

HOUSE BILL NO. 2197

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the House Committee on Commerce and Energy

on _____)

(Patron Prior to Substitute--Delegate Byron)

A BILL to amend and reenact §§ 56-576 and 56-585.5 of the Code of Virginia, relating to Virginia Electric Utility Regulation Act; renewable energy; eligible sources for renewable energy portfolio standard program; advanced nuclear technology and hydrogen.

Be it enacted by the General Assembly of Virginia:

1. That §§ 56-576 and 56-585.5 of the Code of Virginia are amended and reenacted as follows:

§ 56-576. Definitions.

As used in this chapter:

"Advanced nuclear technology" means a small modular reactor or other advanced technology used for generating nuclear energy.

"Affiliate" means any person that controls, is controlled by, or is under common control with an electric utility.

"Aggregator" means a person that, as an agent or intermediary, (i) offers to purchase, or purchases, electric energy or (ii) offers to arrange for, or arranges for, the purchase of electric energy, for sale to, or on behalf of, two or more retail customers not controlled by or under common control with such person.

The following activities shall not, in and of themselves, make a person an aggregator under this chapter:

- (i) furnishing legal services to two or more retail customers, suppliers or aggregators;
- (ii) furnishing educational, informational, or analytical services to two or more retail customers, unless direct or indirect compensation for such services is paid by an aggregator or supplier of electric energy;
- (iii) furnishing educational, informational, or analytical services to two or more suppliers or aggregators;
- (iv) providing default service under § 56-585;
- (v) engaging in activities of a retail electric energy supplier, licensed pursuant to § 56-587, which are authorized by such supplier's license; and
- (vi) engaging in actions of a

27 retail customer, in common with one or more other such retail customers, to issue a request for proposal
28 or to negotiate a purchase of electric energy for consumption by such retail customers.

29 (Expires December 31, 2023) "Business park" means a land development containing a minimum
30 of 100 contiguous acres classified as a Tier 4 site under the Virginia Economic Development Partnership's
31 Business Ready Sites Program that is developed and constructed by a locality, an industrial development
32 authority, or a similar political subdivision of the Commonwealth created pursuant to § 15.2-4903 or other
33 act of the General Assembly, in order to promote business development.

34 "Combined heat and power" means a method of using waste heat from electrical generation to
35 offset traditional processes, space heating, air conditioning, or refrigeration.

36 "Commission" means the State Corporation Commission.

37 "Community in which a majority of the population are people of color" means a U.S. Census tract
38 where more than 50 percent of the population comprises individuals who identify as belonging to one or
39 more of the following groups: Black, African American, Asian, Pacific Islander, Native American, other
40 non-white race, mixed race, Hispanic, Latino, or linguistically isolated.

41 "Cooperative" means a utility formed under or subject to Chapter 9.1 (§ 56-231.15 et seq.).

42 "Covered entity" means a provider in the Commonwealth of an electric service not subject to
43 competition but does not include default service providers.

44 "Covered transaction" means an acquisition, merger, or consolidation of, or other transaction
45 involving stock, securities, voting interests or assets by which one or more persons obtains control of a
46 covered entity.

47 "Curtailment" means inducing retail customers to reduce load during times of peak demand so as
48 to ease the burden on the electrical grid.

49 "Customer choice" means the opportunity for a retail customer in the Commonwealth to purchase
50 electric energy from any supplier licensed and seeking to sell electric energy to that customer.

51 "Demand response" means measures aimed at shifting time of use of electricity from peak-use
52 periods to times of lower demand by inducing retail customers to curtail electricity usage during periods
53 of congestion and higher prices in the electrical grid.

54 "Distribute," "distributing," or "distribution of" electric energy means the transfer of electric
55 energy through a retail distribution system to a retail customer.

56 "Distributor" means a person owning, controlling, or operating a retail distribution system to
57 provide electric energy directly to retail customers.

