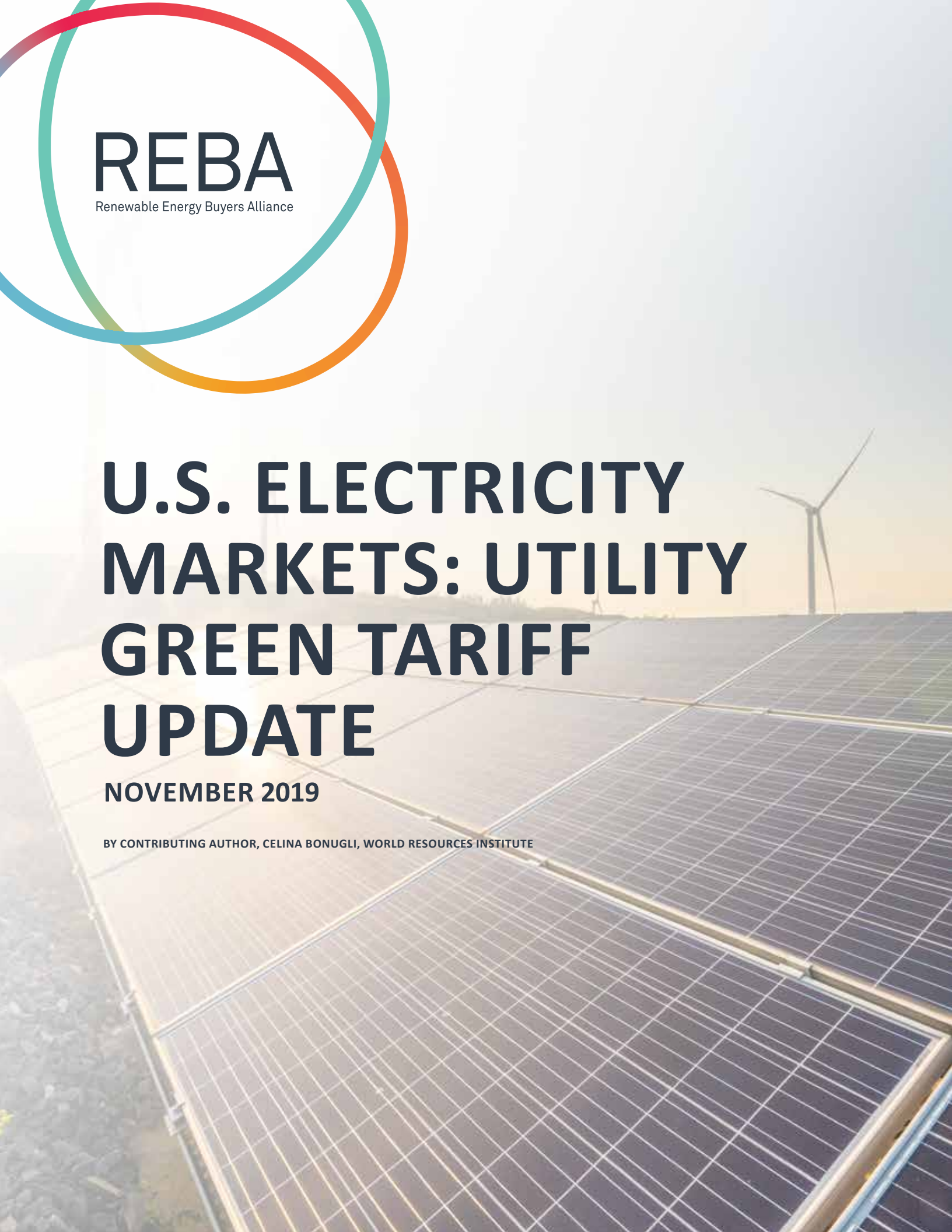




REBA

Renewable Energy Buyers Alliance



U.S. ELECTRICITY MARKETS: UTILITY GREEN TARIFF UPDATE

NOVEMBER 2019

BY CONTRIBUTING AUTHOR, CELINA BONUGLI, WORLD RESOURCES INSTITUTE

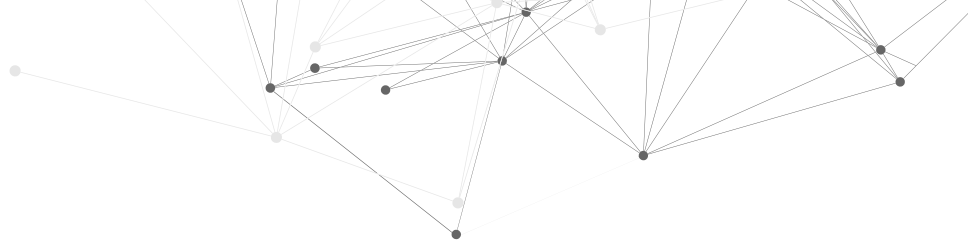


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THE WORLD RESOURCES INSTITUTE’S WORK ON GREEN TARIFFS BECAME AN INITIATIVE OF THE RENEWABLE ENERGY BUYERS ALLIANCE (REBA) IN 2019.



INTRODUCTION

Electricity customers—including residential, municipal, commercial, and industrial users—increasingly want their energy supply to be sourced from renewable energy. Renewable energy provides greenhouse gas and other environmental benefits, and it may offer customers opportunities to reduce their electricity bills and protect themselves against volatile fossil fuel-based power prices.

Customers today want renewable electricity that is cost-competitive and a product with a fixed or predictable price. In addition, customers are seeking solutions that provide access to new projects that are within reasonable proximity to their facilities. **The Corporate Renewable Energy Buyers' Principles** (see Box 1), which 78 companies have signed and many others reference, outline the types of products that customers desire.

Utilities are weighing how to meet this evolving customer interest in renewable energy. In states with restructured electricity markets that provide easily accessible customer choice—13 states and the District of Columbia (Bonugli 2017)—customers can shop for electricity providers that offer renewable energy options. In the remaining states, which are traditional, regulated markets, options are more limited.

