

July 29, 2020

VIA ELECTRONIC FILING

Joel H. Peck, Clerk  
c/o Document Control Center  
State Corporation Commission  
1300 E. Main Street  
Richmond, VA 23219



**MDV-SEIA**



Re: 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

Dear Mr. Peck:

Please accept this letter as the Comments of the Maryland-DC-Delaware-Virginia Solar Energy Industries Association (“MDV-SEIA”) and the Solar Energy Industries Association (“SEIA”) regarding the rules and regulations governing the deployment of energy storage pursuant to § 56-585.5 E 5 of the Code of Virginia<sup>1</sup>. MDV-SEIA is a regional chapter of the national Solar Energy Industries Association, a trade association supporting the solar energy industry. MDV-SEIA’s members sell, integrate, install, maintain, and finance solar energy equipment for residential, commercial, and institutional customers throughout Virginia.

On behalf of Virginia’s solar industry, I appreciate the Commission’s thoughtful consideration of the foregoing Comments.

Sincerely,

/s/ David Murray

David Murray

Executive Director  
Maryland-DC-Delaware-Virginia Solar Energy  
Industries Association

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<sup>1</sup> The comments expressed in this filing represent the position of MDV-SEIA AND SEIA as an organization but may not represent the views of any particular member of MDV-SEIA AND SEIA. For information about MDV-SEIA AND SEIA and its membership, please visit MDV-SEIA AND SEIA's website at [www.mdvseia.org](http://www.mdvseia.org).

**COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION**

**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**

**July 29, 2020**

**JOINT COMMENTS OF THE MARYLAND-DC-VIRGINIA SOLAR ENERGY INDUSTRIES ASSOCIATION AND SOLAR ENERGY INDUSTRIES ASSOCIATION**

Pursuant to the Commonwealth of Virginia State Corporation Commission’s (“Commission”) Order Establishing Proceeding and seeking comment in Case No. PUR-2020-00120, the Maryland-DC-Virginia Solar Energy Industries Association (“MDV-SEIA”) and Solar Energy Industries Association (“SEIA”) respectfully submit these comments for the Commission’s consideration. MDV-SEIA and SEIA also support comments submitted by the Energy Storage Association in this docket. 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 150 member companies employing nearly 10,000 local residents. The vast majority of our members currently offer energy storage solutions or are actively exploring how to best couple solar with storage for their customers. In our comments below, MDV-SEIA underscores the key programs and regulatory reforms needed to ensure that the energy storage target required under the 2020 Virginia Clean Economy Act (SB 851) provides the greatest benefit and savings for the Commonwealth.

The Solar Energy Industries Association (SEIA) is the national trade association for the solar industry. 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.

## **I. GENERAL COMMENTS**

Virginia marks the seventh state to recognize the importance of complementing its clean energy policies with an energy storage target. However, not all of the targets have resulted in the type of energy storage deployment and benefits that the legislation had intended. Several elements of the energy storage target required under SB 851 (2020) were left for the Commission to determine through this regulatory proceeding. It is here in the implementation of regulations of the program that the key issues of program design will determine not only whether the energy storage target is realized, but also whether the target will drive the greatest benefits to ratepayers. The states that have had the most success in driving a robust energy storage market have been the ones that developed specific programs to support the energy storage target. MDV-SEIA and SEIA underscore the need for thoughtful consideration of programs, particularly to ensure that a variety of project applications, sizes and technologies are deployed.

Furthermore, successful states have formalized the energy storage target into utility planning processes in order to ensure that the deployment of storage matches the system needs and supports other resources and grid objectives. Virginia is not the first vertically integrated state to develop an energy storage target, and much can be gleaned from the experience of Nevada in updating regulations and incorporating the energy storage target into the integrated resource planning (“IRP”) process. Nevada’s 1,000 MW energy storage fits nicely into the NV

Energy’s integrated resource planning process. MDV-SEIA and SEIA respectfully urge the Commission to approach this proceeding with an eye towards necessary reforms to the IRP process, as well as other utility planning processes.