58 "Electric distribution grid transformation project" means a project associated with electric
59 distribution infrastructure, including related data analytics equipment, that is designed to accommodate or
60 facilitate the integration of utility-owned or customer-owned renewable electric generation resources with
61 the utility's electric distribution grid or to otherwise enhance electric distribution grid reliability, electric
62 distribution grid security, customer service, or energy efficiency and conservation, including advanced
63 metering infrastructure; intelligent grid devices for real time system and asset information; automated
64 control systems for electric distribution circuits and substations; communications networks for service
65 meters; intelligent grid devices and other distribution equipment; distribution system hardening projects
66 for circuits, other than the conversion of overhead tap lines to underground service, and substations
67 designed to reduce service outages or service restoration times; physical security measures at key
68 distribution substations; cyber security measures; energy storage systems and microgrids that support
69 circuit-level grid stability, power quality, reliability, or resiliency or provide temporary backup energy
70 supply; electrical facilities and infrastructure necessary to support electric vehicle charging systems; LED
71 street light conversions; and new customer information platforms designed to provide improved customer
72 access, greater service options, and expanded access to energy usage information.

73 "Electric utility" means any person that generates, transmits, or distributes electric energy for use
74 by retail customers in the Commonwealth, including any investor-owned electric utility, cooperative
75 electric utility, or electric utility owned or operated by a municipality.

76 "Energy efficiency program" means a program that reduces the total amount of electricity that is
77 required for the same process or activity implemented after the expiration of capped rates. Energy
78 efficiency programs include equipment, physical, or program change designed to produce measured and
79 verified reductions in the amount of electricity required to perform the same function and produce the
80 same or a similar outcome. Energy efficiency programs may include, but are not limited to, (i) programs

81 that result in improvements in lighting design, heating, ventilation, and air conditioning systems,
82 appliances, building envelopes, and industrial and commercial processes; (ii) measures, such as but not
83 limited to the installation of advanced meters, implemented or installed by utilities, that reduce fuel use or
84 losses of electricity and otherwise improve internal operating efficiency in generation, transmission, and
85 distribution systems; and (iii) customer engagement programs that result in measurable and verifiable
86 energy savings that lead to efficient use patterns and practices. Energy efficiency programs include
87 demand response, combined heat and power and waste heat recovery, curtailment, or other programs that
88 are designed to reduce electricity consumption so long as they reduce the total amount of electricity that
89 is required for the same process or activity. Utilities shall be authorized to install and operate such
90 advanced metering technology and equipment on a customer's premises; however, nothing in this chapter
91 establishes a requirement that an energy efficiency program be implemented on a customer's premises and
92 be connected to a customer's wiring on the customer's side of the inter-connection without the customer's
93 expressed consent.

94 "Generate," "generating," or "generation of" electric energy means the production of electric
95 energy.

96 "Generator" means a person owning, controlling, or operating a facility that produces electric
97 energy for sale.

98 "Historically economically disadvantaged community" means (i) a community in which a majority
99 of the population are people of color or (ii) a low-income geographic area.

100 "Incumbent electric utility" means each electric utility in the Commonwealth that, prior to July 1,
101 1999, supplied electric energy to retail customers located in an exclusive service territory established by
102 the Commission.

103 "Independent system operator" means a person that may receive or has received, by transfer
104 pursuant to this chapter, any ownership or control of, or any responsibility to operate, all or part of the
105 transmission systems in the Commonwealth.

106 "In the public interest," for purposes of assessing energy efficiency programs, describes an energy
107 efficiency program if the Commission determines that the net present value of the benefits exceeds the net

108 present value of the costs as determined by not less than any three of the following four tests: (i) the Total
109 Resource Cost Test; (ii) the Utility Cost Test (also referred to as the Program Administrator Test); (iii) the
110 Participant Test; and (iv) the Ratepayer Impact Measure Test. Such determination shall include an analysis
111 of all four tests, and a program or portfolio of programs shall be approved if the net present value of the
112 benefits exceeds the net present value of the costs as determined by not less than any three of the four
113 tests. If the Commission determines that an energy efficiency program or portfolio of programs is not in
114 the public interest, its final order shall include all work product and analysis conducted by the
115 Commission's staff in relation to that program, including testimony relied upon by the Commission's staff,
116 that has bearing upon the Commission's decision. If the Commission reduces the proposed budget for a
117 program or portfolio of programs, its final order shall include an analysis of the impact such budget
118 reduction has upon the cost-effectiveness of such program or portfolio of programs. An order by the
119 Commission (a) finding that a program or portfolio of programs is not in the public interest or (b) reducing
120 the proposed budget for any program or portfolio of programs shall adhere to existing protocols for
121 extraordinarily sensitive information. In addition, an energy efficiency program may be deemed to be "in
122 the public interest" if the program (1) provides measurable and verifiable energy savings to low-income
123 customers or elderly customers or (2) is a pilot program of limited scope, cost, and duration, that is
124 intended to determine whether a new or substantially revised program or technology would be cost-
125 effective.