The simplest and most available option for customers in these states has typically been a utility “green pricing program.”¹ These programs typically offer renewable energy at an additional cost to standard utility electricity charges, and have traditionally been designed for residential and small commercial customers. The customer doesn’t have the opportunity to economically benefit from the fixed cost of the renewable energy project or protection against volatile fossil fuel prices.

Green tariffs, or riders, emerged as an option for customers in traditional, regulated markets, and have expanded rapidly in recent years. Offered by local utilities

BOX 1. THE CORPORATE RENEWABLE ENERGY BUYERS' PRINCIPLES

The Corporate Renewable Energy Buyers' Principles establish the framework for what customers are seeking from electricity providers:

1. Greater choice in options to procure renewable energy
2. Cost competitiveness between traditional and renewable energy rates
3. Access to longer-term, fixed-price renewable energy
4. Access to projects that are new or help drive new projects in order to reduce energy emissions beyond business as usual
5. Increased access to third-party financing vehicles, as well as standardized and simplified processes, contracts, and financing for renewable energy projects
6. Opportunities to work with utilities and regulators to expand the choices for buying renewable energy

WRI's **Technical Note** further explores these principles in detail (Bonugli 2017).

and approved by state public utility commissions (PUCs), these programs allow eligible customers to buy both the energy from a renewable energy project and the Renewable Energy Certificates (RECs) at a more favorable price. Green tariffs were originally designed for large-scale energy customers but may include small customers as well.

Since the first green tariff was proposed by NV Energy in 2013, 31 green tariffs in 18 states have been approved or are pending approval. Green tariffs cater to customers' preference for a more direct financial connection to

renewable energy projects, ideally within the same service territory or grid distribution area, and typically drive new renewable energy projects within the same service territory.

Through green tariffs, traditional utilities may be able to offer renewable energy services as attractive as those that buyers are able to access in states where customers have direct access to suppliers. In some cases, green tariffs may also provide greater flexibility and lower transaction costs than alternatives.²

This issue brief provides detailed information on the green tariff offerings and proposals in the United States.

Figure 1 lists the states with pending or approved green tariffs to date.

The role of this issue brief and additional green tariff resources are outlined in Box 3.

Since the first green tariff was proposed by NV Energy in 2013, 31 green tariffs in 18 states have been approved or are pending approval.

BOX 2. COMPARING GREEN TARIFF SUBSCRIBER PROGRAMS AND COMMUNITY SOLAR

Subscriber programs, where the utility aggregates smaller customers to make a single, larger project more cost effective, may appear very similar to utility community solar,³ which is loosely defined as tariffs where multiple customers are virtually net-metered against a limited share of a local renewable energy project.

There are three key distinctions, however, that separate green tariff subscriber programs and utility community solar—the program intent, the amount of renewable energy available to access, and the use of net-metering for the credit of excess generation.

As previously noted, green tariffs were originally created for large-scale customers seeking to procure renewable energy. By contrast, community solar utility solutions were developed as a way for residential and commercial customers who could not install solar panels on their roof to access renewable energy. The size or access to renewable energy also differs between the two. Green tariffs typically offer customers access to renewable energy up to 100 percent of their load. Community solar program customers, however, tend to be capped by a limited share of a renewable energy project. This is not the case with green tariffs where customers do not accrue large positive energy balances.

For additional information on utility renewable energy products that are not considered green tariffs, see the **Technical Note** (Bonugli 2017).

SCOPE: UTILITY GREEN TARIFF OFFERS

This issue brief focuses on utility green tariff offerings.

As utilities work toward meeting customer demand for renewable energy, several green tariff models have emerged. Green tariff programs have taken roughly three forms to date:

- A sleeved power purchase agreement (PPA), which grants access to individual physical PPAs through the utility
- Subscriber programs, which allow multiple customers to subscribe to a portion of a large renewable energy project(s) while the utility holds the PPA
- Market-based rate programs, which allow for wholesale market participation through the utility

None of these green tariff forms requires the customer to pay the capital cost of the renewable energy facility. See the [Implementation Guide](#) for additional details on these emerging green tariff forms (Barua 2017).

The table excludes green pricing programs, which are offered at a premium charge on top of the full retail electricity rate. It also excludes utility programs that can be classified as community choice aggregation or community solar (see Box 2).

METHODOLOGY

The green tariff criteria and characteristics highlighted in this table include customer costs, facility flexibility, contract time commitment, program size limits, procurement lead,⁴ and risk management, among others. These are the characteristics that most often drive customers' purchasing decisions.

The data presented is compiled from expert partners' knowledge of existing and emerging green tariffs. WRI has also reviewed the public utility commission dockets as a primary resource and verified with utilities and customers whenever possible.

BOX 3. ABOUT THIS ISSUE BRIEF

The **Emerging Green Tariffs in U.S. Regulated Electricity Markets** issue brief provides detailed information on the green tariffs available in U.S. traditional, regulated electricity markets. The green tariff information captured in this issue brief serves as a primary source for our interactive [map](#), presents the renewable energy purchasing options offered to large-scale buyers by regulated electric utilities in each state across the United States.

The **Implementation Guide for Utilities: Designing Renewable Energy Products to Meet Large Energy Customer Needs** outlines the design consideration that utilities and regulators should address and establishes best practices for creating a successful green tariff.

Successful green tariffs, where customers have committed to purchase renewable energy through the program, are captured in WRI's **Green Tariff Deals Chart**.

The **Technical Note** describes the scope and analytical methodology for the renewable energy options identified in interactive map and the Green Tariff Deals Chart.

This table is regularly updated, but many utilities are moving forward quickly to offer new green tariffs. For complete and up-to-date details of each green tariff, see the appropriate docket or filing number listed in the table, or contact the utility and reference the [interactive map](#).

