

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

<b>Building for the Future Through</b>	)	<b>RM21-17-000</b>
<b>Electric Regional Transmission</b>	)	
<b>Planning and Cost Allocation and</b>	)	
<b>Generator Interconnection</b>	)	

**WATT COALITION REPLY COMMENTS  
November 30, 2021**

The WATT Coalition (“WATT”) appreciates the opportunity to submit reply comments on the Federal Energy Regulatory Commission’s (“the Commission”) Advanced Notice of Proposed Rulemaking (ANOPR) in the above-captioned proceeding.

**I. Ninety commenters support inclusion of Grid-Enhancing Technologies (GETs) in transmission planning**

90 parties in the docket specifically recommended that GETs be incorporated into long-term planning and/or interconnection processes. We agree with this broad consensus and recommend that the Commission proceed with specific directives in either a transmission planning rule or interconnection rule requiring the consideration of GETs.

The depth and breadth of support for GETs is broad. Supporters include state regulators, market monitors, ISO/RTOs, transmission owners, retail, residential, commercial, and industrial consumer groups, wholesale consumer interests including transmission-dependent utilities, state energy offices, environmental NGOs, and clean energy industry organizations. The appendix to these comments provides a list of parties that recommended inclusion of GETs, along with citations to the specific point in their comments.

**II. Response to claims regarding operational vs planning role of GETs**

In response to comments by some parties, including EEI which stated “GETs currently serve an operational rather than planning purpose, it is not appropriate to require that these GETs be incorporated into the long-term planning processes,”<sup>1</sup> that is not a legitimate reason not to consider and apply GETs where appropriate. No solution, including HVAC transmission, will be the best solution for all needs. The planning process should determine the best technology to meet the need. We agree instead with AEP, National Grid, and other utilities, that GETs should be fully considered in the planning process. AEP stated: “[P]ortfolio-building should include consideration of non-transmission alternatives and grid-enhancing technologies.”<sup>2</sup> National

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<sup>1</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=EEE0587B-0668-C1B0-9C83-7C7978D00000> at 38-39.

<sup>2</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=0295ADC1-72F0-C9D2-9DA2-7C74C0400000> at 16.

Grid stated: “energy storage and any other relevant Grid-Enhancement Technologies should be considered as potential solutions in regional transmission planning processes, thereby potentially avoiding the need for more expensive and longer lead-time upgrades.”<sup>3</sup> We also agree with Potomac Economics on this point: “GETs will likely serve both the planning process in the short term by enabling interim solutions during construction of transmission projects and other transmission outages and in the longer-term as alternatives or complements to traditional projects.”<sup>4</sup> Some GETs fall under the Flexible AC Transmission System (FACTS) designation, similar to series capacitors and phase-shifting transformers, all of which are cost-recovered infrastructure investments that have historically been almost exclusively deployed to resolve planning horizon-identified constraints. While these grid assets may also be dispatched on operational time-scales to resolve varying issues, they are listed as viable network solutions in relevant tariff sections, providing clarity and certainty for utilities on their cost recovery status. As such, GETs too should be included in these sections as planning-level solutions, due to their cost-effectiveness and lifespan (40+ years).

Furthermore, the fact that “GETs currently serve an operational” purpose is precisely a reason to require their incorporation into long-term planning processes. Planning efforts should be consistent with and account for operational practices geared towards similar objectives, to ensure that planning projects meet legitimate planning needs. For example, there are instances in which actions in the operational timeframes, including the use of GETs, fully relieve a given congestion pattern or overload. In those cases, the planning process should capture and identify those operational solutions rather than propose capital projects to solve needs that would not materialize in operations.

### **III. GETs in the interconnection process**

GETs have particular application in the interconnection process, as we stated in our initial comments, and some parties provided some specific recommendations that we support.

