

WASHINGTON ELECTRIC COOPERATIVE
2018 ANNUAL PLAN FOR TIER III COMPLIANCE
WITH VERMONT'S RENEWABLE ENERGY STANDARD

I. INTRODUCTION

In compliance with requirements from the Vermont Public Utility Commission's Order in Docket 8550, Washington Electric Cooperative (WEC) submits its 2018 Annual Plan for Tier III compliance with Vermont's Renewable Energy Standard (RES).

This Tier III Annual Plan is submitted by WEC, with support from Vermont Energy Investment Corporation (VEIC), to the Vermont Public Utility Commission ("PUC" or "Commission") and to the Public Service Department ("PSD" or "Department"). This Annual Plan addresses the strategy that WEC will use to meet its Tier III compliance obligation for 2018.

Overall, this Annual Plan will describe:

- 1) the estimated Tier III compliance obligation for 2018;
- 2) the overall strategy to be implemented to meet the Tier III compliance obligation in 2018; and
- 3) the types of energy transformation projects that will be undertaken and anticipated number of participants.

WEC's 2018 Annual Plan expands the suite of energy transformation measures that have been screened and vetted through the Technical Advisory Group (TAG) screening process. A fundamental component of WEC's plan is to emphasize and match these TAG screened measures with heightened weatherization efforts. WEC's plans are fully detailed herein.

II. PARTNERSHIP-BETWEEN WEC AND VEIC

Implementation of the projects described in this Annual Plan will be closely coordinated with Vermont Energy Investment Corporation as the administrator of Efficiency Vermont, the statewide energy efficiency utility (EEU). In addition, coordination of data collection, management, reporting, and evaluation and verification activities will be maximized to the extent possible with protocols and schedules already in place for Efficiency Vermont. In cases where entities other than VEIC and its subcontractors deliver WEC Tier III programs and services independently, WEC will ensure coordination of data collection and reporting to provide a single deliverable to regulators.

The Parties have reached an understanding on the implementation of energy transformation projects for WEC's customers that will include the coordinated use of customer and supply-side incentives, standards for measuring performance, and methods to allocate savings and reductions in fossil fuel consumption and greenhouse gas emissions among VEIC and WEC with a strong

emphasis on weatherization. The details of WEC’s plan as well as discussion of roles and responsibilities of each party are outlined in table 1, which remain consistent with WEC’s original 2017 filed design

Table 1: Roles and Responsibilities for 2018 Tier III Programs

| Washington Electric Cooperative | Efficiency Vermont |
|---|---|
| <ul style="list-style-type: none"> • Leverage local presence and relationships with members • Utilize multiple communications channels to reach members <ul style="list-style-type: none"> • Newsletter • Member Service Rep staff • Promotional material • • • Leverage existing EEU programs like Button Up to deploy savings • Provide call center support | <ul style="list-style-type: none"> • Maintain program delivery model • Maintain contractor and supplier network • Statewide marketing • Call center support • Capture sales data • Custom and upstream incentives |

III. 2018 WASHINGTON ELECTRIC COOPERATIVE TIER III COMPLIANCE OBLIGATION AND OVERALL STRATEGY

WEC continues to participate with VEIC and other distribution utilities through the Technical Advisory Group (TAG) process; all measures included in the 2018 WEC program meet TAG standards for characterization and energy savings. One distinction for measure screening which adds additional value to WEC program is due to the Co-op’s qualification as 100% renewable, as defined statutorily. Utilities which have not yet met the Vermont renewability standard, based on the portfolio of power sources today, use a “blended” portfolio in the TAG modeling process; a blended portfolio reduces the savings claims for the same measure(s) compared to a utility with 100% renewability today.¹

¹ See Appendix C

A. 2018 WEC Tier III Requirements

Vermont's RES establishes a required amount for Tier III compliance of 2.67% of WEC's 2017 retail sales for the period 2018. The calculation for this compliance amount for WEC for 2018 is shown in Table 2:

Table 2: Tier III Requirements

| | | | | |
|--|--------------|-------------------|--------------------|------------------|
| Program Year | | 2018 | | |
| Utility Sales (kWh) | | 69,427,967 | | |
| Compliance Rate | | 2.67% | | |
| MWh Target | | 1,851 | | |
| With 10% Buffer | | 2,092 | | |
| Maximum Investment (ACP) | | \$ 112,529 | | |
| Maximum Investment (ACP) with 10% Buffer | | \$ 123,782 | | |
| Modeled Savings Totals | | | | |
| | | 1,945 | | |
| Over/(Under) Target plus 10% Buffer | | | | |
| | | (147) | | |
| Non-Incentive Totals | | | | |
| | | 10,000 | | |
| Gross Incentive Totals | | | | |
| | | \$ 113,950 | | |
| Incentives Net of Grants | | | | |
| | | \$ 66,450 | | |
| Yield (\$/MWh) | | | | |
| | | \$ 39 | | |
| Measure | | Units | MWh Savings | Incentive |
| Multi Zone Cold-Climate Heat Pump (CCHP) with no Controls and High Performing Home | | | | |
| | per unit | 3 | 62.4 | |
| | Total | | 187.1 | |
| Single Zone Cold-Climate Heat Pump (CCHP) with no Controls and High Performing Home | | | | |
| | per unit | 5 | 29.4 | |
| | Total | | 146.8 | |
| Heat Pump Water Heater (HPWH) | | | | |
| | per unit | 15 | 16.9 | |
| | Total | | 253.9 | |
| Pellet Heating | | | | |
| | per unit | 2 | 128.4 | |
| | Total | | 256.8 | |
| All Electric Vehicle* | | | | |
| | per unit | 15 | 32.9 | |
| | Total | | 493.5 | |
| Plug-in Hybrid Electric Vehicle* | | | | |
| | per unit | 10 | 18.5 | |
| | Total | | 185.2 | |
| Weatherization | | | | |
| | per unit | 20 | 20.0 | |
| | Total | | 400.0 | |
| Solar Hot Water | | | | |
| | per unit | 1 | 21.6 | |
| | Total | | 21.6 | |

* Funded by Grant Dollars

As noted in Table 2 WEC's compliance target is 1,851 MWh. Adding a ten percent buffer to this estimate for planning purposes gives WEC a year one target of 2,092 MWh.

Using the Alternative Compliance Payment rate of \$60.78, WEC's maximum budget for incentives, program delivery and administration is \$123,782. Based on WEC's anticipated offering of measures combined with Weatherization WEC plans to spend up to \$66,450 of incentive dollars in its second year effort.

B. Proposed Measures & Program Design

- Working with Efficiency Vermont (EVT) WEC has promoted “**Button Up WEC**”, using cooperative marketing support for a well-recognized residential weatherization campaign.
- **Weatherization** – These measures claim savings for the installation for insulation and air leakage reduction measures in a residential or commercial application. Savings will be calculated on a custom basis by project. Weatherization (WX) for income eligible WEC member residences will be coordinated with Capstone of Barre. Income eligibility based on current Vermont Department of Human Services (DHS) levels.
- **Cold-Climate Heat Pumps** - This measure claims savings for the installation of single or multi head variable speed mini-split heat pumps in a residential application, within a thermal shell meeting a performance standard. The measure is characterized as a custom retrofit measure claiming thermal energy savings for heating and electric heating and cooling penalties versus the installation of a baseline heat pump. The TAG approved savings claim for an eligible CCHP has been reduced for 2018, compared to prior TAG characterization; the effect of this change is to force a higher target of CCHP sales in 2018.
- **Heat-Pump Water Heaters** - This measure claims savings for the installation of an ENERGY STAR heat pump water heater (HPWH) in place of the existing water heater in a residential or commercial application. The measure is characterized for retrofit applications. Savings are presented dependent on the existing fossil water heater fuel type. HPWH fossil fuel efficiency savings has been reduced to account for a heating penalty is assessed to account for the impact of the heat pump water heater on the water heating load.
- **Solar Hot Water** - This measure is characterized as a retrofit and applies to the installation of a new solar water heating system that has a Solar Rating Certification Council (SRCC) OG-300 qualified performance rating in a residential building. Backup hot water is provided by resistance electric within the solar hot water storage tank.
- **EV Charging Stations** - This measure applies to the installation of a Level 2 charging station at a public location or a residential building. WEC has been responsible for the installation of five Type II EV stations in its service territory.

- **EV Incentive** - WEC plans to offer an incentive of up to \$1900 per EV purchased in 2018 by low and moderate income WEC households. WEC will use current income eligibility levels as provided by the state of Vermont Agency of Human Resources. The EV incentive funding source is from dollars remaining in WEC's 2015 VLITE grant award. WEC used a grant from VLITE to fund charging stations. Remaining dollars in the grant will be pursued to fund incentives.