FIGURE 1
STATES WITH GREEN TARIFF PROGRAMS, OCTOBER 2019 (CONTINUED)

YEAR PROPOSED OR APPROVED	STATE	UTILITY	GREEN TARIFF PROGRAM	STATUS
2013	Nevada	NV Energy	Green Energy Rider, Schedule NGR	Approved
	North Carolina	Duke Energy	Green Source Rider, Rider GS	Concluded
2015	Utah	Rocky Mountain Power (RMP)	Service from Renewable Energy Facilities, Schedule 32	Approved
2016	Colorado	Xcel Energy	Renewable*Connect	Approved
	New Mexico	Public Service company of New Mexico (PNM)	Green Energy Rider, Rider No. 47	Approved
	Utah	RMP	Renewable Energy Purchases for Qualified Customers, Schedule 34	Approved
	Virginia	Dominion Energy	Schedule MBR	Approved
	Washington	Puget Sound Energy (PSE)	Long-Term Renewable Energy Purchase Rider, Schedule No. 139, branded as “Green Direct”	Approved
	Wyoming	Black Hills Energy	Large Power Contract Service	Approved
2017	Georgia	Georgia Power	REDI	Approved
	Nebraska	Omaha Public Power District (OPPD)	Schedule No. 261 M—Large Power—High Voltage Transmission Level—Market Energy	Approved
	Wisconsin	Madison Gas and Electric (MGE)	Renewable Energy Rider	Approved
2018	Kansas	Eergy Companies	Renewables Direct	Approved
	Kentucky	Kentucky Power	Renewable Power Option Rider	Approved
	Michigan	Consumers Energy Company	Voluntary Large Customer Renewable Energy Pilot Program	Approved

FIGURE 1

STATES WITH GREEN TARIFF PROGRAMS, OCTOBER 2019 (CONTINUED)

YEAR PROPOSED OR APPROVED	STATE	UTILITY	GREEN TARIFF PROGRAM	STATUS
2018	Missouri	Ameren Missouri	Renewable Choice Program	Approved
	Missouri	Evergy Companies	Renewables Direct	Approved
	South Carolina	Duke Energy	Green Source Advantage, Rider GSA	Proposal with the PUC
	Virginia	Dominion Power	Renewable Energy Supply Service, Schedule RG	Approved
	Virginia	Dominion Power	Rate Schedule MBR, Large General Service MBR	Proposal with the PUC
	Wisconsin	Wisconsin Electric Power Company	Dedicated Renewable Energy Resource (DRER)	Approved
	Wisconsin	Xcel Energy	Renewable*Connect	Approved
2019	Georgia	Georgia Power	Customer Renewable Supply Procurement (CRSP)	Approved
	Kentucky	LG&E-KU	Standard Rate Rider Green Tariff	Approved
	Kentucky	Duke Energy	Green Source Advantage, GSA	Proposal with the PUC
	Michigan	DTE Energy	Large Customer Voluntary Green Pricing (LCVGP) Program, Rider 19	Approved
	New Mexico	Public Service company of New Mexico (PNM)	Solar Direct	Proposal with the PUC
	North Carolina	Duke Energy	Green Source Advantage, Rider GSA	Approved
	Oregon	Portland General Electric	Green Future Impact	Approved
	Virginia	Dominion Energy	Schedule RF	Approved



01 GREEN TARIFF
PROGRAMS

COLORADO—XCEL ENERGY	
Tariff Name	Renewable*Connect, Schedule RC
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	Capped at 50 MW.
Tariff/Contract Structure	Xcel Energy enters into a 20-year PPA with solar facilities. Second contract between Xcel and customer for solar subscription assigns RE capacity share and costs.
Customer Cost Structure	<p>Standard retail rate applies plus Renewable*Connect charge and Renewable*Connect bill credit.</p> <p>Renewable*Connect charge, updated annually for new subscribers, consists of:</p> <ul style="list-style-type: none"> • The RE resource as negotiated in the PPA • The solar integration costs of intermittent solar generation • Program administration costs • A subscription risk adjustment fee <p>The 2019 Renewable*Connect charge (\$/kWh) varies per the term length:</p> <ul style="list-style-type: none"> • Month-to-month contract = \$0.0440 • Five-year term = \$0.04157 (rounding to \$0.042) • 10-year term = \$0.04077 (rounding to \$0.041) <p>Renewable*Connect bill credit (kWh), \$0.03700 in 2019, consists of an avoided energy credit, updated annually, and a fixed avoided capacity credit.</p> <p>The avoided energy credit (kWh), \$0.02308, is based on an approved qualifying facility energy component.</p> <p>The avoided capacity credit (kWh), \$0.01769, is based on the 2018 projection of a 50 MW solar resource over the 10 years following 2018.</p> <p>Fixed early termination fee for customers on a 5- or 10-year contract.</p>
Administrative Fee	Included in customer cost structure on a per kWh charge.
Value of RE Price Certainty	Customers lock in contract price and contract term length at the time of subscription; the credit is updated annually, and it is possible to see lower utility bills if the credit exceeds the charge.
Procurement Lead	Xcel negotiates with the solar facility or facilities and enters a PPA; customers can choose not to subscribe to the offering but do not have any control over the PPA price.