We agree with NARUC’s suggestion that, “the Commission should allow interconnecting customers the option of using ATTs over wires where appropriate,”<sup>5</sup> and Potomac Economics, which stated “GETs should also be considered as alternatives to reduce interconnection costs and provide shorter-term solutions while longer term projects are identified and completed.”<sup>6</sup> Specifically, we agree with Pine Gate’s suggestion on interconnection: the interconnection customer should “have the ability to consult with the transmission owner and, if applicable, the RTO/ISO to request the consideration and study of the deployment of GETs in addition, or as a substitution to, carrying out a traditional transmission upgrade or addition. The transmission owner would then determine whether to deploy the GETs. If the transmission owner elects not

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<sup>3</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=03F7E29F-2EE0-CFD8-9F6E-7C79C8C00000> at 32-33.

<sup>4</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=DC3CFBE2-3905-C65D-8FAF-7C7A4D100000> at 8.

<sup>5</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 24.

<sup>6</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=DC3CFBE2-3905-C65D-8FAF-7C7A4D100000> at 8-9.

to deploy the GETs, the interconnection customer would then have the right to appeal that determination to the Commission.”<sup>7</sup>

We also agree with Pine Gate, EDF Renewables, and others about how GETs can help to bridge needs in the interconnection process. Pine Gate stated “Renewable resources can be developed over a relatively short period (i.e., months to years), while transmission infrastructure takes much longer (i.e., multiple years and in some instances a decade). GETs can bridge this gap and enable large amounts of renewable resources to interconnect to the transmission system relatively quickly.”<sup>8</sup>

#### **IV. GETs as a subject of transmission monitoring**

We agree with parties who suggest that reviewing the incorporation of GETs would be a valuable function for the monitor. For example, the Arizona Corporation Commission stated: “The independent transmission monitor could leverage the information collected to provide feedback on various issues such as the transmission provider’s consideration of Grid-Enhancing Technologies. This information could be used by the Commission and state commissions while contemplating the establishment of just and reasonable rates.”<sup>9</sup>

#### **V. Additional comments to highlight**

We provide below a select summary of other notable comments on GETs:

- Certain TDUs: “...it is essential that the Commission require that system optimization and the consideration of Grid-Enhancing Technologies (as well as non-transmission alternatives) to be a formal part of the transmission planning process.”<sup>10</sup>
- Massachusetts DER: “...additional grid enhancing technologies that can reduce the overall cost of transmission, such as devices that enable dynamic line ratings and software tools that helps to reduce system congestion, should be a part of the transmission planning, design, and deployment. These advanced technologies that could help ‘squeeze more out of the transmission system’ are particularly important as new transmission facilities become more and more difficult to site across New England.”<sup>11</sup>
- NARUC: “The planning process needs a clear pathway for consideration of alternative transmission solutions, including grid enhancing technologies, non-transmission technologies, and hybrid programs for efficiency, load control, distributed generation, and storage in the regional planning process.”<sup>12</sup>
- NYISO: “...transmission providers should consider Grid-Enhancing Technologies in interconnection studies to assess whether their deployment can serve as the

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<sup>7</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1178956C-E487-C15E-9EB3-7C74BF500000> at 13.

<sup>8</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1178956C-E487-C15E-9EB3-7C74BF500000> at 11.

<sup>9</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=C685E81E-FF9D-CA69-866C-7C7668A00000> at 6.

<sup>10</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=76CB7B9A-7FF4-CB91-AD65-7C797E200000> at 22.

<sup>11</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=572C5F46-A6AF-CA39-9D29-7C75EEF00000> at 20.

