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COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

COMMONWEALTH OF VIRGINIA, *ex rel.*

STATE CORPORATION COMMISSION

*Ex Parte:* In the matter of establishing rules and regulations pursuant to § 56-585.5 E 5 of the Code of Virginia related to the deployment of energy storage

CASE NO. PUR-2020-00120

**COMMENTS OF ES STAKEHOLDERS ON THE COMMISSIONS PROPOSED  
REGULATIONS GOVERNING THE DEPLOYMENT OF ENERGY STORAGE**

Pursuant to the Commonwealth of Virginia State Corporation Commission’s (“Commission”) Order for Notice and Comment in Case No. PUR-2020-00120 the U.S. Energy Storage Association; Virginia Advanced Energy Economy; Maryland, D.C, and Virginia Solar Energy Industries Association; and the Solar Energy Industries Association (Collectively, “Energy Storage Stakeholders” or “ES Stakeholders”) respectfully submit these comments for the Commission’s consideration. Energy Storage Stakeholders emphasize that the regulations submitted herein will meet the legislative intent of the 2020 Virginia Clean Economy Act (“VCEA”) while implementing energy storage targets that provide the greatest benefit and savings for residents and businesses in the Commonwealth.

**I. ABOUT ENERGY STORAGE STAKEHOLDERS**

The U.S. Energy Storage Association (“ESA”) is the national trade association dedicated to energy storage, working toward a more resilient, efficient, sustainable, and affordable electricity grid—as is uniquely enabled by energy storage. With more than 200 members, ESA represents a diverse group of

companies, including independent power producers, electric utilities, energy service companies, financiers, insurers, law firms, installers, manufacturers, component suppliers, and integrators involved in manufacturing, deploying and operating energy storage systems around the globe. Further, our members work with all types of energy storage technologies and chemistries, including lithium-ion, advanced lead-acid, flow batteries, zinc-air, liquid air, compressed air, and pumped hydro among others. A number of our members have operations in Virginia and/or are presently developing grid energy storage projects in the Commonwealth.

Virginia Advanced Energy Economy (Va. AEE) is a coalition of businesses that seek to make the Commonwealth's energy more secure, clean, and affordable, bolstering Virginia's economy. The comments expressed herein represent the position of Va. AEE as a coalition but may not represent the view of any particular member.

Maryland, D.C., and Virginia Solar Energy Industries Association ("MDV-SEIA") is the official trade association of the regional solar industry. Our members install, develop, finance, maintain and operate solar energy systems to provide local, clean electricity to Virginia, Maryland and the District of Columbia. The trade association was founded in 1984, and as a result of rapid technological advancements and innovative state and federal policy, has grown to over 170 member companies employing nearly 10,000 local residents. The comments expressed in this filing represent the position of MDV-SEIA as an organization but may not represent the views of any particular member of MDV-SEIA. For information about MDV-SEIA and its membership, please visit MDV-SEIA's website at [www.mdvseia.org](http://www.mdvseia.org).

The Solar Energy Industries Association ("SEIA") is leading the transformation to a clean energy economy, creating the framework for solar to achieve 20% of U.S. electricity generation by 2030. SEIA works with its 1,000 member companies and other strategic partners to fight for policies that create jobs in every community and shape fair market rules that promote competition and the growth of reliable, low-

cost solar power. Founded in 1974, SEIA is a national trade association building a comprehensive vision for the Solar+ Decade through research, education and advocacy.

## II. INTRODUCCION

ES Stakeholders applaud the Commission for advancing regulations to implement the VCEA's nation-leading targets for the deployment of energy storage system(s) ("ESS"). The ambitious targets must be matched with appropriate programs and regulations to ensure that in meeting the 3,100 MW target of ESS by 2035, Virginia captures the greatest benefits of the deployment through early and consistent investments in a diversity of business and ownership models at all levels of interconnection and ensures diversity and equity in customer engagement, investment, and benefits. ES Stakeholders appreciate the opportunity to submit these comments, which include lessons learned from other states to assist the Commission in the successful implementation of the VCEA energy storage targets that support a more resilient, efficient, sustainable and affordable electric grid. To assist the Commission, ES Stakeholders have provided in-line revisions of the Proposed Regulations in Appendix A that incorporate the recommendations provided in these Comments.

## III. COMMENTS ON PROPOSED RULES

### **Minimum interim targets for energy storage deployment by Phase I and Phase II Utilities.**

ES Stakeholders commend the Commission for its consideration of interim targets as intended by the VCEA legislation. In its consideration, ES Stakeholders respectfully recommend an increase of the proposed interim 2025 target for Virginia Electric and Power Company ("Dominion") from 250 MW to 400 MW, and for Appalachian Power Company ("APCo") from 25 MW to 100 MW. The Proposed Rules set interim targets of 55% of the total deployment be achieved in the last third of the timeline, whereas less than 10% of the target would be achieved in the first third of the timeline, as illustrated in table one below.

Table 1 Proposed Regulations Incremental Targets

	2021- 2025	2026-2030	2031-2035
APCo incremental target (MW)	25	125 (150 cumulative)	250 (400 cumulative)
Incremental target as percent of total	6%	31%	63%
Dominion incremental interim target (MW)	250	950 (1200 cumulative)	1500 (2700 cumulative)
Incremental target as percent of total	9%	35%	56%

In proposing the same interim targets that have been adopted in the Proposed Rules, Dominion justifies the backloading of ESS deployment in its Comments<sup>1</sup> as a strategy to take advantage of cost declines and procure a larger share of the total deployment at a cheaper cost in the outyears. However, ES Stakeholders find that by delaying the deployment of energy storage, the Commission will delay anticipated cost declines and miss important benefits of early deployment of energy storage. ES Stakeholders recommend a greater focus on near-term deployment for the following reasons:

- 1) Significant early cost reductions in storage installations will occur as a result of learning-by-doing via deployment. The equipment costs of battery energy storage hardware will continue to decline over the next decade, as discussed in ESA's Comment,<sup>2</sup> owing to deployment across the US and globally. However, soft costs, which make up a significant portion of total

<sup>1</sup> Proposed Regulations Submitted by Virginia Electric Power Company and Appalachian Power Company, Case No. PUR-2020-00120, submitted July 29, 2020

<sup>2</sup> Comments of the U.S. Energy Storage Association on Rules Related to the Deployment of Energy Storage, Case No. PUR-2020-00120, submitted July 29, 2020

installed project costs,<sup>3</sup> will decline only as local market actors including regulators, utilities, developers, and local governments gain experience with permitting, interconnection, construction, and operations that in turn improve efficiencies in business and regulatory processes. The Commonwealth will not benefit from a similar reduction in soft costs unless Virginia itself deploys energy storage locally.

2) As Virginia's utilities make multi-decadal investment decisions in the near term, delaying serious consideration of energy storage as a near-term investment option will lock in other investments that may reduce the utility of storage in the future. For example, continued deployment of fuel-based power plants that can be substituted in whole or in part by a diverse mix of energy storage may reduce the capacity need for storage at a future juncture. The statutory goals of the VCEA to eliminate sources of emissions, such as fuel-based power plants, compel a forward-looking analysis of investment in storage. Significant interim targets will drive that analysis and result in savings for ratepayers.

3) If storage deployment is limited in the next decade, Virginia will miss out on critical benefits of storage to its electricity grid in the intervening years before deployment ramps up in 2030, in particular for resilience and integration with the transportation sector and other beneficial electrification. As the Commonwealth's shift toward the electrification of transportation will increase demand and change load shapes, grid investments in the flexibility of storage are critical to ensure infrastructure is in place to enable that shift at the least cost for ratepayers.