COLORADO—XCEL ENERGY	
Bundled RECs Management	Xcel will either retire RECs on behalf of the subscribing customer or transfer RECs to a Western Renewable Energy Generation Information System account.
Customer Facility Flexibility	<p>The contract can be assigned to a new meter if:</p> <ul style="list-style-type: none"> • New location is within Xcel’s service territory. • The subscription does not exceed 100% of customer’s load at new location. <p>If consumption during the first 12 months at the new meter is lower than the prior consumption, the contract will be readjusted to a participation level that matches the 12-month energy usage at the new meter; the customer will pay a prorated portion of the early termination fee.</p> <p>The original subscription term will continue to apply to the transferred subscription.</p>
Contract Time Commitment	Three options: month-to-month, five years, and 10 years; longer terms have lower prices.
Customer Limitations/ Eligibility	<p>Customers are on rate schedules R, RD, C, SG, SGL, PG, and TG.</p> <p>At the time of the customer’s initial subscription, renewal, or transfer, the maximum participation level is the lower of:</p> <ul style="list-style-type: none"> • 100% of their previous year’s usage; or • 10% of the total capacity of Renewable*Connect. <p>Corporate entities with multiple premises cannot subscribe to more than 40% of the total capacity of Renewable*Connect.</p> <p>Each corporate premise is limited to an allocation not to exceed 100% of that premise’s energy consumption.</p> <p>During the first eight weeks of the program, subscriptions are limited to residential and commercial class customers, then the program will be available to all retail customers.</p>
Aggregation of Customer Facility Demand	Not explicit in the filing.
Impact on Net Metering (On-Site Resources)	Customers can subscribe the portion of their consumption not already subscribed to other programs.

COLORADO—XCEL ENERGY	
RE Facility Limitations/ Eligibility	<p>Photovoltaic solar resource is 50 MW.</p> <p>Xcel has signed a PPA with a new 50 MW solar resource to have RE available as soon as possible.</p>
Commercial Risk Management	<p>Unsubscribed RE generated from the facility will be dispatched into the larger system though this will likely be at a lower price than Xcel pays for the PPA; the risk adjustment fee shifts some of this risk to the subscribing customers.</p> <p>Xcel retains the right to excess revenues limited to its prevailing weighted average cost of capital.</p> <p>If excess revenues collected exceed the weighted average cost of capital, customers will receive a credit back through the Renewable Energy Standard Adjustment.</p> <p>If the supplier fails to deliver, Xcel is not held liable.</p>
PUC Process	Approved November 9, 2016.
Status/RE Deals Signed	The first 50 MW tranche of solar is fully subscribed: ~10 MW serving residential customers and ~40 MW serving commercial and industrial (C&I) customers.
Docket Information	16A-0055E



GEORGIA—GEORGIA POWER	
Tariff Name	Commercial and Industrial REDI Schedule CIR -1
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	200 MW
Tariff/Contract Structure	<p>Customer enters into Customer Agreement with Georgia Power that outlines energy costs for RE resources, term length, and other material terms.</p> <p>Georgia Power enters into 30-year PPA with RE generator, selected through the Renewable Energy Development Initiative (REDI) RFP process (CIR Portfolio).</p>
Customer Cost Structure	<p>Standard general retail service applies, plus a CIR Portfolio Price minus an hourly credit.</p> <p>CIR Portfolio Price, on a fixed price per kWh basis:</p> <ul style="list-style-type: none"> • Levelized supply cost based on the portfolio of RE facilities • Levelized additional sum of 8.5% of the net present value of the net benefits realized from the C&I REDI Portfolio • Administrative costs <p>Credit, on an hourly basis: consists of pro rata share of the hourly amount of RE production from REDI Portfolio.</p> <p>No early termination fee with 180-day notice.</p>
Administrative Fee	<p>\$5,000 Notice of Intent (NOI) application fee.</p> <p>Administrative fees: Initial Administrative Fee plus Ongoing Administrative Fee.</p> <p>Initial Administrative Fee: \$0.00005 per kWh applied over contract term.</p> <p>Ongoing Administrative Fee:</p> <ul style="list-style-type: none"> • Subscription level 50 MW or less: \$0.001 per kWh • Subscription level 50 MW or greater: \$0.0005 per kWh
Value of RE Price Certainty	<p>Customers lock in contract price and contract term length at the time of subscription.</p> <p>Hourly credits are based on Georgia Power's hourly cost of incremental generation for each hour in which the CIR Portfolio produces energy.</p>
Procurement Lead	Georgia Power procures and operates resources.
Bundled RECs Management	RECs are retired by Georgia Power on customer's behalf.
Customer Facility Flexibility	No limitations defined in the filing; customer can work with utility to meet multiple facility requirements.

GEORGIA—GEORGIA POWER	
Contract Time Commitment	Ten, 15, 20, 25, or 30 years.
Customer Limitations/ Eligibility	Existing customers with annual peak demand of 3 MW or greater. Subscription level cannot exceed 100% of preceding annual consumption per facility.
Aggregation of Customer Facility Demand	Customers may aggregate premises to reach the 3 MW participant threshold, so long as aggregated demand exceeds 3 MW and premises are under a common ownership or control.
Impact on Net Metering (On-Site Resources)	Customers are allowed to participate in net metering.
RE Facility Limitations/ Eligibility	RE resources are procured through the REDI RFP process.
Commercial Risk Management	No requirements listed in the filing.
PUC Process	Approved August 1, 2017.
Status/RE Deals Signed	The program is fully subscribed—totalizing 177.5 MW. Customers include: Google, Johnson & Johnson, Target, and Walmart.
Docket Information	Docket 40161

GEORGIA—GEORGIA POWER	
Tariff Name	Customer Renewable Supply Procurement (CRSP)
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	1,000 MW – 600 MW available for existing customers and up to 400 MW for new or existing customers with new load additions.
Tariff/Contract Structure	Customer enters into Customer Agreement with Georgia Power that outlines energy costs for RE resources, term length, and other material terms. Georgia Power enters into 30-year PPA with RE generator(s). Additional details pending.
Customer Cost Structure	Standard general retail service applies, plus the CRSP Program participation price minus an hourly credit. Additional details pending.
Admin Fee	NOI fee pending.
Value of RE Price Certainty	Customers lock in contract price and contract term length at the time of subscription; the hourly credit is based on the actual hourly cost of incremental generation. It is possible to see lower utility bills if the credit exceeds the charge.
Procurement Lead	Up to 1,000 MW of RE resources to be procured and operated by Georgia Power.
Bundled RECs Management	RECs are retired by Georgia Power on customer's behalf.
Customer Facility Flexibility	600 MW procured for existing customers will be allocated pro rata; 400 MW procured for new or existing customers, with new load additions offered on a first-come-first-served basis.
Contract Time Commitment	Minimum 10 years.
Customer Limitations/ Eligibility	Existing customers with annual peak demand of 3 MW or greater. New or existing customers with new load additions 25 MW or greater. Subscription level cannot exceed 100% of preceding annual consumption per facility.
Aggregation of Customer Facility Demand	Customers may aggregate premises to reach the 3 MW or 25 MW participant threshold, so long as aggregated demand exceeds 3 MW or 25 MW and premises are under a common ownership or control.