126 "Low-income geographic area" means any locality, or community within a locality, that has a
127 median household income that is not greater than 80 percent of the local median household income, or
128 any area in the Commonwealth designated as a qualified opportunity zone by the U.S. Secretary of the
129 Treasury via his delegation of authority to the Internal Revenue Service.

130 "Low-income utility customer" means any person or household whose income is no more than 80
131 percent of the median income of the locality in which the customer resides. The median income of the
132 locality is determined by the U.S. Department of Housing and Urban Development.

133 "Measured and verified" means a process determined pursuant to methods accepted for use by
134 utilities and industries to measure, verify, and validate energy savings and peak demand savings. This may

135 include the protocol established by the United States Department of Energy, Office of Federal Energy
136 Management Programs, Measurement and Verification Guidance for Federal Energy Projects,
137 measurement and verification standards developed by the American Society of Heating, Refrigeration and
138 Air Conditioning Engineers (ASHRAE), or engineering-based estimates of energy and demand savings
139 associated with specific energy efficiency measures, as determined by the Commission.

140 "Municipality" means a city, county, town, authority, or other political subdivision of the
141 Commonwealth.

142 "New underground facilities" means facilities to provide underground distribution service. "New
143 underground facilities" includes underground cables with voltages of 69 kilovolts or less, pad-mounted
144 devices, connections at customer meters, and transition terminations from existing overhead distribution
145 sources.

146 "Peak-shaving" means measures aimed solely at shifting time of use of electricity from peak-use
147 periods to times of lower demand by inducing retail customers to curtail electricity usage during periods
148 of congestion and higher prices in the electrical grid.

149 "Percentage of Income Payment Program (PIPP) eligible utility customer" means any person or
150 household whose income does not exceed 150 percent of the federal poverty level.

151 "Person" means any individual, corporation, partnership, association, company, business, trust,
152 joint venture, or other private legal entity, and the Commonwealth or any municipality.

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

161 "Qualified waste heat resource" means (i) exhaust heat or flared gas from an industrial process that
162 does not have, as its primary purpose, the production of electricity and (ii) a pressure drop in any gas for
163 an industrial or commercial process.

164 "Renewable energy" means energy derived from sunlight, wind, falling water, and biomass,
165 sustainable or otherwise, (the definitions of which shall be liberally construed), energy from waste, landfill
166 gas, municipal solid waste, wave motion, tides, advanced nuclear technology, and hydrogen or geothermal
167 power, and does not include energy derived from coal, oil, or natural gas, or nuclear power other than
168 energy from advanced nuclear technology. "Renewable energy" also includes the proportion of the thermal
169 or electric energy from a facility that results from the co-firing of biomass. "Renewable energy" does not
170 include waste heat from fossil-fired facilities or electricity generated from pumped storage but includes
171 run-of-river generation from a combined pumped-storage and run-of-river facility.

172 "Renewable thermal energy" means the thermal energy output from (i) a renewable-fueled
173 combined heat and power generation facility that is (a) constructed, or renovated and improved, after
174 January 1, 2012, (b) located in the Commonwealth, and (c) utilized in industrial processes other than the
175 combined heat and power generation facility or (ii) a solar energy system, certified to the OG-100 standard
176 of the Solar Ratings and Certification Corporation or an equivalent certification body, that (a) is
177 constructed, or renovated and improved, after January 1, 2013, (b) is located in the Commonwealth, and
178 (c) heats water or air for residential, commercial, institutional, or industrial purposes.

179 "Renewable thermal energy equivalent" means the electrical equivalent in megawatt hours of
180 renewable thermal energy calculated by dividing (i) the heat content, measured in British thermal units
181 (BTUs), of the renewable thermal energy at the point of transfer to a residential, commercial, institutional,
182 or industrial process by (ii) the standard conversion factor of 3.413 million BTUs per megawatt hour.

183 "Renovated and improved facility" means a facility the components of which have been upgraded
184 to enhance its operating efficiency.

185 "Retail customer" means any person that purchases retail electric energy for its own consumption
186 at one or more metering points or nonmetered points of delivery located in the Commonwealth.

187 "Retail electric energy" means electric energy sold for ultimate consumption to a retail customer.

