

**4.400 RENEWABLE ENERGY STANDARD RULE****TABLE OF CONTENTS****PART I: GENERAL PROVISIONS**

<b>4.401</b>	Purpose and Background	2
<b>4.402</b>	Authority	2
<b>4.403</b>	Definitions	3

**PART II: TIERS I & II**

<b>4.404</b>	System for Tracking Compliance with Tiers I and II	6
<b>4.405</b>	Banking of Tradeable RECs and Environmental Attributes	7
<b>4.406</b>	Qualification of Generation Facilities for Tiers I and II	8
<b>4.407</b>	Disclosure and Representations Regarding Retail Electricity Provider Generation Portfolios	11

**PART III: TIER III**

<b>4.408</b>	Conversion Method for Fossil-Fuel Savings from Energy Transformation Projects	11
<b>4.409</b>	Process for Prior Approval of Energy Transformation Measures	12
<b>4.410</b>	Cost-Effectiveness Screening of Energy Transformation Projects	13
<b>4.411</b>	Banking and Trading in Tier III	14
<b>4.412</b>	Evaluation, Measurement, and Verification of Energy Transformation Projects	15
<b>4.413</b>	Equitable Opportunity to Participate in and Benefit from Energy Transformation Projects	16
<b>4.414</b>	Coordinated Delivery of Energy Transformation Projects	17
<b>4.415</b>	Best Practices and Minimum Standards	18
<b>4.416</b>	Specific Types of Energy Transformation Projects	19
<b>4.417</b>	Tier III Annual Planning	21
<b>4.418</b>	Withdrawal and Addition of Energy Transformation Projects	22

**PART IV: COMPLIANCE FILINGS**

<b>4.419</b>	Filing Schedule and Requirements	22
<b>4.420</b>	Determination of Compliance and Alternative Compliance Payment	23
<b>4.421</b>	Update of Annual Compliance Rates	23

**PART I: GENERAL PROVISIONS****4.401 Purpose and Background**

(a) The purpose of this rule is to implement the Renewable Energy Standard (“RES”), established under 30 V.S.A. chapter 89, which requires Vermont Retail Electricity Providers to acquire specified amounts of Renewable Energy in the form of Tradeable Renewable Energy Credits (“Tradeable RECs”) or Environmental Attributes and to achieve fossil-fuel reductions by implementing Energy Transformation Projects.

(b) The RES is divided into three categories, known as Tiers.

(1) Tier I requires Retail Electricity Providers to procure an amount of Renewable Energy equivalent to 55% of their annual retail electric sales for the year 2017, increasing by 4% every third January 1 thereafter, eventually reaching 75% in 2032.

(2) Tier II requires that a portion of the Renewable Energy that Retail Electricity Providers procure to satisfy Tier I be from New Renewable Energy from Distributed Renewable Generation resources. Under Tier II, Retail Electricity Providers must procure an amount of New Renewable Energy equivalent to 1% of their annual retail electric sales from Distributed Renewable Generation resources in 2017, increasing by three-fifths of a percent each year thereafter, eventually reaching 10% in 2032. For a Retail Electricity Provider meeting the 100% renewable requirements of 30 V.S.A. § 8005(b), the provider may satisfy the Tier II requirements by accepting net-metering systems within its service territory pursuant to the provisions of Title 30 of the Vermont Statutes Annotated that govern net-metering.

(3) Tier III requires Retail Electricity Providers to procure additional Distributed Renewable Generation eligible for Tier II or to achieve fossil-fuel reductions from Energy Transformation Projects equivalent to 2% of their annual retail electric sales in 2017, increasing by two-thirds of a percent each year thereafter, eventually reaching 12% in 2032. However, in the case of a Retail Electricity Provider that is a municipal electric utility serving not more than 6,000 Customers, the required amount for Tier III is 2% of the provider’s annual retail sales beginning on January 1, 2019, increasing by an additional two-thirds of a percent each subsequent January 1 until reaching 10 and two-thirds percent on and after January 1, 2032.

(A) Any Retail Electricity Provider may petition the Commission: (i) to reduce its Tier III requirement in any given year, or (ii) if the provider fails to achieve its Tier III requirement in a given year, to allow the provider to avoid paying the Alternative Compliance Payment. The Commission shall apply the standards provided in 30 V.S.A. § 8005(a)(3)(G).

(B) For a Retail Electricity Provider that meets the 100% renewable requirements of 30 V.S.A. § 8005(b) and has been appointed as an energy efficiency entity under 30 V.S.A. § 209(d), the provider may petition the Commission to reduce its Tier III requirement as provided in 30 V.S.A. § 8005(b).

**4.402 Authority**

This rule is adopted pursuant to 30 V.S.A. §§ 8001(b), 8004(b), and 8005(a)(3)(F).

#### 4.403 Definitions

For purposes of this rule, the following definitions shall apply:

“Alternative Compliance Payment” means a payment made to the Vermont Clean Energy Development Fund established under 30 V.S.A. § 8015, in lieu of purchasing Renewable Energy, Tradeable RECs or Environmental Attributes, or supporting Energy Transformation Projects to satisfy the requirements of 30 V.S.A §§ 8004 and 8005 and this rule. The rates for Alternative Compliance Payments are established pursuant to 30 V.S.A. § 8005(a)(4) and section 4.421 of this rule.

“Commission” means the Vermont Public Utility Commission or the Commission’s duly authorized representative.

“Customer” means a retail electric customer.

“Department” means the Vermont Department of Public Service.

“Distributed Renewable Generation” means one of the following:

(A) a Renewable Energy Plant that is New Renewable Energy; has a Plant Capacity of 5 MW or less; and

(i) is directly connected to the subtransmission or distribution system of a Vermont Retail Electricity Provider; or

(ii) is directly connected to the transmission system of an electric company required to submit a Transmission System Plan under 30 V.S.A. § 218c(d), if the Plant is part of a plan approved by the Commission to avoid or defer a transmission system improvement needed to address a transmission system reliability deficiency identified and analyzed in that Plan; or

(B) a net-metering system approved under the former 30 V.S.A. § 219a or under 30 V.S.A. § 8010 if the system is New Renewable Energy and the interconnecting Retail Electricity Provider owns and retires the system’s Environmental Attributes.