GEORGIA—GEORGIA POWER	
Impact on Net Metering (On-Site Resources)	None.
RE Facility Limitations/ Eligibility	New RE resources greater than 3 MW.
Commercial Risk Management	Not applicable.
PUC Process	Approved July 29, 2019.
Status/RE Deals Signed	<p>Two RFP processes will be utilized. The first RFP is expected to be issued in 2020, seeking resources in service 2022 through 2023: the RFP will seek 300 MW for existing customers and up to 400 MW for new or existing customers with new load additions. The second RFP is expected to be issued in 2021, seeking resources in service 2023 through 2024: the RFP will seek 300 MW for existing customers and the remaining MW for new or existing customers with new load additions.</p> <p>Customers may submit an NOI identifying their proposed subscription level in MW, contract term length, and other requirements related to their interest in the program.</p>
Docket Information	Docket 42310



KANSAS—EVERGY (WESTAR ENERGY AND KCP&L)	
Tariff Name	Direct Renewable Participation Service (DRPS)—referred to as “Renewables Direct”
Tariff Type	Tariff; Subscriber Product
Pilot Size/Period	First tranche: 200 MW wind farm
Tariff/Contract Structure	<p>All charges, adjustments, and surcharges, except the Retail Energy Cost Adjustment (RECA), will be billed at the standard rates applicable to the customer’s rate class.</p> <p>Customer enters into a 20-year Participation Agreement for new wind energy secured and operated by Westar.</p> <p>The monthly amount subscribed will be a fixed kW amount in 500 kW increments up to 2,000 kW, and in 1,000 kW increments thereafter.</p>
Customer Cost Structure	<p>Customers pay a fixed Renewable Participation Charge rate—current charge under the approved Soldier Creek Wind Farm is 1.800¢ per kWh. The Renewable Participation Charge will replace the RECA Surcharge for the RE purchased.</p> <p>Any usage beyond the agreed amount under this service will be billed at the current authorized RECA rate.</p> <p>At the end of each calendar year, any excess generation will be credited to the customer’s bill at 80% of the Renewable Participation Charge rate. This credit is associated with excess energy produced by the customer’s subscription that cannot offset customer usage. Customers with recurring excess generation will have their contracted amount reduced to better match their usage.</p>
Administrative Fee	Administrative costs are included in the fixed price.
Value of RE Price Certainty	Customers realize an immediate price reduction with the replacement of the RECA charge(s).
Procurement Lead	Westar Energy will negotiate with facility and include the final program price within the commission-approved tariff.
Bundled RECs Management	Certification of renewable energy associated with the purchased wind energy under this service will be delivered to the customer.
Customer Facility Flexibility	Customer may maintain participation in this program when relocating facilities or service within Westar Energy’s territory.

KANSAS—EVERGY (WESTAR ENERGY AND KCP&L)	
Contract Time Commitment	20 years.
Customer Limitations/ Eligibility	Existing or new customers must have an average monthly peak demand of greater than 500 kW and be accepting service under any tariff subject to the RECA.
Aggregation of Customer Facility Demand	Customers may elect to aggregate accounts within the company's jurisdiction for qualification only, should available capacity allow for it.
Impact on Net Metering (On-Site Resources)	Intent is not to limit net-metering customers; customers participating in net metering may subscribe with net load if qualified.
RE Facility Limitations/ Eligibility	No limitations exist outside of Westar Energy's need to procure low-cost, renewable resources to supply subscribing customers with their desired energy product.
Commercial Risk Management	Not explicitly stated in filing.
PUC Process	Approved July 10, 2018.
Status/RE Deals Signed	The first 200 MW tranche is fully subscribed. customers include Ardent Mills, Bunge Milling, Cargill, Cox Communications, Evcon, Landoll Corp, Textron Aviation, Benedictine College, Kansas State University, University of Kansas, Washburn University, Sedgwick County Zoo, Sisters of Charity, Veterans Affairs Medical Centers, and municipalities.
Docket Information	Docket 18-WSEE-190-TAR

KENTUCKY—KENTUCKY POWER	
Tariff Name	Renewable Power Option (RPO) Rider
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	No limitations are defined in the filing.
Tariff/Contract Structure	<p>Participants choose the type of access to renewable energy:</p> <ul style="list-style-type: none"> • Option A: customers may purchase RECs at a premium price (Option A is not detailed in this table). • Option B: customers may contract with Kentucky Power to purchase energy and RECs from the renewable energy generator. <p>Option B: Terms are determined by customer and Kentucky Power.</p> <p>Customer may terminate service with 30-day notice.</p>
Customer Cost Structure	Option B: Charge determined by agreement between customer and Kentucky Power. Charge will reflect a combination of the firm service rates otherwise available to the customer and the cost of the renewable energy resource directly contracted for by the customer.
Administrative Fee	Not explicitly stated in filing.
Value of RE Price Certainty	Provides customers and the company with more flexibility to meet customers' renewable power needs.
Procurement Lead	The company will work collaboratively with the customer on Option B contracts.
Bundled RECs Management	REC management under Option B may vary by contract.
Customer Facility Flexibility	Not explicitly stated in filing.
Contract Time Commitment	Not explicitly stated in filing.
Customer Limitations/ Eligibility	Option B is available to customers taking metered service under the company's I.G.S. and C.S.-I.R.P., or multiple L.G.S. tariff accounts with common ownership under a single parent company that can aggregate multiple accounts to exceed 1,000 kW peak demand.
Aggregation of Customer Facility Demand	Accounts can be aggregated for purposes of qualifying for Option B.