188 "Revenue reductions related to energy efficiency programs" means reductions in the collection of
189 total non-fuel revenues, previously authorized by the Commission to be recovered from customers by a
190 utility, that occur due to measured and verified decreased consumption of electricity caused by energy
191 efficiency programs approved by the Commission and implemented by the utility, less the amount by
192 which such non-fuel reductions in total revenues have been mitigated through other program-related
193 factors, including reductions in variable operating expenses.

194 "Rooftop solar installation" means a distributed electric generation facility, storage facility, or
195 generation and storage facility utilizing energy derived from sunlight, with a rated capacity of not less
196 than 50 kilowatts, that is installed on the roof structure of an incumbent electric utility's commercial or
197 industrial class customer, including host sites on commercial buildings, multifamily residential buildings,
198 school or university buildings, and buildings of a church or religious body.

199 "Small modular reactor" means an advanced nuclear reactor that produces nuclear power and has
200 a power capacity of up to 400 megawatts per reactor.

201 "Solar energy system" means a system of components that produces heat or electricity, or both,
202 from sunlight.

203 "Supplier" means any generator, distributor, aggregator, broker, marketer, or other person who
204 offers to sell or sells electric energy to retail customers and is licensed by the Commission to do so, but it
205 does not mean a generator that produces electric energy exclusively for its own consumption or the
206 consumption of an affiliate.

207 "Supply" or "supplying" electric energy means the sale of or the offer to sell electric energy to a
208 retail customer.

209 "Total annual energy savings" means (i) the total combined kilowatt-hour savings achieved by
210 electric utility energy efficiency and demand response programs and measures installed in that program
211 year, as well as savings still being achieved by measures and programs implemented in prior years, or (ii)
212 savings attributable to newly installed combined heat and power facilities, including waste heat-to-power
213 facilities, and any associated reduction in transmission line losses, provided that biomass is not a fuel and

214 the total efficiency, including the use of thermal energy, for eligible combined heat and power facilities
215 must meet or exceed 65 percent and have a nameplate capacity rating of less than 25 megawatts.

216 "Transmission of," "transmit," or "transmitting" electric energy means the transfer of electric
217 energy through the Commonwealth's interconnected transmission grid from a generator to either a
218 distributor or a retail customer.

219 "Transmission system" means those facilities and equipment that are required to provide for the
220 transmission of electric energy.

221 "Waste heat to power" means a system that generates electricity through the recovery of a qualified
222 waste heat resource.

223 **§ 56-585.5. Generation of electricity from renewable and zero carbon sources.**

224 A. As used in this section:

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

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

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

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

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

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

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

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

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

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

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

262 2. By December 31, 2028, each Phase I and II Utility shall retire all biomass-fired electric
263 generating units that do not co-fire with coal.

264 3. By December 31, 2045, each Phase I and II Utility shall retire all other electric generating units
265 located in the Commonwealth that emit carbon as a by-product of combusting fuel to generate electricity.

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

271 C. Each Phase I and Phase II Utility shall participate in a renewable energy portfolio standard
272 program (RPS Program) that establishes annual goals for the sale of renewable energy to all retail
273 customers in the utility's service territory, other than accelerated renewable energy buyers pursuant to
274 subsection G, regardless of whether such customers purchase electric supply service from the utility or
275 from suppliers other than the utility. To comply with the RPS Program, each Phase I and Phase II Utility
276 shall procure and retire Renewable Energy Certificates (RECs) originating from renewable energy
277 standard eligible sources (RPS eligible sources). For purposes of complying with the RPS Program from
278 2021 to 2024, a Phase I and Phase II Utility may use RECs from any renewable energy facility, as defined
279 in § 56-576, provided that such facilities are located in the Commonwealth or are physically located within
280 the PJM Interconnection, LLC (PJM) region. However, at no time during this period or thereafter may
281 any Phase I or Phase II Utility use RECs from (i) renewable thermal energy, (ii) renewable thermal energy
282 equivalent, (iii) biomass-fired facilities that are outside the Commonwealth, or (iv) biomass-fired facilities
283 operating in the Commonwealth as of January 1, 2020, that supply 10 percent or more of their annual net
284 electrical generation to the electric grid or more than 15 percent of their annual total useful energy to any
285 entity other than the manufacturing facility to which the generating source is interconnected. From
286 compliance year 2025 and all years after, each Phase I and Phase II Utility may only use RECs from RPS
287 eligible sources for compliance with the RPS Program.