C. Estimated Number of Participants, Program Goals and Shared Responsibilities

By building on existing programs, efficiencies and the benefits of shared information, the services to be provided by WEC are expected to increase the number of members who participate in weatherization as well as increase the installation of measures such as qualifying heat pump hot water heaters and cold climate heat pumps above what would have happened in absence of WEC's Tier III program, and thereby grow the market for the measures targeted by the Project.

WEC's plan and estimates of the number of participants, incentives, and MWh savings are provided in Table 2 (above). While all WEC members are eligible to participate, based on the budget constraint of the Alternate Compliance Payment (ACP), in actuality WEC will promote the Button Up services on a "first come, first served" basis up to the numbers noted in Table 2. What this means is once WEC hits the target rates of participation it will no longer offer its extra incentives toward the measures. The EEU program incentive dollars will continue but any incremental WEC incentives will cease once the participation targets are achieved. The pace of the program incentives is budget constrained, and will be monitored closely for alignment with savings goals. WEC and VEIC will coordinate on field results, and project completions to ensure achievement of both parties' goals. Based on the rates of participation in 2017, WEC does not anticipate turning members away in 2018. We do not expect disruption in offering incentive dollars.

- D. WEC plans to perform the bulk of the work necessary for program reporting, verification and tracking responsibilities. Efficiency Vermont will track measure details and savings and by March 15, 2019, WEC shall submit a report to the Commission and the Department that establishes its savings claim regarding its 2019 energy transformation projects. Adjustments and final claims will be filed following PUC determination of verified savings.
- E. Low Income Plan – WEC has followed the State of Vermont Agency of Human Resources income eligibility criteria for WEC members; in 2018 the same income criteria will be applied to determine eligibility for the proposed EV incentive.
- F. Tier II Distributed Generation – The Commission noted in its order June 28, 2016 Order in Docket 8550 that utilities that are considered 100% renewable would have limitations regarding the use of Tier II RECs and counting toward Tier III goals. In

this Annual Plan filing WEC is not planning to use Tier II RECs toward its Tier III program goals but we seek clarification from the Commission on this issue.

The Department argued that a provider qualifying under Section 8005(b)(1) should only be allowed to count Tier II RECs towards its Tier III obligation to the extent that those Tier II RECs exceed what the provider's Tier II compliance obligation otherwise would have been absent the language of Section 8005(b).

We believe the Commission should adopt this recommendation and allow WEC to use Tier II RECs in the event we exceed the Tier II obligation absent the language of Section 8005 (b). To deny use of REC's that are over and above the Tier II requirement levels that are implemented for non reduced amount providers limits an option to those DUs that are 100 percent renewable and have already invested significantly in achieving the state's goals early. WEC seeks to only to use RECs that exceeds the standard had it not been granted eligible for reduced amounts as a 100% renewable utility.

The Commission noted in its order:

Any DU that qualifies for the modified requirement is likely to possess a meaningful portfolio of generation eligible for Tier II. Allowing such generation to count towards Tier III is likely to eliminate, or at least substantially reduce, a DU's Tier III obligation. As we find that this was not the intent of the statute – had it been, there would have been no need to include the additional mechanism reducing Tier III requirements – we conclude that a qualified DU seeking to apply generation from Tier II-eligible units must also show that this generation was in excess of that used to meet its ongoing obligation to demonstrate its ownership of RECs or renewable attributes under Section 8005(b)(1).

WEC seeks to use only Tier II RECs that are in excess of its obligation (ie greater than 1.67% of its retail energy sales in year one) had it not qualified as 100% renewable under Section 8005(b)(1) In this way WEC will retain the flexibility to offer incentives or roll out efforts that enhance Tier II participation in its service territory.

APPENDIX A (BACKGROUND)

BACKGROUND

On June 11, 2015, the Governor of Vermont signed into law Public Act No. 56, an act relating to establishing a renewable energy standard ("RES"). Vermont's RES is categorized into three tiers of required resources that must be met by Vermont electric utilities to meet the requirements of the States' renewable energy standard: total renewable energy, distributed renewable generation and energy transformation.