4) A limited storage deployment in early years will prevent Virginia from gaining experience with a diversity of customer benefits, interconnection types, technologies, ownership models, and customer benefits to determine the best long-term path forward as the

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<sup>3</sup> Permitting; interconnection; engineering procurement and construction; contingency, development represent 25 to 50 percent of total ESS costs according to the National Renewable Energy Laboratory's website on the 2020 Annual Technology Baseline, available at <https://atb.nrel.gov/electricity/2020/index.php?t=st>

Commonwealth concurrently pursues 100 percent clean electricity. For example, under the Proposed Rules' interim target of 25 MW by 2025, APCo could achieve a goal of at least 10 percent behind-the-meter (“BTM”) with a single 2.5 MW project. Similarly, Dominion presently has an active RFP soliciting up to 250 MW, equal to its interim target under the Proposed Rules, but only allows projects over 5 MW in size—raising the possibility that no BTM distributed storage will be procured.

In Comments submitted July 29, ESA recommended near-term interim targets of 400 MW by end of 2023 for Dominion and 100 MW by end of 2022 for APCo. These interim targets would help Virginia reduce soft costs and gain experience with a diversity of energy storage projects for a variety of applications and use cases in both utility-owned and thirty party-owned business models. Moreover, ESA's proposed timeline aligns with APCo and Dominion's current integrated resource planning cycle. ES Stakeholders urge the Commission to adopt the interim targets proposed in ESA's Comments.

Additionally, the VCEA established a goal of “installing at least 10 percent of such energy storage projects BTM.”<sup>4</sup> Consistent with the Proposed Rules' requirement that at least 35 percent of ESS must be purchased or owned by a third party apply to each interim target, ES Stakeholders recommend that the Commission require that at least 10 percent of the each interim target be met with BTM storage as well, to ensure progress toward the goal established in the VCEA. By exceeding the goal that at least 10 percent of energy storage is located BTM under each interim target, the Commission can stimulate investment in storage from end-use customers in Virginia, and improve resilience at customer facilities.

#### **Procurement of energy storage projects by Phase I and Phase II Utilities.**

The VCEA clearly recognizes the benefits of competition by creating a requirement that at least 35 percent of ESS be purchased or contracted from a third party. Further, the VCEA also requires that the regulations “include programs and mechanisms to deploy energy storage, *including competitive*

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<sup>4</sup> Code of Virginia, § 56-585.5 D 4

*solicitations*” (emphasis added).<sup>5</sup> Consistent with the intent of the VCEA, ES Stakeholders respectfully recommend that the Commission take further steps to ensure competition in the procurement of energy storage resources. By specifically requiring regulations to address competitive solicitations, the legislation intends for the Commission to take additional steps beyond what is already required by § 56-233.1 and § 56-585.5 E 5 of the Code of Virginia. The Commission initially suggested the need for additional action in its Order Establishing Proceeding, asking: “what competitive solicitation-related programs and mechanisms to deploy energy storage should be including in the required regulations?”<sup>6</sup> However, the Proposed Rules do not include any programs or mechanisms that are not already required by law, instead referencing § 56-233.1 and including the request for proposal requirements already required by § 56-585.5 D 3 of the Code of Virginia. ES Stakeholders suggest the following mechanisms to protect competition, contribute to the growth of a diverse storage market in Virginia, and deliver the lowest costs to ratepayers:

- 1) ES Stakeholders recommend that the Commission pursue measures to ensure that energy storg come from the most competitive ESS sources possible, either in the form of a power purchase agreement or other contract. The VCEA provides two distinct mechanisms by which utilities may satisfy the requirement that at least 35 percent of energy storage come from third parties: the ESS is either purchased by the utility, or the ESS is owned by a third party and with service sold to the utility through a mechanism such as a power purchase agreement. Although the utility may prefer to own such facilities, ES Stakeholders encourage the Commission to implement this provision in a manner that generates the greatest savings for Virginia ratepayers. In comparing utility-owned ESS to contracted ESS owned by a third party, the utility should account for additional costs of its expanded rate base. Doing so will ensure the most cost-effective procurements for Virginia ratepayers.

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<sup>5</sup> Code of Virginia, § 56-585.5 E 5

<sup>6</sup> *Order Establishing Proceeding*, Case No. PUR-2020-00120



2) In order provide third parties a reasonable opportunity evaluate a utility's selection, ES Stakeholders recommend that third parties should have equitable access to relevant electric system data, with appropriate confidentiality safeguards in place for privacy, system security, and public safety.

3) Require that any minimum thresholds, such as setbacks or spacing requirements, are consistent with established codes and standards, in order to ensure safety while promoting competitiveness in Virginia's energy storage market.

4) ES Stakeholders recommend that the Commission require utilities to conduct procurements through an owner-blind process administered by a third party, unless the procurement is for transmission or distribution infrastructure in which the demonstrated reliability obligations of a utility necessitate ownership and/or operation of energy storage by the utility. The third party administrator would define the evaluation process and the project selection methodology. This would ensure that all ownership models have equal opportunity to compete without fear of selection bias, and be evaluated solely on the criteria listed in the request for proposal.

5) ES Stakeholders respectfully recommend that the Commission emphasize procuring projects that represent a diversity of market applications and energy storage technologies. It is in the interest of the Commonwealth to maximize information for consumers and utilities on a range of offerings by ensuring that no single energy storage project, technology, or company dominate procurements. Ratepayers benefit when procurement processes develop energy storage markets and encourage competition and innovation.

### **Annual energy storage plans.**

The VCEA requires that each utility submit an annual plan to “meet the energy storage project targets of subsection E, including the goal of installing at least 10 percent of such energy storage projects BTM.”<sup>7</sup> ES Stakeholders respectfully recommend that the Commission provide guidance in these regulations regarding the specific information or specific program design that utilities should include in their annual storage plans to meet the target for BTM projects. The proposed regulations submitted by ESA include specific recommendations for plans.<sup>8</sup> At a minimum, ES Stakeholders recommend that annual plans contain the following information:

- 1) A description of the utility’s progress in meeting the energy storage target, including interim targets and sub-targets thereof (e.g., the goal of at least 10 percent BTM);
- 2) An evaluation of the costs and benefits for the deployment of energy storage; and
- 3) The status of programs promoting the deployment of energy storage.

### **Behind-the-meter incentives, non-wires alternative programs, and peak demand reduction programs by Phase I and Phase II Utilities.**

ES Stakeholders believe that the programs proscribed by the VCEA – specifically BTM incentives, non-wires alternatives (“NWA”), and peak demand reduction (“PDR”) programs – are an important mechanism to meet the energy storage targets of the VCEA in the most cost-effective manner possible.

Well-designed programs can offset significant infrastructure investments and deliver significant savings. A cost-benefit analysis in Massachusetts found total net system benefits of \$859 million to \$1.2

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<sup>7</sup> Code of Virginia § 56-585.5 D 4

<sup>8</sup> *Proposed Regulations of the U.S. Energy Storage Association for the Deployment of Energy Storage*, Case No. PUR-2020-00120, submitted August 14, 2020

billion from deploying 1766 MW of ESS.<sup>9</sup> In New York, for example, Con Edison recently avoided a \$1.2 billion substation upgrade through non-wires alternatives including a 2 MW ESS.<sup>10</sup> To maximize benefits, it is important that these programs be pursued at a scale commensurate with that of the VCEA's energy storage goals. The Massachusetts Department of Public Utilities and the New York Public Service Commission have both recently approved utility BTM storage programs that utilize pay-for-performance type structures, only compensating BTM storage for the value delivered to ratepayers.<sup>11,12</sup> These programs are open to third parties.