288 In order to qualify as RPS eligible sources, such sources must be (a) electric-generating resources
289 that generate electric energy derived from solar-~~or~~, wind, advanced nuclear technology, or hydrogen
290 located in the Commonwealth or off the Commonwealth's Atlantic shoreline or in federal waters and
291 interconnected directly into the Commonwealth or physically located within the PJM region; (b) falling
292 water resources located in the Commonwealth or physically located within the PJM region that were in

293 operation as of January 1, 2020, that are owned by a Phase I or Phase II Utility or for which a Phase I or
 294 Phase II Utility has entered into a contract prior to January 1, 2020, to purchase the energy, capacity, and
 295 renewable attributes of such falling water resources; (c) non-utility-owned resources from falling water
 296 that (1) are less than 65 megawatts, (2) began commercial operation after December 31, 1979, or (3) added
 297 incremental generation representing greater than 50 percent of the original nameplate capacity after
 298 December 31, 1979, provided that such resources are located in the Commonwealth or are physically
 299 located within the PJM region; (d) waste-to-energy or landfill gas-fired generating resources located in
 300 the Commonwealth and in operation as of January 1, 2020, provided that such resources do not use waste
 301 heat from fossil fuel combustion or forest or woody biomass as fuel; or (e) biomass-fired facilities in
 302 operation in the Commonwealth and in operation as of January 1, 2020, that supply no more than 10
 303 percent of their annual net electrical generation to the electric grid or no more than 15 percent of their
 304 annual total useful energy to any entity other than the manufacturing facility to which the generating
 305 source is interconnected. Regardless of any future maintenance, expansion, or refurbishment activities,
 306 the total amount of RECs that may be sold by any RPS eligible source using biomass in any year shall be
 307 no more than the number of megawatt hours of electricity produced by that facility in 2019; however, in
 308 no year may any RPS eligible source using biomass sell RECs in excess of the actual megawatt-hours of
 309 electricity generated by such facility that year. In order to comply with the RPS Program, each Phase I
 310 and Phase II Utility may use and retire the environmental attributes associated with any existing owned
 311 or contracted solar, wind, advanced nuclear technology, hydrogen, or falling water electric generating
 312 resources in operation, or proposed for operation, in the Commonwealth or physically located within the
 313 PJM region, with such resource qualifying as a Commonwealth-located resource for purposes of this
 314 subsection, as of January 1, 2020, provided such renewable attributes are verified as RECs consistent with
 315 the PJM-EIS Generation Attribute Tracking System.

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

- | | | |
|---|-------------------|--------------------|
| a | Phase I Utilities | Phase II Utilities |
|---|-------------------|--------------------|

318

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%		

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

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

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

334 D. Each Phase I or Phase II Utility shall petition the Commission for necessary approvals to
335 procure zero-carbon electricity generating capacity as set forth in this subsection and energy storage
336 resources as set forth in subsection E. To the extent that a Phase I or Phase II Utility constructs or acquires
337 new zero-carbon generating facilities or energy storage resources, the utility shall petition the Commission

338 for the recovery of the costs of such facilities, at the utility's election, either through its rates for generation
339 and distribution services or through a rate adjustment clause pursuant to subdivision A 6 of § 56-585.1.
340 All costs not sought for recovery through a rate adjustment clause pursuant to subdivision A 6 of § 56-
341 585.1 associated with generating facilities provided by sunlight or onshore or offshore wind are also
342 eligible to be applied by the utility as a customer credit reinvestment offset as provided in subdivision A
343 8 of § 56-585.1. Costs associated with the purchase of energy, capacity, or environmental attributes from
344 facilities owned by the persons other than the utility required by this subsection shall be recovered by the
345 utility either through its rates for generation and distribution services or pursuant to § 56-249.6.

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

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

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

363 c. By December 31, 2030, each Phase I Utility shall petition the Commission for necessary
364 approvals to construct, acquire, or enter into agreements to purchase the energy, capacity, and

365 environmental attributes of at least 200 megawatts of additional generating capacity located in the
366 Commonwealth using energy derived from sunlight or onshore wind, and 35 percent of such generating
367 capacity procured shall be from the purchase of energy, capacity, and environmental attributes from solar
368 or onshore wind facilities owned by persons other than the utility, with the remainder, in the aggregate,
369 being from construction or acquisition by such Phase I Utility.