“Efficiency Service Providers” means entities providing energy efficiency services and programming, including the Energy Efficiency Utilities, weatherization agencies, and affordable housing agencies.

“Energy Conversion Efficiency” means the effective use of energy and heat from a combustion process.

“Energy Efficiency Utility” means an entity appointed by the Commission pursuant to 30 V.S.A. § 209(d)(2) to provide energy efficiency programs and measures.

“Energy Transformation Measure” means a piece of equipment or system; a strategy intended to affect consumer energy use behaviors; or a modification of equipment, systems, or operations that reduces the amount of fossil fuel that would otherwise have been used. Examples include an individual cold-climate heat pump, heat pump water heater, or electric vehicle.

Energy Transformation Measures may be prescriptive measures approved in accordance with the processes established by section 4.409 of this rule or custom measures not previously approved under section 4.409.

“Energy Transformation Program” means all Energy Transformation Projects administered by a Retail Electricity Provider.

“Energy Transformation Project” means an undertaking that commenced on or after January 1, 2015, 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. Energy Transformation Projects may consist of: (1) one or more prescriptive Energy Transformation Measures approved in accordance with the processes established by section 4.409 of this rule, (2) one or more custom Energy Transformation Measures not previously approved under section 4.409, or (3) a combination of Energy Transformation Measures from (1) and (2).

“Environmental Attributes” or “Attributes” means the characteristics of a Plant that enable the energy it produces to qualify as Renewable Energy and include any and all benefits of the Plant to the environment such as avoided emissions or other impacts to air, water, or soil that may occur through the Plant’s displacement of a nonrenewable energy source.

“Existing Renewable Energy” means Renewable Energy produced by a Plant that came into service prior to or on June 30, 2015.

“kW” means kilowatt or kilowatts (AC).

“kWh” means kW-hour or hours.

“Mmbtu” means one million British thermal units.

“MW” means megawatt or megawatts (AC).

“MWh” means MW-hour or hours.

“NEPOOL GIS” means the Generation Information System, or its successor, operated by the New England Power Pool that is used to track and monitor Tradeable RECs.

“New Renewable Energy” means Renewable Energy produced by a specific and identifiable Plant coming into service after June 30, 2015.

(A) Energy from within a system of generating plants that includes Renewable Energy shall not constitute New Renewable Energy, regardless of whether the system includes specific Plants that came or come into service after June 30, 2015.

(B) “New Renewable Energy” also may include the additional energy from an Existing Renewable Energy Plant retrofitted with advanced technologies or otherwise operated, modified, or expanded to increase the kWh output of the Plant in excess of an historical baseline established by calculating the average output of that Plant for the 10-year period that ended June 30, 2015. If the production of New Renewable Energy through changes in operations, modification, or expansion involves combustion of the resource, the system also must result in an incrementally higher level of Energy Conversion Efficiency or significantly reduced emissions.

“Plant” shall have the same meaning as in 30 V.S.A. § 8002.

“Plant Capacity” means the rated electrical nameplate for a Plant, except that, in the case of a solar energy Plant, the term shall mean the aggregate AC nameplate capacity of all inverters used to convert the Plant’s output to AC power.

“Renewable Energy” means energy produced using a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate.

(A) For purposes of this definition, methane gas and other flammable gases produced by the decay of sewage treatment plant wastes or landfill wastes and anaerobic digestion of agricultural products, byproducts, or wastes, or of food wastes shall be considered Renewable Energy resources, but no other form of solid waste, other than silvicultural waste, shall be considered renewable.

(B) For purposes of this definition, no form of nuclear fuel shall be considered renewable.

(C) The only portion of electricity produced by a system of generating resources that shall be considered renewable is that portion generated by a technology that qualifies as renewable under this definition.

(D) The Commission by rule may add technologies or technology categories to the definition of “Renewable Energy,” provided that technologies using the following fuels shall not be considered Renewable Energy supplies: coal, oil, propane, and natural gas.

(E) In this rule, Renewable Energy refers to either “Existing Renewable Energy” or “New Renewable Energy.”

“RES” means the Renewable Energy Standard established under 30 V.S.A. §§ 8004 and 8005.

“Retail Electricity Provider” or “Provider” means a company engaged in the distribution or sale of electricity directly to the public.

“Technical Advisory Group” is a committee, originally established in relation to the Energy Efficiency Utilities, which includes the Department, Energy Efficiency Utilities, and Retail Electricity Providers, that reviews and approves the methodology and associated assumptions underlying measure-savings calculations included in the Technical Reference Manual and provides approval of Energy Transformation Measures.

“Technical Reference Manual” is a reference manual, established and maintained by the Energy Efficiency Utilities in consultation with the Technical Advisory Group, that provides methods, formulas, and default assumptions for estimating energy and peak impacts, including fossil-fuel savings, from measures and projects promoted by the Energy Efficiency Utilities’ energy efficiency programs and used by Retail Electricity Providers for compliance with Tier III.

“Tier I” means the Renewable Energy Requirements for Retail Electricity Providers established under 30 V.S.A. § 8005(a)(1).

“Tier II” means the Distributed Renewable Generation requirements for Retail Electricity Providers established under 30 V.S.A. § 8005(a)(2).

“Tier III” means the energy transformation requirements for Retail Electricity Providers established under 30 V.S.A. § 8005(a)(3).

“Tradeable REC” or “Tradeable Renewable Energy Credit” means all the Environmental Attributes associated with a single unit of energy generated by a Renewable Energy source where:

(A) those Attributes are transferred or recorded separately from that unit of energy;

(B) the party claiming ownership of the Tradeable Renewable Energy Credits has acquired the exclusive legal ownership of all, and not less than all, the Environmental Attributes associated with that unit of energy; and

(C) exclusive legal ownership can be verified through an auditable contract path or pursuant to the system established or authorized by the Commission or any program for tracking and verification of the ownership of Environmental Attributes of energy legally recognized in any state and approved by the Commission.

## **PART II: TIERS I & II**

### **4.404 System for Tracking Compliance with Tiers I and II**

(a) Pursuant to 30 V.S.A. § 8006(a), the principal mechanism for the tracking and monitoring of Tradeable RECs qualifying for the RES shall be the New England Power Pool’s Generation Information System, known as “NEPOOL GIS,” or its successor.