KENTUCKY—KENTUCKY POWER	
Impact on Net Metering (On-Site Resources)	Proposed tariff RPO does not affect Kentucky’s net metering statute.
RE Facility Limitations/ Eligibility	Not explicitly stated in filing.
Commercial Risk Management	Not explicitly stated in filing.
PUC Process	Approved January 18, 2018.
Status/RE Deals Signed	The tariff has not been used to date.
Docket Information	Docket 2017-00179



KENTUCKY—LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY (LG&E—KU)	
Tariff Name	Standard Rate Rider Green Tariff
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	No limitations are defined in the filing.
Tariff/Contract Structure	<p>Participants choose the type of access to renewable energy:</p> <ul style="list-style-type: none"> • Option 1—RECs: customers may purchase RECs at a premium price through the Green Energy Program (Option 1 is not detailed in this table). • Option 2—Business Solar: customers may contract with LG&E—KU to develop and own a solar array, with the energy produced assigned to the customer (Option 2 is not detailed in this table). • Option 3—Renewable Power Agreement (RPA): customers may contract with LG&E—KU to purchase energy and RECs from the renewable energy generator. <p>Option 3—RPA: Customer enters into contract with LG&E—KU. LG&E—KU enters into contract with RE developer.</p> <p>RPA must be for 10 MW at a minimum and is capped at 50 MW.</p>
Customer Cost Structure	Option 3—RPA: Customer pays standard firm service rate, plus applicable riders and adjustment clauses, in addition to the charges and energy credits set in the written agreement. Program costs will reflect the renewable energy resource and include transmission costs to deliver the energy.
Administrative Fee	Not applicable.
Value of RE Price Certainty	Provides customers and the company with more flexibility to meet customers' renewable power needs.
Procurement Lead	LG&E-KU negotiates with the RE facility.
Bundled RECs Management	Option 3 – RPA: RECs are transferred to the customer.
Customer Facility Flexibility	Not explicitly stated in filing.
Contract Time Commitment	Equivalent to the generation purchase agreement. Minimum five years.
Customer Limitations/ Eligibility	<p>Option 3—RPA: customers must be taking service under standard rate schedules TODS, TODP, and RTS, and have a minimum monthly billing load of 10 MVA (or MW as is appropriate).</p> <p>Customers must not have any preexisting payment obligations.</p>

KENTUCKY—LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY (LG&E—KU)	
Aggregation of Customer Facility Demand	Not explicitly stated in filing.
Impact on Net Metering (On-Site Resources)	Not explicitly stated in filing.
RE Facility Limitations/ Eligibility	RE resource must be located in Kentucky, Indiana, Tennessee, Ohio, West Virginia, Virginia, Missouri, or Illinois, and must be delivered to the company's transmission system. The RE resource must be developed on or after approval of the program.
Commercial Risk Management	Not explicitly stated in filing.
PUC Process	Approved April 30, 2019.
Status/RE Deals Signed	Customer may participate by making a request to LG&E—KU's Account Representative, Call Center, Business Office, or through LG&E—KU's website enrollment form.
Docket Information	2018-0029 (LG&E) and Docket 2018-00294 (KU)

KENTUCKY – DUKE ENERGY	
Tariff Name	Green Source Advantage, Rider GSA
Tariff Type	Rider; Sleeved PPA and/or Market Based Rate
Pilot Size/Period	No limitations defined in the filing.
Tariff/Contract Structure	<p>Customer and Duke Energy enter into GSA Service Agreement outlining service terms and the rates and charges for the contract term per the GSA Program. The customer is responsible for paying the GSA Product Charge which is included on the utility bill and passed onto the facility owner and in return, the customer receives the GSA Bill Credit.</p> <p>Duke Energy Kentucky enters into a PPA with RE Supplier for the delivery of energy and capacity.</p>
Customer Cost Structure	<p>Standard general retail service plus the GSA Product Charge and admin costs, minus the GSA Bill Credit.</p> <p>GSA Product Charge: the negotiated PPA price (\$/kWh) multiplied by the energy produced by the GSA facility during the billing period.</p> <p>GSA Bill Credit: sum of all PJM credits and charges received by the GSA facility.</p> <p>Late payment charge of 5% of net monthly bill applied if payment is not received within 21 days of the mailing date of the bill.</p> <p>Early termination fee.</p>
Admin Fee	<p>\$2,000 application fee. Refundable only if there is insufficient capacity available.</p> <p>\$375/month per bill.</p>
Value of RE Price Certainty	Customer locks in contract price, credit option, and contract term length at the time of subscription.
Procurement Lead	Customer may request that Duke Energy identify and propose a facility or the customer may identify and propose to Duke Energy a GSA facility developed by the RE Supplier.
Bundled RECs Management	RECs will be transferred directly to customer from the RE Supplier. Terms of the transfer will be negotiated by the Customer with the RE Supplier.
Customer Facility Flexibility	Not explicit in the filing.
Contract Time Commitment	Maximum 20 years.

