

December 20, 2021

Department of Public Service
112 State Street, Third Floor
Montpelier, Vt 05620-2601

Re: Efficiency Vermont Written Comments on the Draft 2022 Update to the Vermont Comprehensive Energy Plan

Dear Department of Public service,

VEIC applauds the Department's effort in developing the draft 2022 Comprehensive Energy Plan ("CEP") Update, and deeply appreciates the opportunity to provide comments on the plan. VEIC is the administrator of Efficiency Vermont, Vermont's statewide energy efficiency utility, and has completed a review of the DRAFT Plan, including an analysis of the LEAP modeling results. As such, these comments are inclusive of both the narrative *and* modeling elements of the Plan, and address both topical subjects, and specific sections of the Draft CEP.

I. The 2022 CEP should represent the full value and cost-effectiveness of electric energy efficiency towards meeting the State's clean energy goals.

- The Draft plan includes only a very short section (7.5.1) on the funding levels of the energy efficiency utilities, without any discussion of the impact energy efficiency has on state energy usage, nor that energy efficiency is the most cost-effective alternative to electric generation and is one of the few resources that generates significant greenhouse gas reductions at a cost-savings to Vermont ratepayers. Section 7.5.1 should include a significantly expanded and thorough presentation of the benefits and value that electric energy efficiency provides for Vermonters. This should include a more thorough explanation of how energy efficiency resources have been incorporated in the CEP LEAP modeling as a forward-looking approach to managing and reducing future electric use.
- Further detail should be provided within the narrative of the CEP that energy efficiency is a cost-effective resource for meeting the energy needs of Vermont, and currently ensures that Vermont utilities are purchasing as much as 16% fewer MWs during peak load conditions, which saves energy, and reduces costs for all Vermonters, while being a significant pathway for achieving the State's ambitious climate goals.
- For example, Exhibit 7-11 should be amended to include the anticipated *MWH and MW savings* that will accrue through the strategic investment in the State's energy efficiency utilities ("EEUs"), and the savings that will generate in terms of both *total resource benefits*, and *CO2-equivalent* reductions. The

Department should also consider including a more robust description of the policy and equity considerations that go into the delivery of these services, including minimum performance requirements for cost effectiveness, equitable delivery of services to residential to commercial customers, low-income spending, equity across distribution utility (“DU”) service territories, or others as may be deemed appropriate.

- Section 7.5.1 should include a description, or reference an alternative section devoted to modeling methodology and results, to describe how energy efficiency was incorporated into the LEAP modeling. For example, the CAP Mitigation Pathway scenario includes a robust amount of electrification, and would double the state’s electric consumption from 5.5 terawatt hours to nearly 12 terawatt hours/year. The CEP modeling should include energy efficiency as a load-reducing element to offset this growth, and include a discussion of how energy efficiency, flexible load management, and other demand-side resources could reduce the magnitude of that impact.
- Similarly, Section 7.5.1 should include for comprehensiveness the scheduled energy reductions that would result from implementation of EEU programs as articulated in the EEU Demand Resource Plans (“DRP”). Efficiency Vermont believes that the reason for modeling electric savings for 20 years into the future in a DRP proceeding is to, in part, have readily-available values for measuring efficiency’s impact in long term planning, such as the Comprehensive Energy Plan. As such, the final CEP should be explicit in identifying how efficiency savings in the DRPs are being considered.¹

II. The 2022 CEP should identify and encourage next steps towards advancing flexible load management as a statewide resource for responsibly managing growth in electric use.

- The 2022 CEP should identify an ongoing need for, and encourage, statewide information sharing and planning on flexible load management (“FLM”) approaches. For instance:
 - *Section 4.6.B.b.i Grid & Communications Infrastructure - forums* (p. 4-44) notes “IRPs” as a forum to talk about “grid and comm. infrastructure”, but omits the role the EEU DRPs also serve in developing statewide availability of FLM tools and services. We suggest adding “*EEU DRPs*” to that section.
 - The current FLM Utility Working Group is proving to be another valuable forum for promoting open standards protocols for FLM measures. We recommend adding the following to *Section 4.6.C DER Market Integration and Customer Programs - actions* (p. 4-45) as a third “action”: “*ciii. Host working group meetings to allow EEU and DU program administrators to coordinate and facilitate a shared approach to standards for behind-the-meter DERs.*”

¹ See Vermont Public Utility Commission Case No. 19-3272 for EEU 2021-2023 Demand Resource Plans.