(b) Retail Electricity Providers shall demonstrate their compliance with their Tier I and II obligations, as established under 30 V.S.A. §§ 8005(a)(1)(B) and (a)(2)(C), through ownership and retirement of Tradeable RECs in NEPOOL GIS. If a Provider uses Tradeable RECs or Environmental Attributes that cannot be certified as Tier I or Tier II Tradeable RECs in NEPOOL GIS, that are from a control area that lacks a GIS system integrated with NEPOOL GIS, or for which the renewable content is not accurately represented on its NEPOOL GIS certificates, the Provider shall demonstrate compliance as provided below.

(1) For Tradeable RECs and Environmental Attributes that cannot be certified as Tier I or Tier II Tradeable RECs in NEPOOL GIS, that are from a control area that lacks a GIS system integrated with NEPOOL GIS, or for which the renewable content is not accurately represented

on the associated NEPOOL GIS certificates, a Provider shall submit with its annual RES compliance filing documentation demonstrating that:

- (A) it owns the Attributes in question,
- (B) the Attributes are eligible for the RES, and
- (C) the Attributes have not been claimed in any other jurisdiction.

(2) For Tradeable RECs and Environmental Attributes for which the renewable content is not accurately represented on the associated NEPOOL GIS certificates, a Retail Electricity Provider shall provide the fraction of renewable content. The value of the Tradeable RECs and Attributes shall be determined by multiplying the MWhs as tracked in NEPOOL GIS by the percentage of Renewable Energy contained in the attestation form supplied by the Provider. The Provider shall also retire all Tradeable RECs and Environmental Attributes subject to this subdivision and used for compliance.

#### **4.405 Banking of Tradeable RECs and Environmental Attributes**

(a) Pursuant to 30 V.S.A. § 8004(c), if a Retail Electricity Provider has satisfied its Tier I and II obligations for a given year and has excess Tradeable RECs or Environmental Attributes eligible for the RES, the Provider may bank the excess Tradeable RECs or Attributes to use for compliance with the RES in one of the three years following the year in which the Tradeable RECs or Attributes were created.

(b) A Retail Electricity Provider seeking to bank Tradeable RECs or Environmental Attributes in excess of its Tier I and II obligations shall either retire the Tradeable RECs or Attributes, or place the Tradeable RECs into a reserve account within NEPOOL GIS, if such a reserve account is available.

(c) A Retail Electricity Provider's annual compliance filing shall include documentation demonstrating:

(1) the Tradeable RECs and Environmental Attributes the Provider has retired or placed into a reserve account, which the Provider is banking for use in one of the following three years;

(2) the previously banked Tradeable RECs and Attributes the Provider is using to satisfy its Tier I and II obligations for the compliance year;

(3) the previously banked Tradeable RECs and Attributes the Provider is retaining for use in future years;

(4) for subdivisions (1) through (3) of this subsection, the year the Tradeable RECs and Attributes were created; and

(5) all other information required by the compliance spreadsheet, which must be included with the Provider's annual compliance filing under section 4.419 of this rule.

**4.406 Qualification of Generation Facilities for Tiers I and II**

(a) A facility or group of facilities seeking to be qualified for Tier I or II of the RES shall have a qualification registration or application submitted to the Commission pursuant to the requirements of this section. A facility that qualifies as a Tier II resource automatically qualifies as a Tier I resource. Facilities that qualify as a Tier I or II resource shall receive a statement of qualification from the Commission, and the Commission shall notify the NEPOOL GIS administrator of newly qualified facilities on a monthly basis.

(b) Registration Process.

(1) A facility that meets the following requirements may receive a statement of qualification by means of the registration process described below.

(A) For Tier I, a facility that produces Renewable Energy, as defined in this rule, using any of the following fuel sources: methane and flammable gases from food waste, agricultural waste, or other organic materials, or from decay of sewage or landfill wastes; geothermal; hydroelectric; marine thermal or hydrokinetic; photovoltaic solar; concentrated solar power; and wind.

(B) For Tier II, a facility that:

(i) has a system capacity of 5 MW (AC) or less,

(ii) is directly connected to the subtransmission or distribution system of a Vermont Retail Electricity Provider,

(iii) came into service after June 30, 2015, and

(iv) produces New Renewable Energy, as defined in this rule, using any of the following fuel sources: methane and flammable gases from food waste, agricultural waste, or other organic materials, or from decay of sewage or landfill wastes; geothermal; hydroelectric that has received a water quality certification pursuant to 33 U.S.C. § 1341 from the Vermont Agency of Natural Resources after January 1, 1987, or from the Low Impact Hydropower Institute; marine thermal or hydrokinetic; photovoltaic solar; concentrated solar power; and wind.

(2) A facility seeking a statement of qualification through registration shall submit a complete registration on a form provided by the Commission, which shall include:

(A) Vermont certificate of public good number, if applicable,

(B) NEPOOL GIS identification number,

(C) Plant Capacity,

(D) the Retail Electricity Provider system or transmission system with which the facility is interconnected,



(E) the date the facility came into service, if the facility seeks to be qualified as a Tier II resource,

(F) fuel source, and

(G) any other information required by the Commission's registration form.

(3) A facility that complies with the requirements of Tier I or II and files a complete registration form by the 15th day of a month should receive a statement of qualification from the Commission within 15 days of the 15th day of the month; however, the expiration of this time period without the receipt of a statement of qualification does not constitute a determination that the facility is qualified. The Commission shall provide Tier I and II qualifications to NEPOOL GIS on a monthly basis.

(c) Application Process. For a facility not included under subdivision (b)(1) of this section that is seeking to qualify as a Tier I or II resource, the facility shall submit a complete application requesting a statement of qualification.

(1) The application shall be filed on a form provided by the Commission, which shall include all the information listed in subdivision (b)(2) of this section.

(2) The Department and the Vermont Agency of Natural Resources shall have 30 days from the date a complete application is posted on ePUC, the Commission's electronic filing system, to submit any comments on the application, including whether the Commission should conduct further proceedings to determine whether the facility should receive a statement of qualification.

(3) Following the 30-day comment period described above, the Commission may issue a statement of qualification, if the facility qualifies as a Tier I or II resource, or may open an investigation to determine whether such a statement should be issued.

