

**STATE OF VERMONT**  
**PUBLIC UTILITY COMMISSION**

Case No. 20-3563-PET

Petition of Stowe Electric            )  
Department for approval of its        )  
2020 Integrated Resource Plan        )

**PREFILED TESTIMONY OF**  
**CLAIRE MCILVENNIE**  
**ON BEHALF OF THE**  
**DEPARTMENT OF PUBLIC SERVICE**

June 22, 2021

Summary: This testimony presents the Department’s approach to reviewing Integrated Resource Plans and provides the Department’s conclusion that Stowe Electric Department’s 2020 Integrated Resource Plan meets the requirements of 30 V.S.A. § 218c and that any outstanding issues have been resolved by the Memorandum of Understanding.

1 **Q1. Please state your name and title.**

2 A1. My name is Claire McIlvennie. I am a Senior Energy Policy and Program  
3 Analyst for the Vermont Department of Public Service (“Department”). My business  
4 address is 112 State Street, Montpelier, Vermont.

5  
6 **Q2. Please describe your professional background and experience.**

7 A2. I began working at the Department in March of 2020. My current role in the  
8 Planning Division includes reviewing requests for Enhanced Energy Determinations  
9 pursuant to 24 V.S.A. § 4352 and evaluating utility integrated resource planning for  
10 electric and gas utilities, among other responsibilities. I earned a Bachelor of Arts degree  
11 with a joint major in Psychology and Economics from Middlebury College and a Master  
12 of Science in Environmental Change and Management from the University of Oxford. I  
13 am currently a PhD Candidate in Natural Resources at the University of Vermont with a  
14 focus on human behavior, technology, and policy in smart grid energy systems, a degree I  
15 was pursuing full-time before joining the Department.

16

17 **Q3. Have you ever testified before the Vermont Public Utility Commission (“PUC”)**  
18 **before?**

19 A3. Yes, I have provided testimony in Case Nos. 20-1219-PET, 20-3405-PET, and  
20 21-0167-PET.

21

22 **Q4. What is the purpose of your testimony in this case?**

23 A4. This testimony describes the general approach that the Department takes to  
24 reviewing power supply planning in utility integrated resource plans (“IRPs”) and  
25 describes the terms of the Memorandum of Understanding (“MOU”) agreed to and filed  
26 by the parties.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30

**Q5. Please describe the approach the Department takes to reviewing integrated resource plans.**

A5. Under 30 V.S.A. § 218c, utilities must file an IRP with the Commission at least every three years. The IRP provides a plan for how a utility intends to meet the public’s need for energy services, including power supply, transmission, and distribution investments and expenditures, at least cost including both economic and environmental considerations. In reviewing IRPs, the Department seeks to ensure the necessary factors were considered and provide a check on the reasonableness of the utility’s assumptions. The Department does not attempt to substitute its judgment for that of the utility – for example, the Department might not have developed the exact same assumptions regarding forecasted technology adoption rates; however, the question in the Department’s review is whether the forecast is reasonable. In some instances, the utility’s forecast assumptions might cause the Department to update its own assumptions and forecasts, and ultimately, the iterative dialogue serves both entities well.

In recent years, the energy landscape has undergone considerable change, including the adoption of Vermont’s renewable energy standard, net metering, the development of ISO New England (“ISO-NE”) wholesale energy markets, and advances in and proliferation of distributed energy resources (“DER”). These new developments often require specific generation resource types, shift value streams, and have led to the addition of numerous new technologies, such as electric vehicles and heat pumps. Today, numerous alternatives exist for a utility to supply load – such as through utility-owned projects, power purchase agreements, or short-term purchases from the ISO-NE wholesale energy markets – or manage demand, for example through “flexible loads,” to reduce the need for new supply and manage costs. In addition, load forecasts have become more complex as utilities forecast adoption of electrification technologies and behind-the-meter resources. Each alternative has different costs and benefits associated with it, which can be assessed and compared through the IRP process. The Department’s review of Stowe Electric Department’s (“SED”) IRP is informed by the options available to procure such resources and the numerous factors that influence load.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29

**Q6. Does the Department agree that SED’s assumptions and forecasts are reasonable?**

A6. Yes. The Department reviewed the load forecast methodology and assumptions, such as for electrification, in addition to the evaluation of future resources. As noted above, the Department is looking at the reasonableness of the methodology and assumptions, not whether the Department would have conducted the analysis in the same manner and with the same inputs. Based on that standard, the Department agrees that SED’s IRP represents a reasonable analysis.

**Q7. Please discuss the MOU filed by SED and the Department.**

A7. In the MOU, the Department and SED agree that the IRP meets the requirements of 30 V.S.A. § 218c. The parties also agree that approval of the IRP constitutes an approval of the process used, not necessarily any of the outcomes of the process. The reason for this, in addition to conforming to long-standing Commission precedent, is to allow SED the flexibility to react to changing market and regulatory conditions. SED should deploy least-cost, best-fit decision-making based on conditions at the time that it is evaluating options to fill supply gaps.

The MOU also lays out several items that SED agrees to address in its next IRP. (Attachment 1, DPS-SED MOU, Paragraph 3). I discuss these conditions below.

Condition 3a requires that SED engage with the Department, beginning at least six months prior to the IRP filing deadline. This engagement allows for numerous benefits, such as providing the opportunity for the Department and utility to discuss the modeling before it becomes time-consuming and costly to alter assumptions and raise questions or issues that have come up since the last utility IRP was completed.

Conditions 3b and 3c require that SED analyze the impacts of anticipated electrification adoption on its distribution system and assess strategies to manage these new loads, both as relates to load growth and management of related peaks. As new technologies such as electric vehicles and heat pumps become more prevalent, such assessments will help identify potential infrastructure investments needed to

1 accommodate load growth, prompt consideration of strategies to mitigate impacts such as  
2 direct load control, rate design, and storage, and ultimately help minimize costs.

3 Condition 3d requires that SED include a discussion of cyber and physical system  
4 resilience, including potential investments and proposed metrics for measuring impacts of  
5 those investments. This is consistent with the Commission's recent requirement in Case  
6 No. 20-0276-PET, regarding Green Mountain Power's proposed Climate Plan, that that  
7 utility's resilience planning be included as part of integrated resource planning.<sup>1</sup>

8  
9

10 **Q8. Does this conclude your testimony?**

11 A8. Yes, it does.

---

<sup>1</sup>See Final Order in Case No. 20-0276-PET, issued 9/24/20