ES Stakeholders respectfully request that the Commission require that utilities' proposals for BTM incentive programs, PDR programs, and NWA programs include a description of how the proposed program will enable the utility to meet its energy storage targets, including the BTM goal of at least 10 percent. Approval of a utility's proposed program should be contingent upon whether the utility's proposed or approved programs for BTM incentives, NWA, and PDR will support achievement of a minimum goal of at least 10 percent BTM storage for interim and final targets. This mechanism will help ensure that programs proposed by utilities are impactful in scale while providing flexibility regarding program design. In addition, the Commission should require that any such programs be open and available to third party participation. Additionally, ES Stakeholders recommend that the Commission set deadlines for establishing an initial set of programs to ensure implementation in the near-term, which will

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<sup>9</sup> *State of Charge: A Comprehensive Study of Energy Storage in Massachusetts*, Massachusetts Department of Energy Resources and Mass Clean Energy Center, , September 2016, available at <https://www.mass.gov/service-details/energy-storage-study>

<sup>10</sup> *State of Storage in New York*, New York Department of Public Service, April 2020, available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bEE291D9C-F169-4B37-97EB-7182CSF062BF%7d>

<sup>11</sup> Order approving utility demand-side management programs, Energy Massachusetts Department of Public Utilities, Docket Nos. 20-33:36, issued July 28, 2020, available at <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/12489988>

<sup>12</sup> *Order Establishing Term-Dynamic Load Management and Auto-Dynamic Load Management Program Procurements and Associated Cost Recovery*, New York Department of Public Service, Case 20-E-0130, available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BBB230CF6-F7CC-476D-ADF3-A91DEA1357C8%7D>

drive learning-by-doing to inform subsequent policies and programs as well as support achievement of interim targets.

Drawing on lessons from other states and in light of the value of deadlines, ES Stakeholders respectfully request that the Commission begin this process by directing utilities to file proposals for Bring-Your-Own-Device (“BYOD”) programs no later than the annual plan for 2021 to unlock value from customer-owned ESS while minimizing ratepayer exposure. When designed effectively, these programs have proven to encourage firms to enter new markets and make diverse financing options available to customers, which can support progress toward achieving the VCEA’s goal of at least 10 percent BTM. Multiple ES Stakeholders provide additional information about program designs and model programs for BYOD programs in previous Comments in this proceeding.<sup>13</sup>

**Permitting of non-utility energy storage facilities.**

ES Stakeholders respectfully recommend that the Commission reconsider its approach to permitting requirements for ESS. The proposed permitting requirements inequitably subject ESS to a level of scrutiny not applied to electricity generation, especially for ESS as small as 100 kW and as part of aggregated systems.

Excessive permitting requirements have negative consequences for Virginia and its ratepayers. Permitting delays are a major contributor to the soft costs of energy storage projects – costs which are ultimately passed on to Virginia ratepayers.<sup>14</sup> Excessive permitting requirements have negative consequences and increase costs for both small and large systems, but are particularly harmful for smaller systems, such as those 100 kilowatts to 20 megawatts in size, because they represent a larger portion of developer overhead costs than for larger systems, such as those over 20 megawatts in size. This is because

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<sup>13</sup> See *Comments of the U.S. Energy Storage Association on Rules Related to the Deployment of Energy Storage*, and *Comments of the Maryland-DC-Delaware-Virginia Solar Energy Industries Association and the Solar Energy Industries Association*, Case No. PUR-2020-00120, submitted July 29, 2020

<sup>14</sup> National Renewable Energy Laboratory’s website for the 2020 Annual Technology Baseline, available at <https://atb.nrel.gov/electricity/2020/index.php?t=st>

the major costs associated with complying with permitting requirements, such as legal fees, are fixed and do not increase proportionately with system size. PJM recognizes new resources of 20 megawatts or less as “small generators,” and provides streamlined procedures for processing interconnection requests, providing a clear precedent for the Commission to provide expedited approval for ESS systems 20 megawatts or less.<sup>15</sup> Whether or not the Commission establishes a 20 megawatt threshold, ES Stakeholders recommend that a significantly higher threshold requirement than 100 kilowatts is more consistent with recent regulatory history. Permit by rule applies to renewable energy projects at 150 megawatts, 100 megawatts, or 20 megawatts, depending on the technology.<sup>16</sup> Permitting requirements for generation facilities under the Commission’s jurisdiction to generation facilities greater than 5 megawatts.<sup>17</sup> Extensive permitting requirements will deter developers from smaller, distribution-connected systems that would allow the economic benefits of ESS to be distributed across the state and achieve specific grid applications and use cases that are more appropriate for smaller systems. Additionally, burdensome permitting requirements will discourage BTM projects above 100 kilowatts, making it more difficult for the state to meet the goal established in the VCEA of at least 10 percent of energy storage to be installed BTM.

ES Stakeholders recommend that the Commission harmonize permitting requirements for ESS with those already established for electric generation. Under Virginia Code § 10.1-1197, renewable energy projects smaller than 150 MW receive a permit by rule from the Department of Environmental Quality (“DEQ”). While ESS are not currently eligible for the DEQ permit by rule, ES Stakeholders recommend that the Commission develop permitting requirements similar to the DEQ permit by rule to reduce permitting costs while ensuring appropriate oversight. Additionally, many ESS under development in Virginia are hybrid projects co-located with renewable energy, adding additional regulatory uncertainty

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<sup>15</sup> PJM Manual 14G: Generation Interconnection Requests Revision: 6, PJM, effective September 1, 2020, available at <https://www.pjm.com/-/media/documents/manuals/m14g.ashx>

<sup>16</sup> Code of Virginia § 10.1-1197.5

<sup>17</sup> Administrative Code of Virginia 20VAC5-302-10

as to which permitting requirements apply. ES stakeholders recommend that the Commission clarify that ESS that are co-located with renewable energy projects that have received a permit by rule from the Department of Environmental Quality are not required to obtain a permit or receive a certificate of public convenience and necessity (“CPCN”) from the Commission. At the very least, ES Stakeholders recommend that the Commission eliminate requirements to include information on the permit application relating to (1) sensitive and proprietary financial information, as well as (2) reliability impacts that are duplicative of those required to be determined via the interconnection process.

ES Stakeholders urge that just as permitting requirements for electric generation facilities do not make a distinction between utility and non-utility owned units, the same principle should apply to ESS: any permitting requirement established by the Commission should apply equitably to utility-owned ESS as well as non-utility ESS. The features of an ESS that are evaluated under the proposed permitting requirements – such as environmental impact and system design – do not depend on whether the ESS is owned by a utility or a non-utility.

The Proposed Rules require the Commission to make a determination for approval of the permit based upon “a finding that the energy storage facility will have no material adverse effect upon reliability of electric service provided by any regulated public utility.” ES Stakeholders assert that the criteria for determination of approval under this proposed rule duplicates oversight provided by regional reliability markets via the interconnection process and local jurisdictions. As to regional reliability markets, the transmission interconnection process, which is overseen by the PJM system operator and informed by the utility, already thoroughly examines the impact of the ES facility on bulk system reliability. Because the Commission itself does not possess the system information necessary to make an independent determination as to the reliability impacts of ESS, and would need to rely on information provided by the utility and/or the PJM system operator, limited additional value would be provided by a separate SCC determination. At a minimum, we would ask that, if the Commission determines that the interconnection criteria should remain in the proposed rules, such criteria are applied equally to utility owned and non-

utility owned projects. Relating to the distribution interconnection process, which is overseen by the utility and regulated by the SCC, this process already thoroughly examines the impact of the ES facility on distribution system reliability, so in this case limited additional value would be provided by a separate, additional SCC determination. Authorities having jurisdiction already issue permits at the local level and are best situated to evaluate the local impact of an energy storage project and provide the opportunity for interested parties to provide public feedback.