(d) Aggregated Facilities. A Vermont Retail Electricity Provider may seek to aggregate a group of facilities that qualify as Tier II resources as a single facility for purposes of monitoring and reporting the output of those facilities to NEPOOL GIS.

(1)(A) To aggregate a group of facilities pursuant to this subsection, a Retail Electricity Provider shall submit an application to the Commission requesting a statement of qualification for its aggregated facilities, including the following information for each facility:

- (i) address of the facility's location,
- (ii) system capacity,
- (iii) date the facility came into service,
- (iv) fuel source,
- (v) Vermont certificate of public good number, and
- (vi) any other information requested by the Commission.

(B) In its review of an application for qualification of a group of aggregated facilities, the Commission may impose conditions related to the metering and monitoring of the output of the aggregated facilities, as appropriate.

(C) The Department shall have 30 days from the date a complete application is posted on ePUC, the Commission's electronic filing system, to submit any comments on the application.

(D) If the facilities qualify as Tier II resources and the Retail Electricity Provider has submitted all the information required by this subsection, the Commission shall issue a statement of qualification for the aggregated facilities.

(2)(A) Following Commission issuance of a statement of qualification for a group of aggregated facilities, the Retail Electricity Provider shall submit any modifications to its list of aggregated facilities on a quarterly basis for Commission approval. The update shall include:

(i) the NEPOOL GIS identification number for the previously approved aggregated facilities,

(ii) any modifications to the information regarding its previously approved facilities,

(iii) the information required by subdivision (1) of this subsection for each facility the Provider is seeking to add to its aggregated facilities, and

(iv) the new total capacity of the Provider's aggregated facilities if the Commission approves the update.

(B) A Provider shall submit its quarterly updates as follows: for NEPOOL GIS quarter 1, by June 1; for NEPOOL GIS quarter 2, by September 1; for NEPOOL GIS quarter 3, by December 1; and for NEPOOL GIS quarter 4, by March 1. The Department shall have 20 days from the date a complete quarterly update is posted on ePUC, the Commission's electronic filing system, to submit any comments on the update. If the quarterly update complies with the requirements of this subsection, the Provider should receive an approval from the Commission within 10 days of the date by which the Department must file its comments; however, the expiration of this time period without the receipt of an approval does not constitute a determination that the update is approved.

(e) Review of Tier I and II Facilities.

(1) Upon reasonable notice, the Commission or Department may audit a facility or group of facilities previously qualified as Tier I or II resources, including the inspection and copying of records, inspection of facilities, and other actions necessary to determine compliance with the RES.

(2) The Commission or Department may audit the accuracy of information, including electric generation information, reported to NEPOOL GIS for a facility or group of facilities approved under this section and may require the production of any records, documents, or relevant materials necessary to examine such accuracy.

(3) Upon notice and opportunity for hearing, the Commission may revoke a statement of qualification for a facility or group of facilities if it finds that a facility does not comply with the requirements of the RES or that the information submitted in the facility's registration or application form is not accurate.

#### **4.407 Disclosures and Representations Regarding Retail Electricity Provider Generation Portfolios**

(a) Pursuant to 30 V.S.A. § 8006(b), Retail Electricity Providers shall base any representations of the renewability of their generation portfolio on their most recently approved RES compliance filings.

(b) A Retail Electricity Provider shall publish on its website a representation of its portfolio mix, which shall include:

(1) A representation of all sources contributing more than 1% of the Retail Electricity Provider's generation portfolio, including a description of the fuel sources. In accounting for sources in its generation portfolio, the Provider shall include generation from net-metered systems;

(2) Appropriate categories to represent sources that do not individually exceed 1% of the generation portfolio; and

(3) A representation of the Retail Electricity Provider's Renewable Energy portfolio following all Tradeable REC and Environmental Attribute transactions as approved by the Commission in the Provider's most recent RES compliance filing.

(c) Retail Electricity Providers shall annually provide notice to their Customers of the availability of the above information by means of a bill insert, direct mail, e-mail, or other form of direct notice. This notice shall be provided within 90 days following the approval of a Provider's annual RES compliance filing.

### **PART III: TIER III**

#### **4.408 Conversion Method for Fossil-Fuel Savings from Energy Transformation Projects**

(a) Pursuant to 30 V.S.A. §§ 8005(a)(3)(D) and 8005(a)(3)(F)(i), for the purpose of determining the eligibility and the application of an Energy Transformation Project's fossil-fuel savings to a Retail Electricity Provider's annual requirement, the Provider shall convert the net reduction in fossil-fuel consumption resulting from the Energy Transformation Project to a MWh equivalent of electric energy using the most recent year's approximate heat rate for electricity net generation from the "total fossil fuels" category as reported by the U.S. Energy Information Administration in its Monthly Energy Review.

(b) Retail Electricity Providers shall use a publicly available spreadsheet, provided and maintained by the Department, to determine the MWh-equivalent energy values. The Department shall update the spreadsheet on an annual basis with the appropriate U.S. Energy Information Administration values.

(c) If an Energy Transformation Project is funded by more than one regulated entity, the reduction in fossil-fuel consumption shall be pro-rated among the regulated entities that funded the project. For purposes of this section, “regulated entity” includes the Retail Electricity Providers and Energy Efficiency Utilities.

#### **4.409 Process for Prior Approval of Energy Transformation Measures**

(a) Pursuant to 30 V.S.A. § 8005(a)(3)(F)(ii), this section establishes a process for prior approval of Energy Transformation Measures.

(b) The Technical Advisory Group, originally established in relation to the Energy Efficiency Utilities, shall administer the process for prior approval of Energy Transformation Measures. The Technical Advisory Group includes the Department, the Energy Efficiency Utilities, and the Retail Electricity Providers.

(c) All Technical Advisory Group meetings related to Energy Transformation Measures shall be noticed and open to the public, and time shall be included in each meeting agenda for public input.

(d) The Technical Advisory Group shall:

(1) file with the Commission its analysis of how Energy Transformation Measures that it analyzes and approves meet the requirements of 30 V.S.A. § 8005(a)(3);

(2) file with the Commission, by no later than October 1 of each year, a list of measures that it reviewed during the previous calendar year; and

(3) include in its filing with the Commission appropriate information documenting the eligibility determinations that it has made for each measure.