- Further, we recommend adding the following to *Section 4.6.B.c* to elevate the importance of coordinated open standards protocols to support FLM: “*cv. Promote the adoption of open communication standards to advance equitable and scalable flexible load management capabilities. Open standards reduce the risk of stranded assets associated with proprietary platforms by advancing interoperability of equipment and software while allowing greater economies of scale when managing load through aggregators.*”
- The 2022 CEP should reflect the need for a FLM potential study to be conducted in the near-future, and development of a statewide implementation “roadmap” to assure adoption of FLM measures is well coordinated and results in assets that provide support to the grid when and where it is needed. Identifying the need for an FLM potential study in the CEP would be helpful for setting the foundation for scheduling a FLM potential study as part of the EEU 2024-2026 DRPs.
- The 2022 CEP should identify opportunities for the coordination of broadband roll-out and statewide FLM activities. The CEP should consider how load management is enabled through broadband accessibility and affordability. Efficiency Vermont believes that bundling smart appliance upgrades and connected energy-saving devices with incentives and federal dollars to improve broadband service and/or reduce the monthly cost of broadband service would create benefits for long-term adoption of FLM technologies and the utility’s ability to manage load growth. These programs could be especially complementary to target markets including low-income residents, hospitals, nonprofits, agricultural businesses, and healthy home initiatives as a means for reducing costs and enrolling participants.

III. Efficiency Vermont supports the DPS recommendation to develop a diversity, equity, and inclusion strategy

- *Section 3.4 Recommendations* (p.3-9). Efficiency Vermont looks forward to working with the Department as it develops a diversity, equity, and inclusion (“DEI”) strategy “to advance the transition to a just and equitable system for Vermonters and guide actions moving forward.” Efficiency Vermont encourages learnings from this work to be shared with stakeholders to maximize impact.
- *Section 3.4 Recommendations* (p.3-9). Efficiency Vermont supports the CEP’s intent to better provide clean energy programs to historically underserved Vermonters. Efficiency Vermont encourages the Department and stakeholders to ideate and explore novel approaches to providing services to reach these underserved populations at the level needed to achieve a just and equitable energy transition.
- In advance of the next DRP, Efficiency Vermont intends to explore with the Department and stakeholders, the metrics and indicators that may be useful for tracking progress and measuring performance against DEI considerations in

the EEU portfolio. The final CEP could reference this expectation and identify the DRP process as an opportunity to advance equity and exploration of new metrics by the Energy Efficiency Utilities.

IV. The 2022 CEP should deepen its focus on workforce development

- The draft CEP recognizes the need to ramp up the workforce to achieve the 2022 CEP’s weatherization goal of 120,000 households by 2030 (page 6-2). In Section 6.3.1, the draft includes a discussion and findings of significant barriers to developing the weatherization workforce, as reported in the Weatherization Workforce Plan. The discussion of workforce development is an important inclusion within the 2022 CEP. As the Weatherization Workforce plan identifies, the barriers to developing a sufficient workforce within Vermont extends beyond the energy efficiency industry.
- The CEP should include a recommendation that brings attention to the need for a state-wide workforce development initiative that involves all sectors in the state, including efficient and affordable housing, education, energy, labor, etc. The CEP should discuss how the energy sector could fit into broader state-wide workforce development initiatives. Specifically, EEU services can support education and training of prospective, upcoming, and current workers in Vermont’s energy sector.
 - In *Section 7.5.1 Energy Efficiency Utilities*, the CEP should identify activities that can support a broader statewide effort to grow and develop the workforce needed to achieve the ambitious targets established by the CEP and Climate Action Plan (“CAP”) goals.
 - In the short term, federal and state grants should be used to deploy new apprenticeship programs, training existing workers for continuous learning and efficiency certifications, and reducing the upfront cost of building high-efficiency affordable housing for workers.

V. The 2022 CEP should consider future energy efficiency charge (“EEC”) collections from electric vehicle charging, and the need for a Potential Study to address how those funds should be used to improve the efficiency and market transformation of electric transportation.

- Given the modeled increase in electricity use of 4.4 TWh from switching an estimated 700k vehicles from internal combustion to electric (as modeled in the LEAP model), the CEP would benefit from including an analysis of the potential impact of such growth on EEC revenues. EEC revenue forecasts from electric vehicle charging in both business-as-usual and Central Mitigation scenarios would be insightful.
- The CEP should also include a discussion of a future potential study that would address opportunities for electric vehicle (“EV”) EEC revenues to be used for transportation efficiency, transportation demand management, or other GHG reduction efforts in the state’s transportation sector.