## **II. ANSWERS TO QUESTIONS**

### *1. What interim targets should be established for meeting the targets set forth in Code § 56-585.5 E 1 for APCo?*

While SB 851 sets an energy storage target for both Appalachian Power Company (“APCo”) and Virginia Electric and Power Company (“Dominion”) for 2035, it does identify the need for the Commission to set interim targets. MDV-SEIA and SEIA underscore the importance of creating interim targets that enable the industry to make the investment in building out their business presence in the Commonwealth, to begin developing the types of projects that will help the Commonwealth realize its target, and to develop a robust and deep market to provide competitive offerings. Developing the storage market in the state takes significant investment, and if there is no clarity that the utilities are required to make progress starting today towards meeting those targets, companies are very likely to turn their investments to states with more near term storage needs. As such, we recommend that APCo’s interim cumulative targets be set as follows: 100 MW by December 31, 2022 and 200 MW by December 31, 2025, and 300 MW by December 31, 2028. The triennial interim targets are intended to align with the integrated resource planning cadence.

### *2. What interim targets should be established for meeting the targets set forth in Code § 56-585.5 E 2 for Dominion?*

For the same reasons, we recommend the following cumulative energy storage targets, inclusive of pumped hydro, for 400 MW by end of 2023 and 900 MW by end of 2026, and 1,500 by the end of 2029. While MDV-SEIA and SEIA are encouraged by the timelines that were set

forward in Dominion's 2020 IRP submitted to the Commission on May 1, 2020, we note that given the nascent nature of the energy storage market in Virginia, certain unexpected challenges may delay the interconnection, permitting and agreement negotiations between developers and the utilities. As such, we propose a 2023 target that provides not only the opportunity for potential delays, but also enables the utilities to capitalize on federal incentives available to certain project configurations.

3. *What updates to existing utility planning should be adopted to facilitate the achievement of the Energy Storage Targets?*

MDV-SEIA and SEIA recommend that the Commission revise the regulations governing integrated resource planning to incorporate the energy storage target and reform the process in which the IRP is conducted to better ensure that energy storage is modeled in a way that best reflects its value to the system. MDV-SEIA and SEIA support comments submitted by the Energy Storage Association in this docket. Specifically, MDV-SEIA and SEIA underscore the need for incorporating up-to-date price assumptions for technologies such as energy storage and renewable energy resource in the IRP process, and encourages the Commission to consider a requirement for sub-hourly modeling and a mechanism to capture the value of flexible capacity as proposed by ESA. Additionally, an all-source RFP requirement within the IRP is critical to support not only the price inputs into the IRP, but also to allow all technologies to compete with traditional resources to provide system needs such as peaking capacity or transmission.

Additionally, MDV-SEIA and SEIA believe that incorporation of energy storage to the utility distribution and transmission planning process is merited. The legislation specifically calls for consideration of non-wires alternatives, and the best approach to that is to consider energy storage as a tool in the toolbox for distribution and transmission planning.

4. *What updates to existing utility procurement rules should be adopted to facilitate the achievement of the Energy Storage Targets?*

MDV-SEIA and SEIA commend Dominion and APCo for recognizing the importance of including energy storage in their recent renewable energy requests for proposals. While we recognize this is an important first step, as we noted earlier in our comments, the best way to realize a variety of energy storage applications, project sizes and configurations is to focus on the system need. As such, MDV-SEIA and SEIA would like to see more all-source requests for proposals that focus on a specific need (e.g. peaking capacity, distribution deferral), in addition to the solicitations we are already seeing from the utilities.

5. *What competitive solicitation-related programs and mechanisms to deploy energy storage should be included in the required regulations?*

MDV-SEIA and SEIA recognize that many of these RFPs will result in a unique Power Purchase Agreement or Services Agreement between the utility and the developers. However, we do believe there is an opportunity for the utilities, the Commission staff, and stakeholders to review a pro forma PPA as part of this and future dockets related to energy storage.