(e) The Technical Advisory Group administrator may seek to recover its costs for participating in the Technical Advisory Group process as it relates to Energy Transformation Measures. The Technical Advisory Group administrator shall allocate such costs to each obligated Retail Electricity Provider based on the Provider’s pro-rata share of annual retail electric sales in Vermont. The Technical Advisory Group administrator may enter into bilateral arrangements with obligated Providers as a manner of recovering such costs.

(f) Retail Electricity Providers may submit potential Energy Transformation Measures directly to the Technical Advisory Group for review, characterization, and prior approval. For those potential Energy Transformation Measures that are not immediately sponsored in the Technical Advisory Group process by a Provider, a measure proponent may present its measure to the Department for an initial review. If the Department concludes that the measure may be viable as an Energy Transformation Measure, the Department may share its review and conclusions with the Providers, who may determine whether to pursue full evaluation of the measure through the Technical Advisory Group process. The Department may also sponsor a measure for Technical Advisory Group review itself.

(g) A Retail Electricity Provider may petition the Commission for an alternative process for prior approval of potential Energy Transformation Projects in lieu of obtaining prior approval of an Energy Transformation Measure through the Technical Advisory Group process.

(h) There is no obligation for a Retail Electricity Provider to obtain prior approval of its Energy Transformation Projects.

(i) A Retail Electricity Provider that commenced a project prior to approval of the project as an Energy Transformation Measure through the Technical Advisory Group process may still seek approval of the measure from the Technical Advisory Group.

#### **4.410 Cost-Effectiveness Screening of Energy Transformation Projects**

Pursuant to 30 V.S.A. §§ 8005(a)(3)(C) and 8005(a)(3)(F)(iii), for purposes of cost-effectiveness screening of Energy Transformation Projects, a Retail Electricity Provider shall only offer Energy Transformation Projects that meet the following criteria:

(1) For efficiency measures that may be offered by Energy Efficiency Utilities pursuant to 30 V.S.A. § 209(d), including those measures identified in the Technical Reference Manual, the Retail Electricity Provider shall assess the eligibility of an Energy Transformation Project that is an efficiency measure using the statewide cost-effectiveness screening tools provided by the Department.

(2) Over the Energy Transformation Project's life, the project shall result in a net reduction in fossil fuel consumed by the Retail Electricity Provider's Customers and a reduction in the emission of greenhouse gases attributable to that consumption, whether or not the fuel is supplied by the Provider.

(3) The Energy Transformation Project shall meet the need for its goods or services at the lowest present-value life-cycle cost, including environmental and economic costs. This evaluation shall include an analysis of alternatives that do not increase electric consumption. If a Retail Electricity Provider's Integrated Resource Plan includes an analysis of alternatives, the Provider's Tier III annual plan shall reference the analysis in the Integrated Resource Plan and shall include any significant changes. If a Provider's Integrated Resource Plan does not include an analysis of alternatives, the Provider's Tier III annual plan shall include the analysis.

(4) Cost-effectiveness screening shall quantify:

(A) administrative and implementation costs, including those costs associated with the Technical Advisory Group's measure characterization, project design, evaluation, measurement, and verification; and

(B) costs and benefits associated with increased electric sales and financing and lease income.

(5) Each Energy Transformation Project, including an Energy Transformation Project identified as cost-effective through the statewide cost-effectiveness screening tool, shall in total

cost the Retail Electricity Provider less per MWh of energy savings than the applicable Alternative Compliance Payment.

(A) The total cost of an Energy Transformation Project shall include administrative and implementation costs.

(B) A Retail Electricity Provider may use net costs when assessing whether an Energy Transformation Project costs less than the applicable Alternative Compliance Payment. If a Provider uses net costs, the Provider shall provide the assumptions used in its analysis of net costs.

(6) A Retail Electricity Provider's Tier III annual plan, required under section 4.417 of this rule, shall include reporting on cost/benefit accounting at the Energy Transformation Program level, including cost/benefit analyses for purposes of future-year planning when possible.

(7) For purposes of completing cost-effectiveness screenings of Energy Transformation Projects and evaluating the costs of Energy Transformation Projects relative to the Alternative Compliance Payment, the following costs shall not be included:

(A) Planning and development costs that a Retail Electricity Provider incurs before beginning to implement an Energy Transformation Project, and

(B) The regulatory costs of participating in Commission proceedings and meetings with the Department regarding Energy Transformation Projects.

#### **4.411 Banking and Trading in Tier III**

(a) Pursuant to 30 V.S.A. § 8005(a)(3)(F)(iv), Retail Electricity Providers may bank any unused fossil-fuel reductions from Energy Transformation Projects for compliance in future years. However, pursuant to 30 V.S.A. § 8004(c), Tier II Tradeable RECs and Environmental Attributes that have been banked may only be used in one of the following three years whether they are used to satisfy a Tier II or Tier III obligation.

(b) In its annual compliance filings, a Retail Electricity Provider shall:

(1) document any excess Tier III fossil-fuel reductions that it seeks to retain for compliance in future years;

(2) indicate any Tier III fossil-fuel reductions from prior years that it seeks to claim to meet its current year compliance obligation;

(3) indicate whether and which Tier II credits it seeks to apply towards its Tier III obligations in the current year; and

(4) provide documentation of the current amount of banked Tier III fossil-fuel reductions held by the Provider.

(c) Trading of Tier III fossil-fuel reductions is prohibited.

**4.412 Evaluation, Measurement, and Verification of Energy Transformation Projects**

Pursuant to 30 V.S.A. § 8005(a)(3)(F)(v), to establish and validate an Energy Transformation Project's claimed fossil-fuel reductions, avoided greenhouse gas emissions, conversion to MWh equivalent, cost-effectiveness, and, if applicable, energy savings, the following documentation and verification process shall be employed:

(1) The Department shall conduct an annual savings verification to assess Retail Electricity Providers' annual savings claims. The Department shall work with Providers to attempt to resolve any issues that may lead to adjustments to Providers' annual savings claims.

(2) Savings verification shall include an analysis of project data from Retail Electricity Provider tracking systems, review of project files, and any necessary field verification visits.

(3) For Energy Transformation Projects, where savings assumptions have not been established through the Technical Reference Manual or do not apply, a Retail Electricity Provider shall maintain in its files documentation of all assumptions and calculations used to establish its savings claims.