VI. Weatherization & Clean Heat Standard

- Efficiency Vermont supports the CEP's inclusion of the Weatherization at Scale goals, and the recommendations that would follow.
- In the short term, Efficiency Vermont supports the use of all available Federal and State funding to deploy weatherization that is both at scale with the goals of the CEP and CAP, and commensurate with Vermont's weatherization workforce and supply chain. In the long term, however, meeting the State's weatherization goals will necessitate a consistent source of funding that is appropriate and at scale with the needs of the State.
- While considering long-term funding for weatherization, the CEP should consider the impact of building electrification on EEC revenues, and the weatherization of electrically-heated homes. Similar to the electric transportation potential study, an electric weatherization potential study should be considered for determining a reasonable amount of cost-effective weatherization that can be provided for electrically-heated homes.
- Efficiency Vermont is supportive of the concepts advanced in the Clean Heat Standard through the Climate Action Plan, and acknowledges that the policy considerations for establishing a long-term program are complex, and should be thoroughly reviewed by stakeholders in a public and transparent process. As such, Efficiency Vermont strongly supports the CEP's recommendation for the PUC to conduct an investigation into the costs and resource requirements of a Clean Heat Standard in Vermont; a similar investigation was conducted in response to Act 62, the "All Fuels" energy efficiency proceeding (Case No. 19-2956-INV), which produced two highly valuable and well-researched reports by the PUC. Building on the framework and regulatory principles articulated in these reports would be a useful starting point for assessing the value and impact of a Clean Heat Standard in Vermont.

VII. Section-specific comments

- *Section 2.2.1.3 The Role of Data (p 2-8)*
 - The State of Vermont's vehicle inspection program now collects vehicle odometer readings and reports this information to Vermont's Department of Motor Vehicles ("DMV"). Additional related data on fuel usage, vehicle efficiency and other transportation energy related indicators may also be available through the vehicle on-board diagnostic port connection used at inspection stations. The State should consider opportunities to make this data publicly available through an Open Data portal for researchers and local planners to access, provided individual anonymity can be assured to all parties.
 - Similarly, the State should consider options to leverage upgrades to the Vermont DMV registration and titling systems to provide open access to vehicle registrations and sales by town, with information on vehicle

type, make/model and age, as well as sales of new and used vehicles by type.

- This data could be made available on a quarterly or annual basis.
- *Section 4.6: Next Steps (p. 4-41):*
 - While there are several current initiatives and suggested pathways listed in this “next steps” section, Efficiency Vermont believes it would be appropriate and helpful for the CEP to suggest iterative steps for assuring grid modernization moves forward in a “least-cost, no-regrets” approach.
 - The graphics shown on pages 4-42 and 4-43 would be improved with additional context/explanation.
 - The section on page 4-44 includes the following statement: “Load flexibility initiatives should be codified in policies, regulations, and programs as much as possible, so they can be relied upon as inputs to grid planning efforts. For example, electric vehicle incentives should be tied to time-of-use rates or direct control schemes that can be clearly identified and used by distribution and transmission planners to evaluate demand implications, thus avoiding “worst-case scenario” planning.” A nuance the CEP should consider communicating in this section is that it may not be feasible to tie current State EV incentive programs to time-of-use or direct control requirements, in the same way that utilities are currently linking or considering linking Tier III EV or EVSE incentives to charging programs.
- *Section 5.4.1.1 New and Used PEV Incentive Programs (p. 5-10)*
 - This section comprehensively discusses DU and State EV incentives, but only briefly mentions the federal tax credit for EVs. Given the high value of federal tax credits, this section should discuss the tax credits in greater detail. The Department should consider referencing additional federal incentives that may be pending Congressional approval at the time of finalizing this plan. (note: the Build Back Better incentives are scheduled to persist through 2031.)
- *Section 5.4.1.4 Medium- and Heavy-Duty Vehicle Incentive Programs*
 - Page 5-13 of the draft plan indicates there are four electric school buses in operation. By the time this CEP is published there will be six.
 - The CEP should consider including specific activities identified in the transit electrification plan being developed by VTTrans, which will help align the CEP with this plan and give readers additional context to the host of activities around the state to increase adoption of electric vehicles.
 - It’s unclear why the CEP references specific challenges to electric transit busses in cold weather (see page 5-13). A pilot conducted by Efficiency Vermont in 2017 did not find evidence of cold weather challenges, and VEIC is not aware of other studies in Vermont that

show this. Since that pilot was conducted, Green Mountain Transit (“GMT”) has deployed battery electric buses and experienced some performance challenges with the vehicles, chargers, and managed charging systems that can provide lessons learned for future deployments, but seem unrelated to cold-weather impacts.²