ES Stakeholders support implementation of the Virginia Environmental Justice Act<sup>18</sup> (“VEJA”) and the promotion of environmental justice. ESS can be a powerful tool to achieve environmental justice by replacing fossil fuel “peaker” plants with zero-emission ESS, as is currently being investigated by the New York Power Authority and a coalition of environmental justice groups.<sup>19</sup> However, it is not clear how the Commission would evaluate a permit application on the basis of whether it adversely impacts any goal established by the VEJA. Any Commission action, including the issuance of a permit, is already subject to VEJA’s declaration that “It is the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities.” Therefore, ES Stakeholders believe it is unnecessary and impractical to apply a determination of the impact of VEJA of each ESS subject to a permit from the Commission.

Finally, ES Stakeholders do not find it necessary, reasonable, or practicable to apply the permitting threshold to ESS on an aggregated basis, since aggregations of ESS may involve hundreds of residential ESS as small as several kW in size. It would be highly onerous and costly, if not practically impossible, to provide much of the information required for the proposed permit application for hundreds of small residential ESS, which would constitute a serious barrier to meeting the goal of at least 10

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<sup>18</sup> Code of Virginia § 2.2-234

<sup>19</sup> *NYPA and Environmental Justice Groups Agree to Explore Options for Transitioning NYPA’s Natural Gas ‘Peaker’ Plants to Cleaner Energy Technologies*, New York Power Authority, October 2020, available at <https://www.nypa.gov/news/press-releases/2020/20201013-ej>

percent of ESS installed BTM. Moreover, ESS aggregators will typically aim to bid aggregated ESS resources into federally regulated wholesale markets. Since the Commission does not have jurisdiction over wholesale markets, ES Stakeholders respectfully submit that the Commission should forbear from over-regulating aggregated ESS and erecting unnecessary barriers to wholesale market participation. FERC Order 2222 directed PJM to update rules to facilitate the participation of aggregated distributed energy resources, including ESS, in wholesale markets.<sup>20</sup> The D.C. Circuit Court of Appeals recently explained – and FERC included in Order 2222 – that a state cannot broadly prohibit the participation in wholesale markets of aggregated distributed energy resources.<sup>21</sup> Here, the proposed requirements that aggregations apply for a single permit by compiling information from numerous smaller ESS (much of which, as described above, may not be available or may be exceedingly costly to obtain) would be just that sort of prohibition, as they would interfere with the implementation of FERC Order 2222 by creating unnecessary and virtually insuperable obstacles for the aggregation of ESS, and so should not be included in final regulations.

#### **Licensing of energy storage aggregators.**

ES Stakeholders respectfully recommend that aggregator licensing requirements apply only to aggregators of mass market ESS, and that aggregators of exclusively large commercial ESS be excluded from licensing requirements with the Commission. While additional consumer protections to protect residential customers from unscrupulous actors may be appropriate, large commercial customers have significantly greater capacity to evaluate contracts and risk, and fewer restrictions on aggregators who operate only in the commercial space may be appropriate. New York, the that has issued comparable regulations for aggregators of ESS, limits its registration requirements to mass market suppliers of

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<sup>20</sup> *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 2222, 172 FERC, available at <https://www.govinfo.gov/content/pkg/FR-2020-10-21/pdf/2020-20973.pdf>

<sup>21</sup> *National Association of Regulatory Utility Commissioners v. FERC*, 964 F.3d 1177 (D.C. Cir. 2020), available at <https://www.cadc.uscourts.gov/internet/opinions.nsf/E12B1903B0477E21852585A1005264D7/%24file/19-1142-1851001.pdf>



distributed energy resources.<sup>22</sup> In its order, the Public Service Commission of New York found that “large customers... are substantially more sophisticated and often retain energy experts, attorneys, and other professionals to assist their procurement of DER products and services. For that reason, some more prescriptive rules apply only to mass market customers.”<sup>23</sup> ES stakeholders recommend that general marketing regulations under 20VAC5-335-110 of the Proposed Rules are sufficient for large commercial ESS aggregators.

#### IV. CONCLUSION

ES Stakeholders thank the Commission the opportunity to provide these comments regarding its Proposed Rules to implement energy storage targets of the VCEA. Virginia currently has the highest energy storage target in the country measured by total megawatts and is well-positioned to be a national leader in energy storage. The recommendations provided herein will help ensure that Virginia secures its long-term leadership position by driving early deployment of energy storage, establishing a diversity of business models and use cases, and providing an open and competitive market for the energy storage industry. ES Stakeholders look forward to working with the Commission, utilities, and other stakeholders to maximize the potential for energy storage in Virginia to deliver resilient, efficient, sustainable and affordable electricity service to Virginians.

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<sup>22</sup> *Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers*, New York Public Service Commission, October 2017, available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E2E3114D-B0A7-401C-AA31-198C4845D6C9}>

<sup>23</sup> *Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers*

RESPECTFULLY SUBMITTED on this 2<sup>nd</sup> day of November, 2020

/s/ Julian Boggs

Julian Boggs  
State Policy Director  
Energy Storage Association

/s/ David Murray

David Murray  
Executive Director  
Maryland D.C. and Virginia Solar Energy Industries Association

/s/ Harrison Godfrey

Harrison Godfrey  
Executive Director  
Virginia Advanced Energy Economy

/s/ Scott Elias

Scott Elias  
Senior Manager of Programs & State Initiatives  
Solar Energy Industries Association

## APPENDIX A

### CHAPTER 335

#### CHAPTER 335 REGULATIONS GOVERNING THE DEPLOYMENT OF ENERGY STORAGE

##### **20VAC5-335-10. Purpose and applicability.**

This chapter is promulgated pursuant to § 56-585.5 E 5 of the Code of Virginia to achieve the deployment of energy storage for the Commonwealth. Each Phase I and Phase 11 Utility is subject to 20VAC5-335-30 through 20VAC5-335-70, 20VAC5-335-120, and 20VAC5-335-130 of this chapter. Non-utility developers, owners, operators, and aggregators of energy storage are subject to 20VAC5-335-80 through 20VAC5-335-130 of this chapter. Electric cooperatives are not subject to this chapter.

##### **20VAC5-335-20. Definitions.**

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Behind the meter" means any system that is on the customer side of the utility service meter.

"Behind-the-meter incentive" means any incentive that encourages an end-use electric customer to implement energy storage systems that are connected to the customer side of the utility service meter, regardless of who actually owns the energy storage equipment.

"Bring Your Own Device energy storage program" means a program that provides compensation to customer owners of energy storage systems for the value of the services the energy storage system provides.

"Commission" means the Virginia State Corporation Commission.

"Demand-side management program" means energy efficiency, demand response, or peak shaving programs approved by the commission that a utility may offer to customers pursuant to § 56-585.1 A 5 of the Code of Virginia.

"Energy storage capacity" means the maximum amount of stored energy of the energy storage system (in ~~kilowatt-hours~~ kilowatts or ~~megawatt-hours~~ megawatts) that can be delivered to the grid.

"Energy storage" means any technology that is capable of absorbing energy, storing that energy for a period of time, and re-delivering that energy after storage.

"Energy storage aggregator" means a person or entity that, as an agent or intermediary, (i) offers to purchase, or purchases, energy storage system capabilities; or (ii) offers to arrange for, or arranges for, the purchase of energy storage system capabilities for the purposes of combining (or aggregating) those capabilities to enable the participation of multiple energy storage systems in electricity markets where such individual systems could not participate individually.