(4) By March 15 of each year, a Retail Electricity Provider shall submit a report to the Commission and the Department stating its savings claims for its Energy Transformation Projects for the previous year. The report shall also include Energy Transformation Project participation, spending, and benefits by Customer sector (residential, commercial and industrial, and low-income), as required by section 4.413(c)(1) of this rule. The Commission shall provide a summary table template, created in collaboration with the Department and Providers, to be included in the report. A Provider's annual report shall include a completed summary table.

(5) By June 1 of each year, the Department shall provide recommendations to the Commission regarding the verified savings achieved by Retail Electricity Providers for the previous year.

(6) Within 15 days of the Department's recommendation each year, Retail Electricity Providers and other interested parties may offer comments on the Department's recommendation to the Commission.

(7) If the Department or any interested party recommends that the Commission reject any of a Retail Electricity Provider's Energy Transformation Project fossil-fuel savings or if the Commission finds that a Provider's savings claims do not comply with the requirements of the RES statute or rule, the Commission shall, by August 20 of each year, either issue an order accepting or rejecting those savings claims or issue an order notifying the Provider that the Commission is still considering whether those particular savings claims comply with the RES statute and rule. If the Commission is still considering whether the savings claims comply with the RES statute and rule, the Provider's compliance filing required under section 4.419 of this rule need not address that specific portion of the Provider's Tier III obligation still under consideration. Once the Commission rules on the particular savings claims, if the Commission determines that the savings claims do not comply with the RES statute or rule, the Provider shall have 30 days to file alternative Tier III savings claims, Tier II Tradeable RECs or Environmental

Attributes, Alternative Compliance Payments sufficient to satisfy the portion of the Provider's Tier III obligation that the Commission rejected, or, pursuant to section 4.401(a)(3)(A) of this rule, a request for a reduced Tier III obligation.

(8) Retail Electricity Providers' Tier III annual plans, required under section 4.417 of this rule, may include an evaluation, measurement, and verification plan, including estimated plan costs. Providers are encouraged to consult with the Department in advance of filing their Tier III annual plans to develop estimated evaluation, measurement, and verification plan costs.

(9) Evaluation, measurement, and verification costs may be billed to Retail Electricity Providers using the Department's authority to allocate expenses pursuant to 30 V.S.A. § 21 and shall be allocated proportionally based upon the costs to evaluate each Retail Electricity Provider's share of Energy Transformation Projects. For partnership programs between a Provider and an Energy Efficiency Utility, costs may be allocated according to an agreed-upon cost-allocation methodology.

(10) In addition to annual savings verifications, the Department shall conduct periodic evaluations of Energy Transformation Projects or classes of projects.

(11) Changes to Energy Transformation Project savings claims resulting from periodic evaluations shall not retroactively reduce claims made on behalf of a measure approved pursuant to section 4.409 of this rule or reduce verified claims carried forward pursuant to section 4.411 of this rule. However, such changes may be applied to the treatment of savings claims from projects undertaken in future years.

#### **4.413 Equitable Opportunity to Participate in and Benefit from Energy Transformation Projects**

(a) Pursuant to 30 V.S.A. § 8005(a)(3)(F)(vi), all ratepayers shall have an equitable opportunity to participate in and benefit from Energy Transformation Projects, regardless of rate class, income level, or Provider service territory.

(b) A Retail Electricity Provider that chooses to meet any portion of its Tier III obligations through Energy Transformation Projects in a given year shall make Energy Transformation Project opportunities available to all ratepayers, regardless of rate class or income level.

(1) For purposes of this rule, rate class shall be broadly defined as Customer class or sector – that is, residential Customers and commercial and industrial Customers.

(2) For purposes of this rule, income level shall be broadly defined as low-income and non-low-income.

(A) A low-income Customer shall be defined as a Customer whose household income is at or below 80% of Vermont statewide median income.

(B) The percentage of low-income households in each Retail Electricity Provider's service territory shall be assumed to be the statewide percentage of low-income households.



(C) The Department may provide the statewide percentage of low-income households to the Providers on an annual basis for the purposes of planning and tracking their Energy Transformation Projects.

(D) A Provider may petition the Commission for an alternative definition of “low-income Customer,” and for a different percentage of low-income Customers to be applicable to its service territory. Any such petition must demonstrate why an alternative definition or percentage is necessary based on the unique circumstances of the Provider and its Customers.

(c) Tracking Equitable Opportunity.

(1) A Retail Electricity Provider shall track and report Energy Transformation Project participation, spending, and benefits by Customer sector (residential, commercial and industrial, and low-income) in each year that it chooses to meet any portion of its Tier III obligations through Energy Transformation Projects.

(2) Consideration of whether a Provider has provided equitable opportunities to its Customers shall be measured over the course of the RES program.

(3) A Provider shall endeavor to provide equitable opportunities to its Customer sectors in rough proportion to each Customer sector’s annual retail sales.

(4) A Provider may petition the Commission for alternative measurement criteria. Any such petition must demonstrate why alternative measurement criteria are necessary based on the unique circumstances of the Provider and its Customers.

(d) When offering Energy Transformation Projects, a Retail Electricity Provider must provide information, such as up-front costs, benefits, long-term maintenance, options available to overcome first-cost barriers, and other efficiency and energy support services available, that is consistent, transparent, and unbiased. When an Energy Transformation Project is being offered in more than one service territory, the Providers shall ensure, as part of their coordination, that all such information is provided in a consistent manner.

(e) A Retail Electricity Provider may provide equitable opportunities to its Customers through participation in statewide initiatives, such as a standard suite of Energy Transformation Projects or a common set of technologies.

#### **4.414 Coordinated Delivery of Energy Transformation Projects**

(a) Pursuant to 30 V.S.A. § 8005(a)(3)(F)(vii), in developing Energy Transformation Projects and programs to implement those projects, Retail Electricity Providers shall coordinate with other energy efficiency services and programming, including the Energy Efficiency Utilities, weatherization agencies, and affordable housing agencies (collectively, “Efficiency Service Providers”).

(b) In Retail Electricity Providers’ Tier III annual plans, required under section 4.417 of this rule, Retail Electricity Providers shall demonstrate their efforts to collaborate with Efficiency Service Providers. Outside of the annual planning process, Retail Electricity Providers shall continue to

share information about Energy Transformation Project and program elements, such as incentive structures and marketing and implementation strategies, with other Retail Electricity Providers and Efficiency Service Providers.