6. *What behind-the-meter incentives to deploy energy storage should be included in the required regulations?*

The legislation recognizes the importance of providing customers with an opportunity to deploy energy storage systems by requiring that at least 10% of the total energy storage target be met through the installation of behind-the-meter energy storage systems. MDV-SEIA and SEIA support this important requirement. Several states have implemented programs to support the deployment of behind-the-meter storage resources, and MDV-SEIA and SEIA respectfully urge the Commission to incorporate at least one such program in these regulations in order to make

sure that barriers to behind-the-meter storage are removed and the stated sub-target of the legislation is achieved.

There are several programs currently operating or under consideration in New Hampshire, Massachusetts, Rhode Island, Vermont, New York, Connecticut and Maryland. In terms of cost effectiveness, these programs leverage a customer's private capital investment in deploying resources on their premises and provides compensation to those customers that are aligned with the savings they are providing to the entire system, and therefore all ratepayers. These programs are not incentive programs, where grants or rebates are provided to customers deploying assets, though such programs are helpful in developing in-state energy storage industries and for driving down the cost of the new technology through scale. Rather, these programs are compensating customers for services provided to the system. One such program is the Bring Your Own Device ("BYOD") program currently available for Green Mountain Power in Vermont, and Liberty and Eversource customers in New Hampshire. Under such a program, customers are able to provide traditional grid services and peak demand reduction benefits to the utility and are compensated for the value they provide through an on-bill credit. The savings provided by customer-sited storage comes through the deferment of traditional distribution investment that would have otherwise been needed. The savings are realized to customers in several ways. Although not a formal definition, these BYOD programs are typically associated with mass market customers.

Another program offered in Massachusetts by Eversource and National Grid is the ConnectedSolutions (Targeted/Daily Dispatch program). These programs recognize that shifting energy from periods of low demand on the system to periods of high stress to the system provides opportunities to reduce costs and emissions of meeting peak demand. "Daily Dispatch"

programs compensate storage resources based on performance during peak period dispatches upwards of \$200/kw-yr. Importantly, the program is available to customers for a five-year term, which provides certainty of incoming revenue streams that is critical for the financing of projects. Additional consideration should be made to providing incentives for behind-the-meter resources at critical facilities or other vulnerable areas. California's Self-Generation Incentive Program provides a template worth considering by allocating funding for equity and resilience.

*7. What non-wires alternatives programs to deploy energy storage should be included in the required regulations?*

MDV-SEIA and SEIA support the inclusion of energy storage non-wires alternatives programs to support the deployment target and recommends the Commission consider expanding the current storage pilot program created under Senate Bill 966 (2018). MDV-SEIA and SEIA members have found in other jurisdictions that in order for NWA programs to be successful, there must be a clear framework and guideline provided to the utilities in order to ensure success. States such as California and New York have been able to drive successful NWA deployments that have resulted in significant ratepayer savings because they have implemented robust processes. Including the evaluation of NWA opportunities in distribution planning processes from the start is essential as well as a standard framework for information sharing with the developer community are key elements. Information that the developer community needs to evaluate the viability of a particular opportunity includes the number of calls per year, duration of calls, lead time for calls, time of year when calls can occur, MW and MWh needed, and cost of traditional wires solution.