The third tier of the RES ("Tier III") (Energy Transformation Tier) requires that DUs either procure additional renewable distributed generation eligible for Tier II or acquire fossil-fuel savings from energy transformation projects. Energy transformation projects are those that reduce fossil fuel consumed by DU customers and the emission of greenhouse gases attributable to that consumption. For Tier III, the RES establishes a required amount of 2% of a DU's annual retail sales in 2017, increasing by two-thirds of a percent each year and reaching 12% in 2032.

This category encourages Vermont retail electricity providers to support additional distributed renewable generation or to support other projects to reduce fossil fuel consumed by their customers and the emission of greenhouse gases attributable to that consumption. A retail electricity provider may satisfy the energy transformation requirement through distributed renewable generation in addition to the generation used to satisfy subdivision (a)(2) of this section or energy transformation projects or a combination of such generation and projects.

"Energy transformation projects" are defined in 30 V.S.A. § 8002(25) to mean:

"an undertaking that provides energy-related goods or services but does not include or consist of the generation of electricity and that results in a net reduction in fossil fuel consumption by the customers of a retail electricity provider and in the emission of greenhouse gases attributable to that consumption. Examples of energy transformation projects may include home weatherization or other thermal energy efficiency measures; air source or geothermal heat pumps; high efficiency heating systems; increased use of biofuels; biomass heating systems; support for transportation demand management strategies; support for electric vehicles or related infrastructure; and infrastructure for the storage of renewable energy on the electric grid."

(C) Eligibility criteria. For an energy transformation project to be eligible under this subdivision (a)(3), each of the following shall apply: (i) Implementation of the project shall have commenced on or after January 1, 2015. (ii) Over its life, the project shall result in a net reduction in fossil fuel consumed by the provider's customers and in the emission of greenhouse gases attributable to that consumption, whether or not the fuel is supplied by the provider. (iii) The project shall meet the need for its goods or services at the lowest present value life cycle cost, including environmental and economic costs. Evaluation of whether this subdivision (iii) is met shall

include analysis of alternatives that do not increase electricity consumption. (iv) The project shall cost the utility less per MWH than the applicable alternative compliance payment rate. Act 56 p.18 (3)(A)

Section 8 of Vermont's Renewable Energy Standard (RES) requires the Vermont Public Utility Commission ("Commission") to commence a rulemaking proceeding to determine details for the implementation of Tier III. The outcome of this rulemaking requires that a DU shall file a Tier III annual plan no later than the November 1st immediately prior to the start of the next compliance year.

This Annual Plan is filed to meet this requirement.

APPENDIX C

WEC qualifies as a 100% renewable distribution utility, as defined by statute:

(b) Reduced amounts; providers; 100 percent renewable.

(1) The provisions of this subsection shall apply to a retail electricity provider that:

(A) as of January 1, 2015, was entitled, through contract, ownership of energy produced by its own generation plants, or both, to an amount of renewable energy equal to or more than 100 percent of its anticipated total retail electric sales in 2017, regardless of whether the provider owned the environmental attributes of that renewable energy; and

(B) annually each July 1 commencing in 2018, owns and has retired tradeable renewable energy credits monitored and traded on the New England Generation Information System or otherwise approved by the Commission equivalent to 100 percent of the provider's total retail sales of electricity for the previous calendar year.

(2) A provider meeting the requirements of subdivision (1) of this subsection may:

(A) satisfy the distributed renewable generation requirement of this section by accepting net metering systems within its service territory pursuant to the provisions of this title that govern net metering; and (B) if the Commission has appointed the provider as an energy efficiency entity under subsection 209(d) of this title, propose to the Commission to reduce the energy transformation requirement that would otherwise apply to the provider under this section.

(i) The provider may make and the Commission may review such a proposal in connection with a periodic submission made by the provider pursuant to its appointment under subsection 209(d) of this title.

(ii) The Commission may approve a proposal under this subdivision (B) if it finds that:

(I) the energy transformation requirement that would otherwise apply under this section exceeds the achievable potential for cost-effective energy transformation projects in the provider's service territory that meet the eligibility criteria for these projects under this section; and

(II) the reduced energy transformation requirement proposed by the provider is not less than the amount sufficient to ensure the provider's deployment or support of energy transformation projects that will acquire that achievable potential.

(iii) The measure of cost-effectiveness under this subdivision (B) shall be the alternative compliance payment rate established in this section for the energy transformation requirement.