"Energy storage facility" or "energy storage system" means an energy storage resource and any equipment, other than a transmission or distribution line, needed to interconnect the energy storage resource to the utility's electric system. This additional equipment can include, but is not limited to,

switchgear, transformers, inverters, switches, cables, wires, conductors, bus work, protection devices and systems, communication and control devices and systems, fire protection systems, and environmental protection systems.

"Energy storage power rating" means the total possible instantaneous discharge capability (in kilowatts or megawatts) of the energy storage system, or the maximum sustained rate of discharge that the energy storage system can achieve starting from a fully charged state to a fully discharged state.

"Energy storage project" means an energy storage facility with a specified location and an associated nameplate capacity.

"Energy storage resource" means a resource capable of collecting energy from the electric power grid or a power generation facility and then discharging the energy at a future point in time to provide electricity or other grid services, or a resource capable of the active or dynamic exchange of energy.

"Mass market customer" means a customer that is within a utility's residential or small commercial service class and is not billed based on peak demand. Where an energy storage aggregator does not have sufficient information to determine whether a customer is a mass market or not, that customer should be treated as a mass market customer unless and until the energy storage aggregator acquires sufficient information and determines that the customer is not a mass market customer.

"Mass market energy storage aggregator" means an entity that is engaged in soliciting mass market customers for a project or service that involves the installation of energy storage projects on the property of those mass market customers, through its own employees or contractors.

"Non-wires alternative" means any electricity grid investment, project, or program that uses non-traditional transmission or distribution solutions such as distributed generation, energy storage, energy efficiency, demand response, and grid software and controls to delay or remove the need for traditional system upgrades of equipment such as transmission or distribution lines or transformers, without impacting the safety or overall performance of the electric power system.

"Peak demand reduction program" means any project or program aimed at shifting time of use of electricity from one period to another for the overall economic and reliability benefit of the electric power grid.

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

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

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

"Storage duration" means the amount of time an energy storage system can discharge at its energy storage power rating before depleting the stored usable energy when the system is at maximum energy capacity.

**20VAC5-335-30. Minimum interim targets for energy storage deployment by Phase I and Phase II Utilities.**

A Phase I Utility shall petition the commission for any necessary approvals to construct or acquire the level of energy storage capacity by the following dates:

By December 31, ~~2025~~ 2022, ~~25~~ 100 megawatts;

By December 31, ~~2030~~ 2025, an additional ~~125~~ 100 megawatts for a total of ~~150~~ 200 megawatts; and

By December 31, 2035, an additional ~~250~~ 200 megawatts for a total of 400 megawatts.

A Phase II Utility shall petition the commission for any necessary approvals to construct or acquire the level of energy storage capacity by the following dates:

By December 31, ~~2025~~ 2023, ~~250~~ 400 megawatts;

By December 31, ~~2030~~ 2026, an additional ~~950~~ 500 megawatts for a total of ~~1,200~~ 900 megawatts; and

By December 31, 2035, an additional ~~1,500~~ 1,800 megawatts for a total of 2,700 megawatts.

At least 35% of energy storage facilities placed into service by a Phase I or Phase II Utility shall be (i) purchased by the Phase I or Phase II Utility from a party other than the utility, or (ii) owned by a party other than the Phase I or Phase II Utility, with the capacity from such facilities sold to the utility. The 35% threshold shall also apply to each interim targets period identified in this section and a Phase I or Phase II Utility's acquisition of energy storage facilities and purchases of capacity from its own utility-affiliated interests shall not count towards this 35% threshold. At least some portion of the energy storage facilities must be owned by a party other than the Phase I or Phase II Utility or its own utility affiliated interests.

Any type of energy storage technology shall count toward the interim targets set forth in subsections A and B of this section, including energy storage that is located in the service territory of a municipal utility that purchases electricity primarily from a Phase I or Phase II Utility.

Each Phase I and Phase II Utility shall report on its plan to meet these interim targets and its progress toward meeting these interim targets in the proceedings established by § 56-585.5 D 4 and §§ 56-597 through 56-599 of the Code of Virginia, consistent with the requirements of each respective statute.

#### **20VAC5-335-40. Procurement of energy storage projects by Phase I and Phase II Utilities.**

- A. In procuring energy storage projects, each Phase I and Phase II Utility shall use competitive bidding to the extent practicable, consistent with § 56-233.1 of the Code of Virginia.
- B. Beginning in 2021 and ending in 2035 or when the storage targets are met, whichever is sooner, each Phase I and Phase II Utility shall sponsor at least one competitive solicitation for energy storage projects per calendar year. For each solicitation of energy storage as a supply resource, the utility shall contract with a third-party administrator to develop the evaluation process and the project selection methodology. The solicitation shall be consistent with the following requirements:
  1. The request for proposals shall quantify and describe the utility's need for energy or capacity.
  2. The request for proposals shall be publicly announced and made available for public review on the utility's website at least ~~45~~ 90 calendar days prior to the closing of such request for proposals.

3. The request for proposals shall provide, at a minimum, the following information:
  - i. the size, type, and timing of energy storage resources for which the utility anticipates contracting;
  - ii. any minimum thresholds that must be met by respondents, consistent with established codes and standards;
  - iii. major assumptions to be used by the utility in the bid evaluation process, including environmental emission standards;
  - iv. detailed instructions for preparing bids so that bids can be evaluated on a consistent basis;
  - v. the preferred general location of additional energy storage capacity, and (vi) specific information concerning the factors involved in determining the price and non-price criteria used for selecting winning bids.
4. ~~A utility may evaluate responses to the request for proposals based on any criteria that it deems reasonable.~~ A third-party administrator may develop evaluation criteria that it deems reasonable, but shall at a minimum consider the following in its selection process:
  - i. the status of a particular project's development;
  - ii. the age of existing facilities;
  - iii. the demonstrated financial viability of a project and the developer;
  - iv. a developer's prior experience in the field;
  - v. the location and effect on the transmission grid of an energy storage facility;
  - vi. the benefits to the Commonwealth that are associated with particular projects, including regional economic development and the use of goods and services from Virginia businesses;
  - vii. the environmental impacts of particular resources, including impacts on air quality within the Commonwealth and the carbon intensity of the utility's generation portfolio; and
  - viii. how any project impacts the goals established by the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia).
  - ix. how a project contributes to a diverse portfolio of energy storage technologies and market applications.
5. A utility shall maintain documentation of its reasoning for rejecting any specific response.
  - C. Each utility shall provide, upon request, equitable access to relevant electric system data, with appropriate confidentiality safeguards in place for privacy, system security, and public safety. Access shall be provided in a timely manner such that a third parties may reasonably utilize the data to inform responses to the request for proposal.
  - D. For a solicitation that is solely for the purpose of procuring energy storage as transmission or distribution infrastructure in which the Commission determines that the reliability obligations of a utility necessitate ownership and/or operation of energy storage by the utility, the utility may choose to contract with a third-party administrator to run the procurement.
  - E. Each utility shall report on any competitive solicitations for energy storage resources as part of the annual plan required by § 56-585.5 D 4 of the Code of Virginia.