MDV-SEIA and SEIA welcome the opportunity to work with the Commission on incorporating these practices into the distribution planning process in the Commonwealth. MDV-SEIA and SEIA encourage the Commission to require that the utilities create an annual cycle that



is an extension of the utilities' existing planning processes. This cycle should include: 1) identification, as part of the utilities' existing annual distribution planning processes, of proposed distribution and state-jurisdictional transmission projects which meet Commission defined screens for being potentially deferrable through a non-wires alternative; 2) a consultation process with an advisory group comprised of ratepayer advocates, DER developers, Commission staff, and other interested parties; 3) a request to the commission for approval to put identified projects out to bid, including feedback from the advisory group; 4) upon approval, a solicitation to contract with DERs via a technology-neutral standard contract. California's Distribution Infrastructure Deferral Framework developed within the California Public Utilities Commission's Distribution Resources Planning proceeding (R.14-08-013) is a strong model for Virginia to adopt and adapt.

*8. What peak demand reductions programs to deploy energy storage should be included in the required regulations?*

The BOYD and Daily/Targeted Dispatch programs discussed in the answer to Question #6 can easily be expanded to front-of-the-meter distribution and transmission connected systems in order to encourage shifting renewable energy from periods of low demand to periods of high demand (which correlate to higher emissions and higher costs). Under such programs, charging and discharging windows would be identified and systems could receive compensation for the benefits the shifting can provide.

*9. Should the regulations mandate or limit the deployment of any particular type of energy storage resource or facility? If so, please explain.*

The key to an effective energy storage program that provides the greatest benefit to ratepayers and the state is to facilitate multiple applications, sizes, and locations. To the extent that any one system size or technology type would dominate the entire target, MDV-SEIA and

SEIA respectfully recommend that the Commission seek ways to avoid such a situation. The legislation made some effort in addressing this challenge by limiting one project to no more than 500 MW of the total storage target. MDV-SEIA and SEIA respectfully recommend the Commission consider sub-categories of the target by point of interconnection. Given that the legislation already includes a behind-the-meter target of 10%, the Commission may consider adopting a separate minimum requirement for transmission-connected and distribution-connected energy storage to ensure a diversity of project types and applications. This was employed successfully in California's energy storage program. Furthermore, MDV-SEIA and SEIA encourage the Commission to consider including a safety valve in the interim targets in addition to the above mentioned approach. This safety valve would ensure that if Dominion or APCo propose a single storage project or facility that constitutes more than 85% of the next interim target, that target should be increased by an equivalent amount.

*10. Should the required regulations apply to non-utility energy storage? For example, should the regulations include a mechanism by which the Commission can issue permits for non-utility-owned storage?*

The energy storage target required in SB 851 is intended to break down barriers to energy storage deployment in the Commonwealth. MDV-SEIA and SEIA respectfully recommend that all regulations related to non-utility energy storage be developed with the same legislative intent in mind. As such, MDV-SEIA and SEIA do not see the need to require additional regulations beyond what the legislation calls for to govern non-utility energy storage. However, clarity should be provided to ensure that non-utility energy storage in the Commonwealth has a path forward for permitting and interconnecting onto the system.

*11. Code § 56-585.5 E refers to "energy storage," "energy storage resources," "energy storage facilities," "energy storage project," and "energy storage capacity." The statute provides no definition of any of these terms.*

- a. *Should the regulations include a definition for each term? If so, please provide necessary definition(s).*

MDV-SEIA and SEIA propose the following definitions for the Commission's consideration to be included in the regulations. We note that clarity around the definition in these regulations is important. In particular, we note that in the context of this legislation, the term capacity relates to the energy storage target, and our definition aims to meet the intent of the term in the context of the legislation.

"Energy storage" means any commercially available technology that is capable of retaining energy, storing the energy for a period of time and delivering the energy after storage, including, without limitation, by chemical, thermal or mechanical means.

"Energy storage resources" and "energy storage facilities" means a project that employs energy storage technology.

"Energy storage capacity" is the installed rated power of the energy storage facility.

- b. *Does each included term require its own set of regulations? Why or why not?*

MDV-SEIA and SEIA offer these definitions to provide clarity in the context of Senate Bill 851 and the language in the legislation related to energy storage procurement. It is MDV-SEIA and SEIA's position that these definitions will ensure the Commission implements the intent of the legislation. We do not take a position on whether these require their own state of regulations.