KENTUCKY – DUKE ENERGY	
Customer Limitations/ Eligibility	<p>New or existing nonresidential customers receiving concurrent service on another rate schedule, excluding service under outdoor lighting schedules, with</p> <ul style="list-style-type: none"> • minimum annual peak demand of 1 MW; or • multiple service locations that, in aggregate, are equal to or greater than 5 MW. <p>Annual capacity procured under the tariff cannot exceed 125% of customer’s aggregate maximum annual peak demand at service location(s).</p>
Aggregation of Customer Facility Demand	Customer may aggregate multiple locations to achieve the participant threshold, so long as each account is located in the same service territory as the RE facility.
Impact on Net Metering (Onsite Resources)	There are no eligibility restrictions for customers who are currently net-metering.
RE Facility Limitations/ Eligibility	New GSA facility(ies) must be located within PJM, and all renewable energy supply must be dedicated to the customer and sold into PJM.
Commercial Risk Management	Duke Energy is not liable for RE supply or associated delivery of RECs.
PUC Process	Filed with Kentucky Public Service Commission on September 3, 2019.
Status/RE Deals Signed	Customer must submit an application during the program enrollment period identifying the annual amount of renewable capacity to be developed on behalf of customer and contract term.
Docket Information	Docket 2019-00271

MICHIGAN—CONSUMERS ENERGY COMPANY	
Tariff Name	Large Customer Renewable Energy Pilot (LC-REP) Program
Tariff Type	Pilot Rider; Subscriber Product and/or Market-Based Rate
Pilot Size/Period	Open to customer enrollment for three years based on first in, first served.
Tariff/Contract Structure	<p>Participants choose the amount of utility involvement:</p> <ul style="list-style-type: none"> • Option A: Consumers Energy Provided Renewable Energy • Option B: Customer Provided, External PPA, Renewable Energy <p>Option A: customers elect a subscription level between 20% and 100% of their load, in 5% increments. Limited to 155,000 MWh annually, representing ~44 MW.</p> <p>The early termination fee is negotiated, unless subscription level is adopted by another eligible customer.</p> <p>Option B: Grants customers more active participation in selecting the RE. Customers remain full-service customers but can either build their own RE facility or obtain RE from a third party. Customer has two choices in doing so: Customer can elect the Market Index Provision for real-time pricing, or Consumers Energy can act as the administrator for the customer's renewable PPA under a separate energy management contract.</p>
Customer Cost Structure	<p>Option A, customer pays:</p> <ul style="list-style-type: none"> • Standard full-service tariff rate. • Renewable energy subscription charge: \$0.045 per kWh of load intended to match the levelized cost of the RE (includes cost of construction, operation and maintenance, return on equity, financing, property taxes, insurance, and substation costs). • Wind energy and capacity credit, monthly dollar-per-kWh amount, based on the value of the renewable energy and capacity settled in the Midcontinent Independent System Operator (MISO) market. The credit varies with monthly energy usage and subscription level. <p>Credits may be paid to customer via bill credit or direct payment, at Consumers Energy's discretion.</p> <p>Option B, customer pays:</p> <ul style="list-style-type: none"> • Standard full-service tariff rate (this includes all applicable power supply, delivery, transmission, and surcharges for electric load) • Market Index Provision (optional) • Administrative Charge (optional) <p>Under Option A or B, if a customer subscribes a minimum of 85% of their energy usage in the previous 12-month period to the program and takes service under General Primary Demand Rate Schedule (Rate GPD), then the customer may elect the Market Index Provision.</p>

MICHIGAN—CONSUMERS ENERGY COMPANY	
Customer Cost Structure (continued)	<p>Market Index Provision: a real-time hourly pricing rate that allows customers to substitute the Real Time Locational Marginal Price (RT-LMP) at Consumers Energy’s Zonal Load Node, plus a Market Settlement Fee of \$0.002 per kWh, for the Standard Rate power supply energy charges. Customers selecting the Market Index Provision shall be responsible for all capacity and noncapacity Power Supply charges included in the standard Full-service GPD Rate. Customers may select the Market Index Provision on an annual basis for each program year after providing a 60-day advance notice.</p> <p>Option B customers electing the Market Index Provision are responsible for securing their own power purchase agreements and offering the energy from that resource into the MISO market for payment.</p> <p>Early termination fee.</p>
Administrative Fee	Only if the customer elects to have Consumers Energy administer the sale of their renewable energy into the MISO market under Option B.
Value of RE Price Certainty	Customers who elect the Market Index Provision may reduce energy volatility by better aligning the cost of energy paid under the tariff with the value of the energy received as part of their participation.
Procurement Lead	<p>Option A: Consumers Energy supplies the RE resource from a designated facility.</p> <p>Option B: customers provide their own RE resource. Customers either build their own RE facility or enter into PPA with a third-party provider.</p>
Bundled RECs Management	<p>Option A: RECs are retired by Consumers Energy on customer’s behalf or transferred to the customer at their request.</p> <p>Option B: REC management may vary by contract.</p>
Customer Facility Flexibility	RE facility can service multiple customers or customer meters.
Contract Time Commitment	<p>Option A: three or 20 years. Subscription charge will increase by 2% with each enrollment after the initial or subsequent term ends, limited to four reenrollments. No increase for reenrollment under a 20-year service agreement.</p> <p>Option B: Term of PPA negotiated between the customer and renewable energy developer.</p>

MICHIGAN—CONSUMERS ENERGY COMPANY	
Customer Limitations/ Eligibility	<p>Option A: full-service electric customers with an annual maximum demand of at least 1 MW.</p> <p>Option B: full-service electric customers with new or expanding Primary Voltage load not previously served by the company, without a minimum or maximum annual subscription level. New Primary Voltage load at 2,400 volts or higher is considered incremental.</p> <p>Aggregated maximum demand must be in excess of 3 MW with a minimum of a 70% load factor.</p>
Aggregation of Customer Facility Demand	Customers may aggregate their accounts or meters to reach the 1 MW or 3 MW participant threshold.
Impact on Net Metering (On-Site Resources)	Customers are allowed to participate in net metering.
RE Facility Limitations/ Eligibility	<p>Option A: Utility-owned wind facility—limited to 155,000 MWh per year.</p> <p>Option B: Wind facility must be generated from a 100% certified renewable energy source physically located within MISO. No minimum or maximum generation requirement.</p> <p>Wind facilities under Option A and B must be placed into commercial operation after December 2017.</p>
Commercial Risk Management	Option A: In the instance of shortfall between energy generated and energy subscribed, participant may request Consumers Energy provide RECs as a cover.
PUC Process	<p>Option A was provisionally approved August 23, 2017, and approved and expanded to 155,000 MWh on October 5, 2018. Option B was approved on October 5, 2018.</p> <p>Revisions to Option A, including an increase to the amount and type of RE available, will be filed in docket U-18351. Revisions to Option B, to expand the resource type to also include solar, are also anticipated.</p>
Status/RE Deals Signed	<p>Enrollment is open from June 1 through September 30 each year.</p> <p>Option A: The 44 MW of wind is fully subscribed. Customers to date include General Motors and Switch.</p>
Docket Information	Case No. U-18393 and No. U-18351.

