Labor and Commerce and the Senate Committee on Commerce and Labor no later than December 1,**  
469 **2025.**

470 **5. That the State Corporation Commission (the Commission) shall establish a technology**  
471 **demonstration program for long-duration energy storage resources, as defined in subsection E of §**  
472 **56-585.5 of the Code of Virginia, as amended by this act, to evaluate the feasibility, effectiveness, and**  
473 **reliability benefits of such resources. Such program shall provide for a Phase II Utility, as defined in**  
474 **subdivision A 1 of § 56-585.1 of the Code of Virginia, to petition the Commission for approval to**  
475 **construct, acquire, or procure one or more long-duration energy storage resources with a discharge**  
476 **capacity of at least 3,000 megawatt-hours, provided that the Phase II Utility may include any**  
477 **long-duration energy storage resources existing at the time of such petition in such aggregate capacity.**  
478 **In performing the technology demonstration as established by the Commission, a Phase II Utility shall**  
479 **make a reasonable good-faith effort to secure appropriate sources of funding from the U.S.**  
480 **Department of Energy. The Commission shall adopt such rules and guidelines as may be necessary to**  
481 **require a Phase II Utility to report technology demonstration program outcomes no later than October**  
482 **1, 2029. Such report may include data regarding the costs of projects included in the technology**  
483 **demonstration program, the ease and ability to procure necessary supply chain elements supporting**  
484 **long-duration energy storage, the relative ease associated with siting long-duration energy storage**  
485 **resources, and any other data that the Commission deems relevant.**

486 **6. That the provisions of subdivisions E 3 and 4 of § 56-585.5 of the Code of Virginia, as amended by**



487 this act, shall become effective only upon a determination by the State Corporation Commission (the  
488 Commission) that the technology referenced in such subdivisions is technically viable and that the  
489 construction, acquisition, or procurement targets referenced in such subdivisions are reasonably  
490 achievable. The Commission shall initiate a proceeding to make such determination or alternatively  
491 propose modified targets for the construction, acquisition, or procurement of such technology upon  
492 receipt of the report by a Phase II Utility as required by the fifth enactment of this act and shall enter  
493 its final order in such proceeding no later than March 1, 2030. As part of such proceeding, the  
494 Commission shall also determine whether an additional technology demonstration program for  
495 long-duration energy storage is necessary to further the goal of evaluating the role for energy storage  
496 technologies in bolstering reliability of the electric grid. If the Commission so determines, the  
497 Commission shall establish the duration and scope of an additional technology demonstration  
498 program, including an incremental amount of discharge capacity from long-duration energy storage  
499 projects eligible to be deployed. The Commission shall use all available data and information relating  
500 to such technology in the proceeding. In the event the Commission does not determine that such  
501 technology and targets are viable and achievable, nothing in this act shall prohibit the Commission  
502 from initiating future proceedings in its own discretion or upon a petition by an interested party to  
503 assess such technology and targets.

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

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

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