**20VAC5-335-XX. Annual Energy Storage Plan.**

- A. Each Phase I and Phase II Utility shall submit annually a plan to meet its energy storage target part of the annual plan required by § 56-585.5 D 4 of the Code of Virginia. This requirement shall expire when the energy storage target is deemed by the Commission to have been met.
- B. The plan shall include:
1. A description of the utility's progress in meeting the energy storage target, including interim targets set forward by the Commission.
  2. Overall levels of installed and operational energy storage projects and energy storage projects under contract. The description should identify the development timeline of projects under contract that are not yet operational.
  3. An evaluation of the cost and benefits for the deployment of energy storage, including a description of the utility's cost benefit analysis framework for evaluating a specific energy storage project.
  4. Project-specific information, including but not limited to the following:
    - i. The type of technology being deployed for each of the projects.
    - ii. The nameplate capacity of the projects, in both megawatts and megawatt-hours.
    - iii. The location of the projects, including the city and zip code, if the information is public. The primary application of the energy storage projects, as well as secondary applications, if applicable.
    - iv. The process by which the energy storage projects were procured, including if they were procured through a request for proposals, bilateral negotiations, or other means. Relevant dates for the project, including contract date and estimated commercial operation date for planned projects and actual commercial operation date for operational projects.
    - v. The project owner and operator of each of the projects, including any information about the product manufacturer, if the information is public.
- C. The plan must describe how energy storage resources are being modeled and considered in the existing utility planning processes, including whether the modeling tools were instructed to include energy storage technologies as part of the modeling process, what the cost assumptions and forward cost curve assumptions were for the energy storage technologies being modeled, and the source and date of those cost assumptions. Modeling tools must be able to capture sub-hourly system needs and benefits.
- D. The plan must provide results from any request for proposals inclusive of energy storage that are able to be made publicly available, including the number of bids by technology, average or median prices, whether those bid were for standalone energy storage resources or projects co-located with a renewable or non-renewable energy source, and data related to project capacity in both megawatt and megawatt-hours.
- E. The plan must describe the status of programs promoting the deployment of energy storage, including a description of the participation in each program and an assessment of subscription levels, incentive or compensation levels, and other program information. The plan may include recommended modifications to those programs.
- F. The plan must describe how the utility will achieve the goal of 10 percent energy storage installed behind-the-meter. The description shall include its use of behind-the-meter incentives, peak demand reduction programs, and non-wires alternative programs to achieve this goal.

G. The plan must be available for public comment.

**~~20VAC5-335-50~~, 20-VAC5-335-60. Behind-the-meter incentives by Phase I and Phase II Utilities.**

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address behind-the-meter incentives related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of behind-the-meter incentives related to energy storage. The applications shall describe how the behind-the-meter incentives will allow the utility to achieve the goal established by § 56-585.5 D 4 of the Code of Virginia that at least 10 percent of energy storage systems are installed behind-the-meter, and shall describe whether and how the programs benefit historically economically disadvantaged communities and other parties identified by § 7 of Chapter 1193 of the Virginia Acts of Assembly of 2020. If the utility proposes to offer any such behind-the-meter incentives to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side management programs under §56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section.

**20VAC5-335-60. Non-wires alternative programs by Phase I and Phase II Utilities.**

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address non-wires alternative programs related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of non-wires alternative programs related to energy storage. The applications shall describe how the non-wires alternative programs will allow the utility to achieve the goal established by § 56-585.5 D 4 of the Code of Virginia that at least 10 percent of energy storage systems are installed behind-the-meter, and shall describe whether and how the programs benefit historically economically disadvantaged communities and other parties identified by § 7 of Chapter 1193 of the Virginia Acts of Assembly of 2020. If the utility proposes to offer any such non-wires alternative programs to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side management programs under § 56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section.

**20VAC5-335-70. Peak demand reduction programs by Phase I and Phase II Utilities.**

As part of the annual proceeding required by § 56-585.5 D 4 of the Code of Virginia, each Phase I and Phase II Utility shall address peak demand reduction programs related to energy storage. Each Phase I and Phase II Utility shall file with the commission applications for approval of peak demand reduction programs related to energy storage. The applications shall describe how the peak demand reduction programs will allow the utility to achieve the goal established by § 56-585.5 D 4 of the Code of Virginia that at least 10 percent of energy storage systems are installed behind-the-meter, and shall describe whether and how the programs benefit historically economically disadvantaged communities and other parties identified by § 7 of Chapter 1193 of the Virginia Acts of Assembly of 2020. If the utility proposes to offer any such peak demand reduction programs to customers through a demand-side management program, the utility may seek approval through any existing processes for demand-side management programs under § 56-585.1 A 5 of the Code of Virginia, rather than through a separate proceeding under this section. Each Phase I and Phase II Utility shall convene a stakeholder process to make recommendations concerning the development of a Bring Your Own Device energy storage program. Each Phase I and Phase II Utility shall include a report on the work of the stakeholder group, and file a



Bring Your Own Device energy storage program informed by the recommendations of the stakeholder group in its Annual Plan for the year 2021.

**20VAC5-335-80. Permitting of ~~non-utility~~ energy storage facilities.**

- A. ~~Other than a Phase I or Phase II Utility each~~ Each person seeking to construct and operate an energy storage facility in the Commonwealth with an energy storage power rating of ~~100 kilowatts~~ 20 megawatts or greater, ~~either on a stand-alone basis or on an aggregated basis facilitated by an energy storage aggregator, and that is not co-located with a small renewable energy facility receiving a permit by rule pursuant to § 56-580 of the Code of Virginia shall either~~ (i) obtain a permit from the commission pursuant to this section, or (ii) apply for and receive a certificate of public convenience and necessity from the commission pursuant to § 56-580 of the Code of Virginia for the energy storage facility, prior to commencing construction or operation. If such person applies for and receives a certificate of public convenience and necessity from the commission, a permit shall not be required.
- B. ~~In evaluating a permit application, the commission shall make a determination for approval based upon a finding that the energy storage facility (i) will have no material adverse effect upon reliability of electric service provided by any regulated public utility (ii) does not adversely impact any goal established by the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia); and (iii) is not otherwise contrary to the public interest.~~
- C. ~~Other than a Phase I or Phase II Utility, each~~ Each person applying for a permit to construct and operate an energy storage facility with an energy storage power rating of ~~100 kilowatts~~ 20 megawatts or greater shall file an application with the clerk of the commission. If the applicant becomes aware of any material changes to any information while the application is pending, the applicant shall inform the commission of such changes within 10 calendar days. Applications shall include the following information:
1. Legal name of the applicant as well as any trade name.
  2. A description of the applicant's authorized business structure, identifying the state authorizing such structure and the associated date (e.g., if incorporated, the state and date of incorporation; if a limited liability company, the state issuing the certificate of organization and the date of issuance).
  3. Name and business addresses of all principal corporate officers and directors, partners, and LLC members, as appropriate.
  4. ~~Financial information for the applicant, or principal participant or participants in the project. If the applicant or principal participant or participants is a private entity, financial information should include an analysis of the entity's financial condition and audited financial statements for the two most recent fiscal years. If the applicant or principal participant or participants is a public company, financial information should include a copy, or a link to where a copy can be found on the internet, of the entity's most recent stockholder report and most recent Securities and Exchange Commission Form 10-K. If such information is unavailable, provide evidence that applicant has the financial resources, or access to capital, necessary to complete the proposed project.~~
  5. A discussion of the applicant's qualifications. including:
    - a. A summary of other projects developed and managed by the applicant. Include location, status, and operational history.