<sup>12</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=525BF1AE-E619-CA0B-9E78-7C76BFA00000> at 9.

appropriate upgrade to mitigate the reliability or deliverability issue prompting the need for an upgrade.”<sup>13</sup>

- PJM: “...the Commission should require RTO/ISOs and non-RTO/ISO planning authorities to develop a robust process to account for the potential for grid-enhancing technologies to be integrated into the planning processes as part both near-term and long-range expansion options before requiring that new greenfield transmission be built.”<sup>14</sup>
- Potomac Economics: “GETs may not receive the same incentives to be utilized as traditional transmission projects so transmission monitors may need to play a role to ensure they are considered properly in the planning process. GETs should also be considered as alternatives to reduce interconnection costs and provide shorter-term solutions while longer term projects are identified and completed.”<sup>15</sup>
- TAPS: “...non-wires solutions, such as GETs, can reduce costs to consumers by enabling more efficient use of the existing system or enhancing new projects.”<sup>16</sup>
- US DOE: “Consideration of grid-enhancing technologies should be required in regional transmission planning studies and in interconnection studies. This will facilitate the more efficient use of existing transmission assets and reduce or delay the need for transmission expansion.”<sup>17</sup>

Signed,

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<sup>13</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=36BF69E5-E61F-C711-ACA1-7C79C0F00000> at 50.

<sup>14</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8F7FF153-2DF6-CB73-A083-7C7689E00000> at 63.

<sup>15</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=DC3CFBE2-3905-C65D-8FAF-7C7A4D100000> at 8-9.

<sup>16</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9E6C5830-1A8B-C313-85FD-7C75F9400000> at 19.

<sup>17</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1460C8B3-E842-C0B2-9DCA-7C7693800000> at 48.

## Appendix: List of parties that support including GETS in planning processes

1. 350 New Orleans<sup>18</sup>
2. Acadia Center<sup>19</sup>
3. Advanced Energy Economy<sup>20</sup>
4. Alliant Energy Corporate Services, Inc.<sup>21</sup>
5. American Clean Power Association<sup>22</sup>
6. American Chemistry Council<sup>23</sup>
7. American Council on Renewable Energy<sup>24</sup>
8. American Electric Power Service Corporation<sup>25</sup>
9. American Forest & Paper Association<sup>26</sup>
10. Americans for a Clean Energy Grid<sup>27</sup>
11. Ampacimon<sup>28</sup>
12. Ample, Inc.<sup>29</sup>
13. Attorney General of Maryland<sup>30</sup>
14. Attorney General of the State of Delaware<sup>31</sup>
15. Attorney General of the State of Michigan<sup>32</sup>
16. Attorney General of Vermont<sup>33</sup>
17. Avangrid<sup>34</sup>
18. California Public Utilities Commission<sup>35</sup>
19. CAISO<sup>36</sup>
20. Center for Renewables Integration<sup>37</sup>
21. Coalition of MISO Transmission Customers<sup>38</sup>

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- <sup>18</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.
- <sup>19</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.
- <sup>20</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=D1651334-D884-C35A-9E52-7C76C3700000> at 4.
- <sup>21</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=76CB7B9A-7FF4-CB91-AD65-7C797E200000> at 22.
- <sup>22</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=C346C265-1408-CDED-A4F5-7C76BCA00000> at 59-60.
- <sup>23</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.
- <sup>24</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=13E39BCA-E7A8-CA16-9CC1-7C7687500000> at 23.
- <sup>25</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=0295ADC1-72F0-C9D2-9DA2-7C74C0400000> at 16.
- <sup>26</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.
- <sup>27</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=CB1F7525-6B74-C9BB-910C-7C79EE900000> at 5.
- <sup>28</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.
- <sup>29</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=5E9C6F72-E4E3-C946-9DF3-7C7A4D600000> at 1.
- <sup>30</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.
- <sup>31</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.
- <sup>32</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.
- <sup>33</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.
- <sup>34</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=D46E6F5D-5734-C619-9C13-7C79DB700000> at 12.
- <sup>35</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=395D3699-DCFD-C216-853F-7C7A30500000> at 45.
- <sup>36</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=5913C20B-68FC-CC9B-9F9B-7C7979F00000> at 114.
- <sup>37</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