- Facilities that host medium- and heavy-duty vehicles may need upgrades to support chargers and larger electricity load. The CEP’s recommendation for use of incentives should apply to those facility upgrades as well and not be limited to incentives for the vehicles and charging infrastructure. The role of utilities in managing load could also be referenced in this section (see additional comments on flexible load management, above).
- Recommend a more proactive recommendation #2: “*Based on VTrans study of technical feasibility and costs, and the outcome of ANR’s Electric School and Transit Bus Pilot Program, identify funding sources to begin converting Vermont’s diesel transit and school bus fleets to electric.*”
- The CEP should consider referencing the action plan being developed by the Agency of Natural Resources to implement the multi-state zero-emission medium- and heavy-duty vehicle MOU that Vermont Governor Phil Scott signed on 7/14/2020.³
- *5.4.2.1 Continuing Support for Public Electric Vehicle Charging Infrastructure (p. 5-15).* The Department should consider qualifying the following statements with the additional information provided, below:
 - "Tesla plans to open these stations to other PEVs eventually, possibly within the next year or two." VEIC understands Tesla has expressed interest in opening their charging network to other vehicle users, but no firm commitments have been made other than a small pilot in Europe. It is easier for Tesla to make this shift in Europe as chargers in Europe use the same SAE CCS plug connector for fast charging as most other EV models. In the United States Tesla uses a proprietary plug and communication system for payment processing that will require adapters and/or changes to equipment to allow non-Tesla drivers to access.
 - "Construction of these eleven sites is expected to be completed in 2021." Please note, Blink has until 2022 to complete their installations, and as of mid-December 2021 the Vermont Agency of Commerce and

² See [Electric Transit Bus Demonstration Project, Testing Electric Transit Buses in Vermont Whitepaper](#). Efficiency Vermont Research and Development Report. Michelle McCutcheon-Schour and Bethany Whitaker. December 2017.

³ On July 14, 2020, Governor Scott signed an [MOU](#) with 14 other states and the District of Columbia to work together to foster a self-sustaining market for zero emission medium- and heavy-duty vehicles. The goal of this MOU is for 30% of new truck and bus sales to be zero emission by 2030, and 100% in 2050.

Community Development reported at most two of the sites would be in operation by the end of the year.

- *Section 5.6 Funding Transportation Climate Mitigation (p. 5-34)*
 - This section recommends Vermont consider participation in the regional Transportation Climate Initiative (“TCI”). The feasibility of Vermont joining TCI has significantly diminished as leading states like Massachusetts and Connecticut have withdrawn support in light of increasing gasoline prices and federal funding available for clean transportation. The CEP should recommend the State consider other possibilities for funding clean transportation programs if TCI is no longer an option.
- *Section 5.7 Transportation Pathway: Support Land Use Patterns that Increase Transportation System Efficiency and Section 5.8 Transportation Pathway: Increasing Transportation Choices*
 - These two sections seem to be integrally linked, and it may make sense to consolidate these strategies to demonstrate alignment, improve readability, and systemically address linkages between land use, density, and compact development on vehicle miles traveled (“VMT”) reduction strategies.
 - Housing policies and strategies do not appear to be covered in these sections. Challenges with housing development in Vermont’s downtowns, including the high cost of development, are integrally linked to the ability to achieve compact development in Vermont’s downtowns. High costs of housing in desirable urban areas mean lower income Vermonters must move further out to afford housing. Strategies to address these challenges should be identified and referenced in this plan.
 - There does not appear to be a focus on school transportation in these sections. About 16% of Vermont’s population is traveling to school every day (students and staff) mainly in private vehicles and diesel buses. There are about 450 diesel school buses on the road in Vermont. Recommendations for strategies to reduce energy use and emissions and increase equity should be included and should reference school bus electrification, increasing ridership on school buses, establishing safe routes to school for walking and biking, strategies to increase carpooling, and further examining opportunities to consolidate school and public transit service.
- *Section 5.7.1.3 State Smart Growth Designation Programs*
 - The fifth paragraph in this section references the need to account for transportation costs in the costs of housing that is spread out and further away from destinations. VEIC suggests that this paragraph also include the costs for maintaining state and public infrastructure (i.e. water, sewer, roads) and services, and the environmental impacts of sprawling development.