(c) In developing Energy Transformation Projects and programs to implement those projects, Retail Electricity Providers shall seek to efficiently utilize the resources of other Retail Electricity Providers and Efficiency Service Providers.

(d) When Efficiency Service Provider projects and Retail Electricity Provider projects overlap due to similar measures, projects, or programs, the providers shall work together to negotiate reasonable allocations of savings and costs to be included in the Tier III annual plans and accounted for in the annual compliance reports for Commission review. Should providers be unable to reach a consensus, providers may petition the Commission for a resolution. In addition, the Department may assist providers in the mediation of disputes related to the allocation of costs and savings.

(e) Efficiency Service Providers and Retail Electricity Providers may enter into agreements to share resources across a Retail Electricity Provider's service territory in order to efficiently utilize staff and resources, and these agreements may result in single-point-of-contact services for some Energy Transformation Projects and programs to implement those projects.

(f)(1) Retail Electricity Providers or their partners in offering Energy Transformation Projects and programs to implement those projects shall advise Customers of:

(A) the up-front costs, benefits, and long-term maintenance requirements for Customer-appropriate technologies,

(B) options available to overcome first-cost barriers to participation, and

(C) other efficiency and energy support services available.

(2) Retail Electricity Providers or their partners in offering Energy Transformation Projects shall make Customer referrals for additional information or special services.

#### **4.415 Best Practices and Minimum Standards**

Pursuant to 30 V.S.A. § 8005(a)(3)(F)(viii), if an Energy Transformation Project increases the use of electric energy, the project shall incorporate best practices for demand management, use technologies appropriate for Vermont, and encourage the installation of the technologies in buildings that meet minimum energy performance standards. To meet this requirement, Retail Electricity Providers shall follow and comply with the following provisions.

(1) Best practices for demand management may include:

(A) the enrollment of a participating Customer in an advanced rate program. Advanced rates may include critical peak pricing, time-of-use rates, or controllable load rates or riders;

(B) verifying a high level of building performance to reduce electric demand; or

(C) non-monetary behavioral programs to avoid electricity use during peak days or hours.

(2) Customer and contractor education shall include the advantages and disadvantages associated with an Energy Transformation Project, considering, as applicable, building or vehicle characteristics, fuel types, prices, and Customer economics. Education, outreach, and marketing shall aim to deliver uniform statewide messaging and maximize existing state resources.

(3) Marketing information presented to Customers on savings associated with Energy Transformation Projects shall be accurate, reflect current fuel prices, and address Customer-specific conditions.

(4) A Retail Electricity Provider seeking to verify that an Energy Transformation Project meets minimum building performance standards shall assess the participating Customer's building using the building performance model provided by the Department. The building performance model shall be developed and updated regularly through the Technical Advisory Group process.

(5) The savings that a Retail Electricity Provider may claim for the installation of a prescriptive Energy Transformation Measure in a building achieving minimum energy performance standards shall be determined through the Technical Advisory Group process.

(6) For a Retail Electricity Provider implementing Energy Transformation Projects that increase the use of electric energy, the Provider's Tier III annual plan shall include:

(A) reference to the load forecast developed in the Provider's most recently Commission-approved Integrated Resource Plan and any relevant updates to or major deviations from the assumptions used in that load forecast;

(B) a discussion of the available options for controlling load and their effectiveness and costs, the options the Provider is implementing and why, and whether the projected volume of Energy Transformation Projects warrants demand management activities;

(C) strategies for encouraging the installation of technologies in buildings that meet minimum energy performance standards, as applicable; and

(D) strategies for Customer education, outreach, and marketing.

#### **4.416 Specific Types of Energy Transformation Projects**

Low-income Weatherization. If proposing a low-income weatherization Energy Transformation Project, a Retail Electricity Provider may do any of the following:

(1) purchase previously created verifiable energy savings from a low-income weatherization provider, authorized under Vermont statute, so long as the energy savings were created during the compliance year within the Retail Electricity Provider's service territory and the Retail Electricity Provider advertised the low-income weatherization provider's services to its Customers or members. For purposes of 30 V.S.A. § 8005(a)(3)(E), the previously created savings shall be treated as the incremental energy savings and the additional revenue paid for the savings should be used by the low-income weatherization provider, like any other grant funds it

receives from the Office of Economic Opportunity, to complete low-income weatherization work in any Retail Electricity Provider's service territory.

(2) pay a rate per MWh of lifetime energy savings to a low-income weatherization provider that shall be used by the low-income weatherization provider to fund low-income weatherization projects anywhere within the state, so long as the low-income weatherization provider provides low-income weatherization services within the Retail Electricity Provider's service territory and the Retail Electricity Provider contemporaneously advertises the low-income weatherization services to its Customers or members. The MWh Rate shall be updated annually, and the lesser of the calculated rate or the Alternative Compliance Payment shall be established as the rate per MWh of lifetime energy savings to be used for the calendar year. By October 1 of each year, the Vermont Office of Economic Opportunity shall file the updated MWh Rate with the Commission. The following definitions and calculations shall apply to this subsection.

(A) "Heat Rate" is the official conversion factor to translate from a representation of savings in Mmbtu to MWh.

(B) "Project Lifetime" shall be determined for each weatherization project using an energy modeling software program approved for use by the Vermont Office of Economic Opportunity and the United States Department of Energy.

(C) "Mmbtu Lifetime Savings Projections" shall be determined for each weatherization project using an energy modeling software program approved for use by the Vermont Office of Economic Opportunity and the United States Department of Energy.

(D) "MWh Lifetime Savings Projections" shall be determined by multiplying the projected Mmbtu Lifetime Savings Projections from a weatherization project by the Heat Rate.

(E) The MWh Rate shall be updated annually by the Vermont Office of Economic Opportunity. The MWh Rate to be used for each calendar year shall be determined by:

(i) summing the MWh Lifetime Savings Projections achieved by the Home Weatherization Assistance Program during the most recently completed program year,

(ii) summing the material and onsite labor costs incurred during the most recently completed program year as they are represented in the Vermont Office of Economic Opportunity and United States Department of Energy approved energy modeling software,

(iii) dividing the material and onsite labor costs by the MWh Lifetime Savings Projections, and

(iv) rounding to the nearest whole dollar increment.