- b. A description of any affiliation or affiliations with an incumbent electric utility as defined in § 56-576 of the Code of Virginia.
    - c. A disclosure of any affiliate relationship with any other permit holder.
  6. Specific information about the site for the proposed facility, including:
    - a. A written description of the location including identification of the city or county in which the facility will be constructed. Such description should be suitable for newspaper publication and sufficiently identify any affected areas.
    - b. A description of the site, and a topographical map depiction of the proposed site.
    - c. The status of site acquisition (e.g., purchase option, ownership).
    - d. A description of any applicable local zoning or land use approvals required and the status of such approvals.
  7. Specific information about the proposed facility, including:
    - a. Description of all major systems, including energy storage technology type and battery storage chemistry type (if applicable), intended uses, intended facility useful life, facility configuration, and expected suppliers of major components.
    - b. Energy storage power rating, energy capacity, and storage duration.
    - c. Estimated costs, and schedule for construction, testing and commercialization.
    - d. Site layouts that provide for integration of energy storage systems with adequate spacing and property setback requirements incorporated.
    - e. Codes and standards to which the proposed facility will be constructed.
    - f. Where applicable, the manner and location of the facility's interconnection to the transmission or distribution grid.
  8. A general discussion of the selection process for the energy storage technology, including a description of any competitive procurement processes used.
  9. A general discussion of economic development impacts of the project.
  10. A list of other local, state or federal government agencies whose requirements must be met in connection with the construction or operation of the project and a statement of the status of the approval procedures for each of these agencies.
  11. An analysis of the environmental impact of the project. This analysis shall include the impacts on the environment and natural resources, analysis of alternatives considered, unavoidable adverse impacts, mitigation measures proposed to minimize unavoidable impacts, and any irreversible environmental changes. The information required by this subdivision shall be submitted to the Department of Environmental Quality, simultaneously with its filing with the commission, for coordination and review by state agencies responsible for environmental and natural resource protection. The information shall identify:
    - a. Required air permits, expected restrictions, expected emissions, rates of emissions, and any needed emissions offsets or allowances.
    - b. Required permits for water withdrawals, expected restrictions, the amount of water estimated to be used, the source of such water, identification of a backup source of water, if any, and identification of any facilities that need to be constructed to provide such water.

- c. Required permits for water discharge and potential impacts on regional water flows.
  - d. Required permits related to the wetlands and an identification of any tidal and nontidal wetlands located near the proposed site and how such wetlands will be impacted by applicant's proposed facility.
  - e. Impact of solid and hazardous wastes on local water resources.
  - f. Impact on natural heritage resources, and on threatened and endangered species.
  - g. Erosion and sediment control measures.
  - h. Archaeological, historic, scenic, cultural, or architectural resources in the area.
  - i. Chesapeake Bay Preservation Areas designated by the locality.
  - j. Wildlife resources.
  - k. Agricultural and forest resources and federal, local, state or private parks and recreation areas.
    - l. Use of pesticides and herbicides.
  - m. m. Geology and mineral resources, caves, and sinkholes.
  - n. n. Transportation infrastructure.
12. ~~An analysis of the social impact of the project, including a general discussion of why the facility will not have a disproportionate adverse impact on "historically economically disadvantaged communities" as defined in § 56-576 of the Code of Virginia.~~
13. ~~A general discussion of how the project will promote environmental justice in environmental justice communities and fenceline communities consistent with the Virginia Environmental Justice Act (§§ 2.2-234 et seq. of the Code of Virginia).~~
14. ~~A general discussion of reliability impacts including:~~
- a. ~~A description of interconnection requirements and needed interconnection facilities.~~
  - b. ~~Any such facilities shall be depicted on a topographic map. A description of the potential impact of the proposed facility on the interconnected system. Discussion should identify and summarize any system impact studies or proposed studies.~~
  - c. ~~A description of anticipated services that may be provided to any transmission service provider or local distribution company, including associated costs and benefits. A discussion of existing and expected generation reserves in the region and the impact of the proposed facility on such reserves.~~
15. A discussion of safety measures the applicant will implement, including fire and explosion protection, detection and mitigation measures, and an emergency response plan, as well as a discussion of whether such measures are compliant with all applicable codes and standards.
16. A discussion of the projected useful life of the energy storage facility, including known or projected performance degradation, roundtrip efficiency, and the proposed plan for and cost of decommissioning at the end of the facility's useful life.
17. ~~A discussion of whether the proposed facility is not contrary to the public interest. The discussion shall include, but is not limited to, an analysis of any reasonably known impacts the proposed facility may have upon reliability of service to, and rates paid by,~~

~~customers of any regulated public utility providing electric service in the Commonwealth.~~

- 18. Any application that fails to conform to the requirements shall be incomplete. No action shall be taken on any application until deemed complete and filed.
  - 19. ~~Upon receipt of a complete permit application pursuant to this section, the commission shall enter an order providing notice to appropriate persons and an opportunity to comment on the application.~~ The commission shall issue a permit for construction and operation of the energy storage facility upon finding the applicant satisfies the requirements established by this section. Construction and operation of an energy storage facility in the Commonwealth with an energy storage power rating of less than ~~100 kilowatts~~ 20 megawatts may be undertaken without complying with the filing requirements established by this section. Persons desiring to construct and operate such facilities shall (i) submit a letter stating the location, size, and technology of the energy storage facility to (a) the Director of the commission's Division of Public Utility Regulation, and (b) the utility in whose certificated service territory the energy storage facility is located: and (ii) comply with all other requirements of federal, state, and local law.
- D. In addition to the requirements of this section, each person seeking to operate an energy storage facility must complete either the interconnection process required by the commission's Regulations Governing Interconnection of Small Electrical Generators and Storage (20VAC5-314) or any federally approved process established by the regional transmission organization.
  - E. Within 30 days of any transfer or assignment of an energy storage facility for which a permit was granted by the commission, the permit holder shall notify the commission and the utility in whose certificated service territory the energy storage facility is located of such transfer or assignment. The notice shall include: (i) the date of transfer or assignment: (ii) the information required in subdivision C 1 through C 5 of this section for the new permit holder: and (iii) a declaration by the new permit holder that it agrees to abide by all initial and continuing requirements of the permit.
  - F. Any person receiving a permit to operate an energy storage facility in the Commonwealth pursuant to this section shall comply with all initial and continuing requirements of the commission's permitting process. Should the commission determine, upon complaint of any interested person, the Attorney General, upon staff motion, or its own motion, that a permitted operator of an energy storage facility has failed to comply with any of the requirements of this section or a commission order, the commission may, after providing due notice and an opportunity for a hearing, suspend or revoke the permit or take any other actions permitted by law or regulations as it may deem necessary to protect the public interest.

**20VAC5-335-90. Licensing of mass-market energy storage aggregators.**

- A. ~~Other than a Phase I or Phase II Utility, each person seeking to conduct business as an energy storage aggregator~~ each mass market energy storage aggregator or marketing representative for a mass market energy storage aggregator shall obtain a license from the commission prior to commencing operations.

- B. Each person applying for a license to conduct business as an energy storage aggregator shall file an application with the clerk of the commission. If the applicant becomes aware of any material changes to any information while the application is pending, the applicant shall inform the commission of such changes within 10 calendar days. Applications shall include the following information:
1. Legal name of the applicant as well as any trade name.
  2. A description of the applicant's authorized business structure, identifying the state authorizing such structure and the associated date (e.g., if incorporated, the state and date of incorporation; if a limited liability company, the state issuing the certificate of organization and the date of issuance).
  3. Name and business addresses of all principal corporate officers and directors, partners, and LLC members, as appropriate.
  4. Physical business addresses and telephone numbers of the applicant's principal office and any Virginia office location or locations.
  5. Whether the applicant is an affiliate of a Phase I or Phase II Utility. If so, the application shall further provide a description of internal controls the applicant has designed to ensure that it and its employees, contractors, and agents that are engaged in the (i) merchant, operations, transmission, or reliability functions of the electric generation systems, or (ii) customer service, sales, marketing, metering, accounting or billing functions, do not receive information from the utility or from entities that provide similar functions for or on behalf of the utility as would give the affiliated energy storage aggregator an undue advantage over non-affiliated energy storage aggregators.
  6. A list of states in which the applicant or an affiliate conducts business as an energy storage aggregator, the names under which such business is conducted, and a description of the businesses conducted.
  7. Toll-free telephone number of the applicant's customer service department.
  8. Name, title, address, telephone number, and e-mail address of the applicant's liaison with the commission. Name, title, and address of the applicant's registered agent in Virginia for service of process.
  9. If a foreign corporation, a copy of the applicant's authorization to conduct business in Virginia from the commission or if a domestic corporation, a copy of the certificate of incorporation from the commission.
  10. Sufficient information to demonstrate, for purposes of licensure with the commission, financial fitness commensurate with the service or services proposed to be provided.
  11. Applicant shall submit the following information related to general financial fitness:
    - a. If available, applicant's audited balance sheet and income statement for the most recent fiscal year and published financial information such as the most recent Securities and Exchange Commission forms 10-K and 10-Q. If not available, other financial information for the applicant or any other entity that provides financial resources to the applicant.
    - b. If available, proof of a minimum bond rating (or other senior debt) of "BBB-" or an equivalent rating by a major rating agency, or a guarantee with a guarantor possessing a credit rating of "BBB-" or higher from a major rating agency. If not

available, other evidence that will demonstrate the applicant's financial responsibility.