12. *Code § 56-585.5 E requires Dominion and APCo to "petition the Commission for necessary approvals to construct or acquire new, utility-owned energy storage resources . . . ." (emphasis added). Code § 56-585.1 E 5 provides in part that: After July 1, 2020, at least 35 percent of the energy storage facilities placed into service shall be (i) purchased by the public utility from a party other than the public utility or (ii) owned by a party other than a public utility, with the capacity from such facilities sold to the public utility.*

- a. *Does the energy storage required by Code § 56-585.5 E count toward the targets set forth in Code § 56-585.5 E 1 and E 2, or is it incremental thereto?*

The energy storage required by Code § 56-585.5 E 5 should be applied to the targets set forth in Code § 56-585.5 E 1 and E 2, and is not incremental.

- b. *Should this requirement be incorporated in some way into the interim targets to be adopted for Dominion and APCo?*

MDV-SEIA and SEIA respectfully recommend that in order to honor the intent of the legislation, the breakdown of utility owned and third-party owned should be met for each interim target as well as the final cumulative target in 2035. The requirement was put in place in order to ensure a diverse and robust energy storage market in the Commonwealth, and as such the requirements must be applied throughout the development of the market, not at the final date of the program.

- c. *Should the regulation contain any limitation on the acquisition of energy storage facilities or purchases of capacity from utility-affiliated interests?*

MDV-SEIA and SEIA underscore that the intent of the legislation was to attract regional and national companies offering a wide variety of energy storage projects, creating jobs and economic benefits to the state. As such, there must be a mechanism to ensure that the program provides such an opportunity and that the deployment of projects is not dominated by any one entity, including utility-affiliated interests. Moreover, the 65% ceiling for Utility ownership should only be met if utility ownership up to this percentage is cost effective and net beneficial to ratepayers as compared to 3<sup>rd</sup> party ownership.

13. *Code § 56-585.5 F permits recovery of costs of, inter alia, "energy storage facilities, that are constructed or acquired by a Phase I or Phase II Utility after July 1, 2020 "and costs of "energy storage facilities, purchased by the utility from persons other than the utility through agreements after July 1, 2020[.]" Is there a difference between energy storage*

*facilities that are "acquired" by a utility and those that are "purchased" by a utility that should be addressed by the regulation? Why or why not?*

It is MDV-SEIA and SEIA's interpretation that "constructed" and "acquired" are projects where the energy storage physical equipment is ultimately owned by the utility (the maximum of 65% of all the storage targets as is described in Code § 56-585.5 E). Conversely, "Purchased" projects are considered those third-party owned projects that the utility contracts with (the 35% minimum described in Code § 56-585.5 E). MDV-SEIA and SEIA believe there is good reason for the Commission to provide even greater specificity on the term "purchased" in order to ensure the legislature's intent that those projects be owned by a 3<sup>rd</sup> party. Under the current definition, it is unclear whether an agreement to sell a third-party owned asset to Dominion or APCo would be considered a "purchase." MDV-SEIA and SEIA note that it would be prudent to clarify the type of purchase that would be possible under the third-party owned section, specifically either a power purchase agreement ("PPA"), energy storage services agreement, or tolling agreement rather than using the term "agreement." For the avoidance of doubt, we consider PPA, energy storage services agreements, tolling agreements or any type of services agreement where a 3<sup>rd</sup> party owns the physical energy storage equipment and contracts with the utility falls under the "purchased" bucket.

*14. What additional provisions should be included in the required regulations?*

No response.

### **III. CONCLUSION**

MDV-SEIA and SEIA appreciate the opportunity to provide this input in the development of regulations to support the deployment target required in SB 851. As mentioned in our comments above, we generally support the comments of the Energy Storage Association.

We look forward to working with the Commission and other stakeholders to develop effective regulations and program designs that will ensure a variety of project sizes, applications and configurations.