(3) propose alternatives to the foregoing options that satisfy the applicable requirements of 30 V.S.A. § 8005 and this rule.

**4.417 Tier III Annual Planning**

(a) A Retail Electricity Provider shall file its Tier III annual plan no later than November 1 of the year immediately prior to the start of the next compliance year. The Commission shall provide a summary table template, created in collaboration with the Department and Providers, to be included in the plan. A Provider's annual plan shall include a completed summary table.

(b) Tier III annual plans shall include the following information:

(1) A description of the estimated Tier III compliance obligation, as determined pursuant to 30 V.S.A. § 8005(a)(3)(B), for the following compliance year and a description of the overall strategy to be implemented to meet the Tier III compliance obligation in the following compliance year, including use of any banked Tier III fossil-fuel reductions, use of any excess Tier II Tradeable RECs or Environmental Attributes, and implementation of any Energy Transformation Projects.

(2) When a Retail Electricity Provider's Tier III strategy includes implementation of Energy Transformation Projects, its Tier III annual plan shall include the following information as well as any requirements specified in section 4.412(8) of this rule:

(A) a description of the types of Energy Transformation Projects that will be undertaken, including the types of measures to be implemented and the anticipated number of participants, with sufficient information for the Department to develop an evaluation, measurement, and verification plan and budget;

(B) as required by section 4.413 of this rule, a description of how all ratepayers will have an equitable opportunity to participate in and benefit from the Energy Transformation Projects regardless of rate class or income level;

(C) as required by section 4.414 of this rule, a description of any Energy Transformation Project collaborative efforts, including a methodology for allocating project costs and savings among Efficiency Service Providers;

(D) when a Retail Electricity Provider plans to implement an Energy Transformation Project without coordinating with an Efficiency Service Provider, an explanation, pursuant to 30 V.S.A. § 8005(a)(3)(E)(i), of why the delivery by the Retail Electricity Provider is more cost-effective than delivery by another person or that there is no person other than the Retail Electricity Provider with the expertise or capability to deliver the goods or services;

(E) as required by section 4.415 of this rule, when a Retail Electricity Provider plans to implement Energy Transformation Projects that are likely to increase electricity consumption, reference to the load forecast developed in the Provider's most recent Integrated Resource Plan and any relevant updates to or major deviations from the assumptions used in that load forecast; a discussion of the available options for controlling load and their effectiveness and costs, the options the Provider is implementing and why, and whether the projected volume of Energy Transformation Projects warrants demand management activities; strategies to be used for encouraging the installation of technologies in buildings that meet minimum energy performance

standards, as applicable; and strategies to be used for Customer education, outreach, and marketing;

(F) as required by section 4.410 of this rule, a cost/benefit accounting at the Energy Transformation Program level, including cost/benefit analyses for purposes of future-year planning when possible; and

(G) projected planning and development costs that will be incurred before the Provider fully implements an Energy Transformation Project, and projected administrative costs.

(c) Comments on a Tier III annual plan shall be submitted by the December 1 immediately following the date a plan was submitted.

(d) If the Commission has questions about a Tier III annual plan, it may schedule a workshop. If the Commission finds, after reviewing a Tier III annual plan and any comments filed about it, that the plan does not include the information required by subsection (b) of this section, the Commission shall notify the Retail Electricity Provider, the Department, and any entities that commented on the Provider's Tier III annual plan of the specific deficiency or deficiencies in the plan, and may issue an order directing the Provider to file an amended plan or opening an investigation. The Commission shall aim to provide such notice by December 31.

#### **4.418 Withdrawal and Addition of Energy Transformation Projects**

(a) Pursuant to 30 V.S.A. § 8005(a)(3)(F)(ix), if a Retail Electricity Provider concludes that an ongoing Energy Transformation Project should be withdrawn or terminated because it no longer meets the eligibility criteria due to one or more factors beyond the control of the project and the Provider, the Provider shall give notice to the Commission, the Department, any Customers or other entities participating in or who applied to participate in the Energy Transformation Project who may be affected by the withdrawal or termination, and any affected project partners. Notice shall be provided at least 30 days in advance of the withdrawal or termination.

(b) If a Retail Electricity Provider wishes to add an Energy Transformation Project to its current Tier III annual plan, the Provider shall:

(1) notify the Commission, the Department, and any project partners at least 30 days prior to implementation,

(2) provide the information required in an annual plan, as specified in section 4.417 of this rule, and

(3) as necessary, request an estimate from the Department of any additional evaluation, measurement, and verification costs.

### **PART IV: COMPLIANCE FILINGS**

#### **4.419 Filing Schedule and Requirements**

(a) No later than August 31 of each year, a Retail Electricity Provider shall submit its demonstration of compliance with all Tiers of the RES, including documentation of its total retail

sales, documentation of the number, type, and vintage of Tradeable RECs and Environmental Attributes it used to obtain compliance, the fossil-fuel savings attained from Energy Transformation Projects, and the information required by sections 4.405 and 4.411 of this rule. The Commission shall provide a compliance spreadsheet template, created in collaboration with the Department and Providers, to be included in the filing. The compliance spreadsheet template may define Tier III administrative costs, as necessary.

(b) A Provider's compliance filing shall include a completed compliance spreadsheet and a report of Tier III administrative costs; regulatory costs, including costs to participate in Commission proceedings and Department meetings; and planning and development costs.

(c) The Department and other interested parties shall have 30 days to submit any comments on a Retail Electricity Provider's compliance filing.

#### **4.420 Determination of Compliance and Alternative Compliance Payment**

(a) Following the submittal of a Retail Electricity Provider's annual compliance filing, the Commission shall determine whether the Provider has met its RES obligations, and in the event it has not, shall determine the appropriate Alternative Compliance Payment.

(b) Pursuant to 30 V.S.A. § 8004(d), all required Alternative Compliance Payments shall be paid to the Clean Energy Development Fund established under 30 V.S.A. § 8015 within 30 days of issuance of a Commission order directing payment.

#### **4.421 Update of Annual Compliance Rates**

Pursuant to 30 V.S.A. § 8005(a)(4)(B), annually on or before September 1, the Commission shall announce the applicable Alternative Compliance Payment effective for the compliance year beginning on the following January 1.