370 d. Nothing in this subdivision 1 shall prohibit such Phase I Utility from constructing, acquiring, or
371 entering into agreements to purchase the energy, capacity, and environmental attributes of more than 600
372 megawatts of generating capacity located in the Commonwealth using energy derived from sunlight or
373 onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-580 and 56-
374 585.1.

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

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

391 facilities owned by persons other than the utility, with the remainder, in the aggregate, being from
392 construction or acquisition by such Phase II Utility.

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

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

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

414 e. Nothing in this subdivision 2 shall prohibit such Phase II Utility from constructing, acquiring,
415 or entering into agreements to purchase the energy, capacity, and environmental attributes of more than
416 16,100 megawatts of generating capacity located in the Commonwealth using energy derived from

417 sunlight or onshore wind, provided the utility receives approval from the Commission pursuant to §§ 56-
418 580 and 56-585.1.

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

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

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

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

462 5. If, in any year, a Phase I or Phase II Utility is unable to meet the compliance obligation of the
463 RPS Program requirements or if the cost of RECs necessary to comply with RPS Program requirements
464 exceeds \$45 per megawatt hour, such supplier shall be obligated to make a deficiency payment equal to
465 \$45 for each megawatt-hour shortfall for the year of noncompliance, except that the deficiency payment
466 for any shortfall in procuring RECs for solar, wind, or anaerobic digesters located in the Commonwealth
467 shall be \$75 per megawatts hour for resources one megawatt and lower. The amount of any deficiency
468 payment shall increase by one percent annually after 2021. A Phase I or Phase II Utility shall be entitled
469 to recover the costs of such payments as a cost of compliance with the requirements of this subsection
470 pursuant to subdivision A 5 d of § 56-585.1. All proceeds from the deficiency payments shall be deposited

471 into an interest-bearing account administered by the Department of Energy. In administering this account,
472 the Department of Energy shall manage the account as follows: (i) 50 percent of total revenue shall be
473 directed to job training programs in historically economically disadvantaged communities; (ii) 16 percent
474 of total revenue shall be directed to energy efficiency measures for public facilities; (iii) 30 percent of
475 total revenue shall be directed to renewable energy programs located in historically economically
476 disadvantaged communities; and (iv) four percent of total revenue shall be directed to administrative costs.

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

481 E. To enhance reliability and performance of the utility's generation and distribution system, each
482 Phase I and Phase II Utility shall petition the Commission for necessary approvals to construct or acquire
483 new, utility-owned energy storage resources.

484 1. By December 31, 2035, each Phase I Utility shall petition the Commission for necessary
485 approvals to construct or acquire 400 megawatts of energy storage capacity. Nothing in this subdivision
486 shall prohibit a Phase I Utility from constructing or acquiring more than 400 megawatts of energy storage,
487 provided that the utility receives approval from the Commission pursuant to §§ 56-580 and 56-585.1.

488 2. By December 31, 2035, each Phase II Utility shall petition the Commission for necessary
489 approvals to construct or acquire 2,700 megawatts of energy storage capacity. Nothing in this subdivision
490 shall prohibit a Phase II Utility from constructing or acquiring more than 2,700 megawatts of energy
491 storage, provided that the utility receives approval from the Commission pursuant to §§ 56-580 and 56-
492 585.1.

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

495 4. All energy storage projects procured pursuant to this subsection shall meet the competitive
496 procurement protocols established in subdivision D 3.

497 5. After July 1, 2020, at least 35 percent of the energy storage facilities placed into service shall
498 be (i) purchased by the public utility from a party other than the public utility or (ii) owned by a party
499 other than a public utility, with the capacity from such facilities sold to the public utility. By January 1,
500 2021, the Commission shall adopt regulations to achieve the deployment of energy storage for the
501 Commonwealth required in subdivisions 1 and 2, including regulations that set interim targets and update
502 existing utility planning and procurement rules. The regulations shall include programs and mechanisms
503 to deploy energy storage, including competitive solicitations, behind-the-meter incentives, non-wires
504 alternatives programs, and peak demand reduction programs.