- VEIC supports the recommendation in the sixth paragraph of this section to align state designation programs with the CAP and CEP. In addition to the further studies called for in the recommendations portion of this section, the CEP should consider including a proactive recommendation for action that is consistent with the text of paragraph 6, and in general, include more proactive opportunities for reform in this section of the plan.
- *Section 5.8 Transportation Pathway: Increasing Transportation Choices*, general comments:
 - There are few recommendations for action in this section. Consider adding more proactive recommendations that may help further transportation efficiency through the multiple objectives noted.
 - VEIC suggests adding more detail, and proactive recommendations for prioritization of funding for transportation efficiency and transportation alternatives like bike, pedestrian, transit and other mobility options. These alternatives are only viable if they are convenient and readily accessible to support not just recreation, but daily transportation needs.
 - Transportation Demand Management (“TDM”) is presented mainly as a state responsibility, but there are significant roles for municipalities and employers to support transportation options and reduce VMT. In some states, there are TDM requirements for large employers and local land use policies can require TDM measures associated with large residential or commercial development.
- *Section 5.8.1 Strategy: Provide Safe, Reliable, and Equitable Public and Active Transportation Options*
 - On page 5-46, consider including a more detailed discussion for why none of the 2016 CEP objectives are on track, and include proactive recommendations for getting on track to meet objectives.
 - As the transportation sector electrifies, reducing the vehicle miles travelled by Vermonters could become a leading indicator for energy efficiency. Paragraph three of this section notes that as EVs increase, VMT strategies would have a smaller impact on GHG emissions. The CEP should also reflect that VMT reduction strategies will help reduce electric load and should be treated as an energy efficiency measure. Accordingly, Vermont will still have a need for overall efficiency even when vehicles are electrified and VMT reduction will be an important measure to achieve this.
- *Section 5.8.1.1 Public Transit*
 - This section may benefit from aligning some of the earlier content and recommendations around electrifying transit buses.
 - VEIC suggests there can be more refined strategies to increase effectiveness of transit where density currently allows, such as

- reducing headways (i.e., interval of time between busses), adding routes and other strategies to increase convenience of traveling by bus.
 - References to pilots to increase and improve convenience of transit in rural areas should be included, such as the MyRide on-demand pilot program in Montpelier and the Rural Uber concept being developed by Capstone.
- *Section 5.8.1.4 Telecommuting*
 - As mentioned in comments above, reduction in vehicle miles traveled may one day be considered an electric efficiency measure, and as such, the impacts of telecommuting should be researched to better understand the impacts and benefits, including reduced vehicle miles traveled.
 - This section should reference broadband expansion as a strategy to allow for more telecommuting.
 - VEIC suggests the CEP include a proactive recommendation to link ongoing State efforts (e.g., broadband development) and incentivizing behavior through policies that encourage or incentivize telecommuting. The State could lead by example by developing strong telecommuting policies that encourage state employees to telecommute.
- *Section 6.2 Current Thermal and Process Energy Demand and Resources*
 - *Exhibit 6-6. Residential Average Price per MMBtu Delivered by Heating Technology (p. 6-6):* Given the increasing role of ground source heat pumps (“GSHPs”) and air-to-water heat pumps (“AWHPs”) in the CEP’s modeling, Efficiency Vermont recommends adding these two technologies to Exhibit 6-6.
- *Section 7.3.2 Cost Drivers (p. 7-8):* Distribution costs are noted in the Grid Evolution section as highly important but are notably absent from section 7.3.2. regarding electric cost drivers. Efficiency Vermont recommends adding a subsection (7.2.2.X) on distribution costs and resulting impacts to electric costs.
- *Section 7.4 Historic and Current Demand*
 - *Exhibit 7-9 Projected Vermont Summer Peak Load and Component Forecasts (p. 7-16) and Exhibit 7-10 Projected Vermont Winter Peak Load and Component Forecasts (p. 7-17):* These two graphs show the estimated load growth in Summer and Winter due to EV and heat pump forecasts based on modeling completed for VELCO’s Long Range Transmission Plan (“LRTP”). While it is helpful to see the demand impacts of these two electrification technologies, the assumptions used for the LRTP are significantly different than those of the LEAP model used for this CEP. For instance, VELCO’s EV forecast does not include any medium- or heavy-duty vehicles, and

only reaches an estimated total of 400,000 EVs by 2040, rather than the 700,000 EVs estimated in the LEAP model. Likewise, the LRTP estimates about 300,000 heat pumps installed by 2040, while the LEAP model estimates twice that – at over 600,000. The impacts of these two differences are significant considering Vermont’s energy and peak demand curves are much higher in CEP modeling than in the LRTP. Clarifying the differences between LRTP and LEAP estimates would clarify for readers the additional level of activity contemplated by the Draft CEP.