22. Commonwealth of Massachusetts Department of Energy Resources<sup>39</sup>
23. Connecticut Attorney General<sup>40</sup>
24. Connecticut Department of Energy and Environmental Protection<sup>41</sup>
25. Connecticut Municipal Electric Energy Cooperative<sup>42</sup>
26. Connecticut Office of Consumer Counsel<sup>43</sup>
27. Connecticut Public Utilities Regulatory Authority<sup>44</sup>
28. Conservation Law Foundation<sup>45</sup>
29. Consumers Energy Company<sup>46</sup>
30. CTC Global Corp.<sup>47</sup>
31. DC Attorney General<sup>48</sup>
32. Defenders of Wildlife<sup>49</sup>
33. DTE Electric Company<sup>50</sup>
34. EDF Renewables<sup>51</sup>
35. Electricity Consumers Resource Council<sup>52</sup>
36. Environmental Law and Policy Center<sup>53</sup>
37. Fresh Energy<sup>54</sup>
38. Glass Packaging Institute<sup>55</sup>
39. Heimdall Power<sup>56</sup>
40. Industrial Energy Consumers of America<sup>57</sup>
41. Institute for Policy Integrity at New York University School of Law<sup>58</sup>
42. Lindsey Manufacturing Company<sup>59</sup>

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<sup>38</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.

<sup>39</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=572C5F46-A6AF-CA39-9D29-7C75EEF00000> at 20.

<sup>40</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>41</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>42</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=EFB676CB-3BEE-C830-BD56-7C7A2A200000> at 6.

<sup>43</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>44</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>45</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>46</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=76CB7B9A-7FF4-CB91-AD65-7C797E200000> at 22.

<sup>47</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9782040F-EE29-C77F-9EC0-7C7A32E00000> at 15-16.

<sup>48</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>49</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

<sup>50</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=76CB7B9A-7FF4-CB91-AD65-7C797E200000> at 22.

<sup>51</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=D9084BD1-E9C3-CF42-9F51-7C79F3000000> at 16.

<sup>52</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=96340958-E66D-C956-922B-7C7972B00000> at 9.

<sup>53</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

<sup>54</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>55</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.

<sup>56</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

<sup>57</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.

<sup>58</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=5FA204AD-548C-C585-9E3B-7C76B7000000> at 47.

<sup>59</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

43. LineVision<sup>60</sup>
44. Maine Office of the Public Advocate<sup>61</sup>
45. Maryland Office of People's Counsel<sup>62</sup>
46. Massachusetts Attorney General<sup>63</sup>
47. Massachusetts Municipal Wholesale Electric Company<sup>64</sup>
48. Michigan Public Service Commission<sup>65</sup>
49. Minnesota Attorney General<sup>66</sup>
50. National Association of Regulatory Utility Commissioners<sup>67</sup>
51. National Association of State Energy Officials<sup>68</sup>
52. National Association of State Utility Consumer Advocates<sup>69</sup>
53. National Audubon Society<sup>70</sup>
54. National Wildlife Federation<sup>71</sup>
55. National Grid<sup>72</sup>
56. Natural Resources Defense Council<sup>73</sup>
57. New England States Committee on Electricity<sup>74</sup>
58. New Hampshire Electric Cooperative<sup>75</sup>
59. New Jersey Board of Public Utilities<sup>76</sup>
60. NewGrid<sup>77</sup>
61. Northwest Energy Coalition<sup>78</sup>
62. NYISO<sup>79</sup>
63. Office of the Illinois Attorney General<sup>80</sup>
64. Office of the People's Counsel for the District of Columbia<sup>81</sup>

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<sup>60</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

<sup>61</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>62</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>63</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>64</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=EFB676CB-3BEE-C830-BD56-7C7A2A200000> at 6.

<sup>65</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=0B7BD08F-5569-C795-9F38-7C7970A00000> at 10.

<sup>66</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>67</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=525BF1AE-E619-CA0B-9E78-7C76BFA00000> at 57.

<sup>68</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=756925EB-C6A0-CAAA-A4D9-7C79CE600000> at 2.

<sup>69</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=FB6CE194-40BB-C837-9EFF-7C7A4A800000> at 4.

<sup>70</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

<sup>71</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

<sup>72</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=03F7E29F-2EE0-CFD8-9F6E-7C79C8C00000> at 32-33.