12. The name of the utility certificated to provide service in the area in which the applicant proposes to provide service, the type of service or services the applicant proposes to provide, and the class of customers to which the applicant proposes to provide such services.
13. The following information related to the applicant's fitness to operate as an energy storage aggregator:
  - a. Disclosure of any (i) civil, criminal, or regulatory sanctions or penalties imposed or in place within the previous five years against the company, any of its affiliates, or any officer, director, partner, or member of an LLC or any of its affiliates, pursuant to any state or federal law or regulation: and (ii) felony convictions within the previous five years, which relate to the business of the company or to an affiliate, of any officer, director, partner, or member of an LLC.
  - b. Disclosure of whether any application for license or authority to conduct the same type of business as it proposes to offer in Virginia has ever been denied, and whether any license or authority issued to it or an affiliate has ever been suspended or revoked and whether other sanctions have been imposed.
  - c. If the applicant has engaged in the provision of energy storage aggregation in Virginia or any other state, a report of all instances of violations of reliability standards that were determined to be the fault of the applicant, including unplanned outages, failure to meet service obligations, and any other deviations from reliability standards during the previous three years. The report shall include, for each instance, the following information: (i) a description of the event; (ii) its duration; (iii) its cause; (iv) the number of customers affected; (v) any reports, findings or issuances by regulators or electric and natural gas system reliability organizations relating to the instance; (vi) any penalties imposed: and (vii) whether and how the problem has been remedied.
14. A \$250 registration fee payable to the commission.
15. A discussion of the proposed use or uses of the aggregated resources, including the nature of the intended participation in wholesale electric markets, if any.
16. Sufficient information to demonstrate technical fitness commensurate with the service to be provided, to include:
  - a. The applicant's experience.
  - b. Identity of applicant's officers and key managers with direct responsibility for the business operations conducted in Virginia and their experience in the provision of storage aggregation.
  - c. Documentation of the applicant's membership or participation in regional reliability councils or regional transmission organizations, if any.
  - d. Billing service options the applicant intends to offer and a description of the applicant's billing capability including a description of any related experience.
17. A copy of the applicant's dispute resolution procedure.
18. The standards of conduct to which the applicant adheres or agrees to adhere to.

An officer with appropriate authority, under penalty of perjury, shall attest that all information supplied on the application for licensure form is true and correct, and that, if licensed, the applicant will abide by all applicable regulations of the commission.

- C. Any application that fails to conform to the requirements herein, shall be regarded as incomplete. No action shall be taken on any application until deemed complete and filed.
- D. Upon receipt of an application for a license to conduct business as an energy storage aggregator, the commission shall enter an order providing notice to appropriate persons and an opportunity for comments on the application. The commission shall issue a license to conduct business as an energy storage aggregator upon finding the applicant satisfies the requirements established by this section.
- E. A license to conduct business as an energy storage aggregator granted under this section is valid until revoked or suspended by the commission after providing due notice and an opportunity for a hearing or until the energy storage aggregators abandons its license.
- F. An energy storage aggregator shall comply with all initial and continuing requirements of the commission's licensure process and any reasonable registration processes required by the utility or utilities in whose certificated service territory the energy storage aggregator intends to operate. Should the commission determine, upon complaint of any interested person, the Attorney General, upon staff motion, or its own motion that an energy storage aggregator has failed to comply with any of the requirements of this section or a commission order, the commission may, after providing due notice and an opportunity for a hearing, suspend or revoke the energy storage aggregator's license or take any other actions permitted by law or regulations as it may deem necessary to protect the public interest.

**20VAC5-335-100. Energy storage aggregator registration with utility.**

- A. An energy storage aggregator shall submit to the utility or utilities in whose certificated service territory it intends to operate proof of licensure from the commission to provide energy storage aggregation services in the Commonwealth. An energy storage aggregator shall provide notice of any suspension or revocation of its license to the utility or utilities upon issuance of the suspension or revocation by the commission.
- B. An energy storage aggregator and the utility or utilities shall exchange the names, telephone numbers, and e-mail addresses of appropriate internal points of contact to address operational and business coordination issues, and the names and addresses of their registered agents in Virginia.

**20VAC5-335-110. Marketing by energy storage aggregators.**

- A. An energy storage aggregator shall provide accurate, understandable information in any advertisements, solicitations, marketing materials, or customer service contracts, in a manner that is not misleading. Marketing material found misleading by the commission will be withdrawn.
- B. Customer service contracts shall include:
  1. Explanations of the price for the energy storage aggregator's services or, if the exact price cannot feasibly be specified, an explanation of how the price will be calculated;
  2. Explanations of how the customer will be compensated for the value of their energy storage;

3. Length of the service contract, including any provisions for automatic contract renewal;
4. Provisions for termination by the customer and by the energy storage aggregator;
5. A statement of any minimum contract terms, minimum or maximum storage requirements, minimum or fixed charges, and any other charges;
6. Applicable fees including, but not limited to, start-up fees, cancellation fees, late payment fees, and fees for checks returned for insufficient funds;
7. A notice of any billing terms and conditions;
8. A toll-free telephone number and an address for inquiries and complaints;
9. In a conspicuous place, confirmation of the customer's request for enrollment and the approximate date the customer's service shall commence;
10. A notice that, upon request by the customer, the energy storage aggregator shall provide a copy of its dispute resolution procedure; and
11. A notice that, upon any change in the terms and conditions of the contract, including any provisions governing price or pricing methodology, or assignment of the contract to another energy storage aggregator, the energy storage aggregator shall communicate such changes to the customer at least 30 days in advance of implementing such changes.

**20VAC5-335-120. Confidentiality.**

Where any application filed under this chapter, including any supporting documents or pre-filed testimony, contains information that the applicant asserts is confidential, the filing may be made under seal and accompanied by a motion for a protective order or other confidential treatment in accordance with SVACS-20-170 of the commission's Rules of Practice and Procedure (5VAC5-20).

**20VAC5-335-130. Waiver.**

- A. Any request for a waiver of any provision in this chapter may be granted upon such terms and conditions as the commission may impose.
- B. For good cause shown, any Phase I and Phase II Utility may request a waiver of the commission's Rules Governing Utility Promotional Allowances (20VAC5-313) for any proposed programs or incentives related to energy storage set forth in 20VAC5-335-50 through 20VAC5-335-70 of this chapter.
- C. For good cause shown, any Phase I and Phase II Utility may request a waiver of the commission's Regulations Governing the Functional Separation of Incumbent Electric Utilities under the Virginia Electric Utility Restructuring Act (20VAC5-202).