- *Comments related to graphs in CEP narrative*
 - *Exhibit 5-5. Number of Vermont Registered On-Road Electric Vehicles by Modeling Scenario (p. 5-8):* This graph, which compares the volume of EVs forecasted across the four modeling scenarios, is helpful. Efficiency Vermont recommends inserting more of these types of graphs based on LEAP modeling throughout the CEP to improve the transparency and visualization of the measures modeled to achieve the goals of the 2022 CEP. The Department should consider inserting additional graphics, most of which can be readily pulled from the LEAP model, into appropriate sections of the CEP’s narrative. Including, but not limited to:
 - Modeled number of housing units weatherized by year across scenarios (BAU, CAP, Local Electrical Gen, Biofuel emphasis) – this will illustrate the dramatic increase in weatherization needed to meet CEP and CAP goals.
 - Modeled number of heat pumps and heat pump water heaters, by year across scenarios, heat pump technology type, and/or sector (residential and commercial).
 - Modeled trend of Vermont’s vehicle stock by fuel type by year for the CAP scenario, a stacked area graph is recommended.
 - Modeled vehicle sales of passenger cars by year by fuel type for the CAP scenario, a stacked area graph is recommended.
 - Total estimated peak load growth (in MW) by year for the CAP scenario, separated by transportation, residential, commercial, and industrial sectors. This graphic would be similar to Exhibit 7-9 and 7-10, except it would demonstrate the peak load growth expected in achievement of the 2022 CEP’s goals, rather than the peak load growth expected in VELCO’s current LRTP.
 - Total estimated electrical energy load growth (in TWh) by year for the CAP scenario, separated by transportation, residential, commercial, and industrial sectors.
 - Total modeled energy (all fuels) load growth (in MMBtu or gigajoules) by year for the CAP scenario, separated by transportation, residential, commercial, and industrial sectors.

- Total modeled greenhouse gas emissions (in million metric tons CO2 equivalents) by year across scenarios and/or sectors.
 - For all the graphs described above (including Exhibit 5-5), Efficiency Vermont recommends these graphs or tables include a title (or footnotes) that identifies what is included. For example, Exhibit 5-5 should include a title that explains that the EVs modeled in this graphic include passenger cars and light-, medium-, and heavy-duty trucks. In general, Efficiency Vermont notes many of the graphs and tables throughout the CEP could more clearly identify the information each graph or table presents.
- *Comments related to how EVs were modeled in the LEAP Model*
 - It is unclear how vehicle scrappage is factored into the CEP. Based on a preliminary review of LEAP files, it appears the modeling may assume every new vehicle sale results in the scrapping of an older, replaced vehicle. If that is accurate, the CEP modeling team may want to reconsider in light of increasing vehicle lifetimes and higher prices of new vehicles. More rapid turnover of vehicles may not be achievable in the absence of other mechanisms to encourage greater EV adoption, such as scrap and replace programs.
 - It is unclear how used EVs were considered in the LEAP modeling. Given the important role used EVs play in the affordability and accessibility of transportation electrification, the CEP should specify the modeling assumptions of used EVs.
 - In the LEAP model the estimated market share of Plug-in Hybrid Electric Vehicle (PHEV) appears to be much lower than all-electric sales share. For example, the CAP scenario assumes PHEV will have 0.5% of market share of passenger vehicles in 2025, while all-electrics will have a share of 38.2%. This assumption may make sense in the long term as all-electric range increases and costs come down, but the CEP should recognize that these modeling assumptions are significantly different from current market conditions.

Thank you, again for this opportunity to provide substantive comments on the Draft 2022 Comprehensive Energy Plan. Efficiency Vermont appreciates the effort that went into drafting the plan, and will be happy to continue working with the Department as the plan is finalized. Please do not hesitate to reach out to me if you have any questions regarding these comments.

Sincerely,

David C. Westman