<sup>73</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>74</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=21609FD9-B190-C03C-990C-7C79A9800000> at 14-15.

<sup>75</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=EFB676CB-3BEE-C830-BD56-7C7A2A200000> at 6.

<sup>76</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>77</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

<sup>78</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>79</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=36BF69E5-E61F-C711-ACA1-7C79C0F00000> at 50.

<sup>80</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

65. Oregon Attorney General<sup>82</sup>
66. Pennsylvania Office of Consumer Advocate<sup>83</sup>
67. Pennsylvania Public Utility Commission<sup>84</sup>
68. Pine Gate Renewables LLC<sup>85</sup>
69. PJM<sup>86</sup>
70. PJM Industrial Customer Coalition<sup>87</sup>
71. Potomac Economics<sup>88</sup>
72. Public Utilities Commission of Ohio's Office of the Federal Energy Advocate<sup>89</sup>
73. R Street Institute<sup>90</sup>
74. Rhode Island Attorney General<sup>91</sup>
75. Sierra Club<sup>92</sup>
76. Smart Wires<sup>93</sup>
77. Solar Energy Industries Association<sup>94</sup>
78. Southern Environmental Law Center<sup>95</sup>
79. Southface Institute<sup>96</sup>
80. SPP<sup>97</sup>
81. Sustainable FERC Project<sup>98</sup>
82. Transmission Access Policy Study Group<sup>99</sup>
83. US Department of Energy<sup>100</sup>
84. US Energy Storage Association<sup>101</sup>
85. VEIR Inc.<sup>102</sup>

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<sup>81</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=D47CB465-98A4-CDEE-9DEE-7C7779000000> at 4.

<sup>82</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>83</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>84</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8CC10DE9-0854-C62A-A7B9-7C79C0500000> at 5-6.

<sup>85</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1178956C-E487-C15E-9EB3-7C74BF500000> at 3.

<sup>86</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8F7FF153-2DF6-CB73-A083-7C7689E00000> at 63.

<sup>87</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1DE900D3-DA8A-C74C-BDAA-7C79EC700000> at 37.

<sup>88</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=DC3CFBE2-3905-C65D-8FAF-7C7A4D100000> at 8.

<sup>89</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=8969081D-2D62-C380-9D3F-7C795B800000> at 21.

<sup>90</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2A861665-D484-C31D-9EE9-7C75F7F00000> at 4.

<sup>91</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=A0CA6B13-1EFB-C87E-A4A6-7C797D500000> at 30-33.

<sup>92</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>93</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

<sup>94</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=5FC63C6F-0E7C-CC12-9CD2-7C7977100000> at 5.

<sup>95</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>96</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>97</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=5FB7823D-ABAC-C088-9C4E-7C7A38100000> at 12.

<sup>98</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>99</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=9E6C5830-1A8B-C313-85FD-7C75F9400000> at 2.

<sup>100</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=1460C8B3-E842-C0B2-9DCA-7C7693800000> at 48.

<sup>101</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=C346C265-1408-CDED-A4F5-7C76BCA00000> at 59-60.

<sup>102</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=0C0E384A-7E05-C658-9C1B-7C74C1100000> at 16.

86. Vermont Public Power Supply Authority<sup>103</sup>

87. Vote Solar<sup>104</sup>

88. Western Resource Advocates<sup>105</sup>

89. WindSim<sup>106</sup>

90. Xcel Energy Services, Inc.<sup>107</sup>

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<sup>103</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=EFB676CB-3BEE-C830-BD56-7C7A2A200000> at 6.

<sup>104</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=329DA6C6-1570-C435-BB5C-7C7A50100000> at 11-12.

<sup>105</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=60F22F6B-C401-C6BC-B293-7C76AE400001> at 4.

<sup>106</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2273F95E-5752-C8D2-9E6A-7C7989C00000> at 2.

<sup>107</sup> <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=2A16D6F5-8784-CA0D-9FC4-7C7696E00000> at 21.