505 F. All costs incurred by a Phase I or Phase II Utility related to compliance with the requirements
506 of this section or pursuant to § 56-585.1:11, including (i) costs of generation facilities powered by sunlight
507 or onshore or offshore wind, or energy storage facilities, that are constructed or acquired by a Phase I or
508 Phase II Utility after July 1, 2020, (ii) costs of capacity, energy, or environmental attributes from
509 generation facilities powered by sunlight or onshore or offshore wind, or falling water, or energy storage
510 facilities purchased by the utility from persons other than the utility through agreements after July 1, 2020,
511 and (iii) all other costs of compliance, including costs associated with the purchase of RECs associated
512 with RPS Program requirements pursuant to this section shall be recovered from all retail customers in
513 the service territory of a Phase I or Phase II Utility as a non-bypassable charge, irrespective of the
514 generation supplier of such customer, except (a) as provided in subsection G for an accelerated renewable
515 energy buyer or (b) as provided in subdivision C 3 of § 56-585.1:11, with respect to the costs of an offshore
516 wind generation facility, for a PIPP eligible utility customer or an advanced clean energy buyer or
517 qualifying large general service customer, as those terms are defined in § 56-585.1:11. If a Phase I or
518 Phase II Utility serves customers in more than one jurisdiction, such utility shall recover all of the costs
519 of compliance with the RPS Program requirements from its Virginia customers through the applicable
520 cost recovery mechanism, and all associated energy, capacity, and environmental attributes shall be
521 assigned to Virginia to the extent that such costs are requested but not recovered from any system
522 customers outside the Commonwealth.

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

530 G. 1. An accelerated renewable energy buyer may contract with a Phase I or Phase II Utility, or a
531 person other than a Phase I or Phase II Utility, to obtain (i) RECs from RPS eligible resources or (ii)
532 bundled capacity, energy, and RECs from solar or wind generation resources located within the PJM
533 region and initially placed in commercial operation after January 1, 2015, including any contract with a
534 utility for such generation resources that does not allocate to or recover from any other customer of the
535 utility the cost of such resources. Such an accelerated renewable energy buyer may offset all or a portion
536 of its electric load for purposes of RPS compliance through such arrangements. An accelerated renewable
537 energy buyer shall be exempt from the assignment of non-bypassable RPS compliance costs pursuant to
538 subsection F, with the exception of the costs of an offshore wind generating facility pursuant to § 56-
539 585.1:11, based on the amount of RECs obtained pursuant to this subsection in proportion to the
540 customer's total electric energy consumption, on an annual basis. An accelerated renewable energy buyer
541 obtaining RECs only shall not be exempt from costs related to procurement of new solar or onshore wind
542 generation capacity, energy, or environmental attributes, or energy storage facilities, by the utility pursuant
543 to subsections D and E, however, an accelerated renewable energy buyer that is a customer of a Phase II
544 Utility and was subscribed, as of March 1, 2020, to a voluntary companion experimental tariff offering of
545 the utility for the purchase of renewable attributes from renewable energy facilities that requires a
546 renewable facilities agreement and the purchase of a minimum of 2,000 renewable attributes annually,
547 shall be exempt from allocation of the net costs related to procurement of new solar or onshore wind
548 generation capacity, energy, or environmental attributes, or energy storage facilities, by the utility pursuant
549 to subsections D and E, based on the amount of RECs associated with the customer's renewable facilities

550 agreements associated with such tariff offering as of that date in proportion to the customer's total electric
551 energy consumption, on an annual basis. To the extent that an accelerated renewable energy buyer
552 contracts for the capacity of new solar or wind generation resources pursuant to this subsection, the
553 aggregate amount of such nameplate capacity shall be offset from the utility's procurement requirements
554 pursuant to subsection D. All RECs associated with contracts entered into by an accelerated renewable
555 energy buyer with the utility, or a person other than the utility, for an RPS Program shall not be credited
556 to the utility's compliance with its RPS requirements, and the calculation of the utility's RPS Program
557 requirements shall not include the electric load covered by customers certified as accelerated renewable
558 energy buyers.

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

564 3. Provided that no incremental costs associated with any contract between a Phase I or Phase II
565 Utility and an accelerated renewable energy buyer is allocated to or recovered from any other customer of
566 the utility, any such contract with an accelerated renewable energy buyer that is a jurisdictional customer
567 of the utility shall not be deemed a special rate or contract requiring Commission approval pursuant to §
568 56-235.2.

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

576 subsection F for such period that the customer is not purchasing electric energy from the utility, and such
577 customer's electric load shall not be included in the utility's RPS Program requirements.

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

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

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