MICHIGAN—DTE ENERGY	
Tariff Name	Large Customer Voluntary Green Pricing (LCVGP) Program, Rider 19
Tariff Type	Pilot Rider; Subscriber Product
Pilot Size/Period	455 MW
Tariff/Contract Structure	<p>Customer enters into an agreement with DTE Energy.</p> <p>DTE will enter into a PPA with RE power producer following a competitive bid process.</p> <p>Customers can subscribe, at a minimum, 20% of monthly energy use for each enrolled account and up to 100% of total energy use, in 5% increments. After the initial year, customers may increase their subscription level annually for the remainder of their agreement based on availability.</p>
Customer Cost Structure	<p>Standard general service rate applies, including all surcharges and credits, plus a monthly subscription charge, minus an energy and capacity credit.</p> <p>Subscription Charge: flat fee (kWh) based on the levelized costs of service for resource. If new assets are contracted at a lower rate, the rate for the newer, lower-cost assets will be averaged for all subscribers. If future assets are contracted at a higher cost, the rate of the new assets will only apply to new subscribers.</p> <p>Energy Credit: monthly credit based on the average Real Time Locational Marginal Price for the resource.</p> <p>Capacity Credit: monthly credit based on annual MISO capacity auction pricing.</p> <p>Customers receiving at least 50% of their average monthly energy will be exempt from paying the company's renewable energy surcharge.</p> <p>Early termination fee.</p>
Administrative Fee	Not applicable.
Value of RE Price Certainty	Customers lock in contract price and contract term length at the time of subscription; the program cost can be adjusted down if the cost of future assets is lower.
Procurement Lead	DTE Energy procures and operates resources.
Bundled RECs Management	<p>RECs are transferred to registered participants in the Michigan Renewable Energy Certification System or retired on behalf of customer.</p> <p>RECs will not be calculated toward RPS requirements.</p>

MICHIGAN—DTE ENERGY	
Customer Facility Flexibility	RE resources can service multiple customers or customer meters. Customers are permitted to transfer their level of subscription to another eligible customer. The early termination fee would then be waived.
Contract Time Commitment	Five, 10, 25, or 30 years.
Customer Limitations/ Eligibility	Full-service customers with an aggregate annual maximum demand of at least 1 MW.
Aggregation of Customer Facility Demand	Customers may aggregate multiple facilities to reach the maximum demand requirement.
Impact on Net Metering (On-Site Resources)	Intent is not to limit the distribution generation tariff.
RE Facility Limitations/ Eligibility	Facilities must be in the state of Michigan.
Commercial Risk Management	Not explicitly stated in filing.
PUC Process	Approved January 18, 2019.
Status/RE Deals Signed	Multiple customers—Ford Motor Company, General Motors, the University of Michigan, the Detroit Zoo, and several others—have utilized 412 MW of wind in 2019.
Docket Information	Case No. U-20343

MINNESOTA—XCEL ENERGY	
Tariff Name	Renewable*Connect
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	<p>Blend of solar and wind resources to match system average on- and off-peak demand.</p> <p>Pilot Renewable*Connect: 50 MW of existing wind and 25 MW of existing solar. Pilot consisted of facilities already approved in order to offer customers participation as soon as possible.</p> <p>Renewable*Connect: 70 MW of existing wind and 30 MW of new solar for the Month-to-Month offer, and up to 200 MW, approximately 150 MW of new wind and 50 MW of new solar, for the Long Term offer.</p>
Tariff/Contract Structure	<p>Renewable*Connect includes two offers: Ongoing Month-to-Month and Long Term, including Standard Usage and a High Off-Peak Usage option for qualifying customers.</p> <p>The Month-to-Month option will include pilot Month-to-Month Renewable*Connect customers and existing Windsource customers, who will be offered the option to transfer into the program.</p> <p>Under both offers, customers can choose 100 kWh blocks or 100% of their annual load.</p>
Customer Cost Structure	<p>Customer usage is settled monthly.</p> <p>The blend of resources assigned to pilot tranche will determine the fixed kWh price of the program which replaces the fuel clause charge.</p> <p>Stated kWh price for customers based on:</p> <ul style="list-style-type: none"> • Resource cost • Capacity credit • “Neutrality adjustment” • Marketing and administrative costs <p>The Month-to-Month resource cost reflects a 10-year partially levelized cost for the wind and solar resources, which may be revised annually. The Long Term resource cost is based on wind and solar PPAs or the actual delivered costs, the combination of which will differ between Standard Usage and High Off-Peak Usage customers. High Off-Peak Usage customers will receive a higher portion of wind, which will likely be a lower cost.</p> <p>The capacity credit for Renewable*Connect customers reflects the market-based value of the capacity of the renewable energy project in the regional market. The capacity credit is calculated as the product of the MISO accreditation percentage for solar and the annual cost of a combustion turbine, and is credited to the customer per kWh they purchase from the project.</p>

MINNESOTA—XCEL ENERGY	
Customer Cost Structure (continued)	“Neutrality adjustment” (or “neutrality charge”) is an attempt to avoid cost shifting to nonparticipating customers; charge includes line and curtailment losses and the cost of integrating variable RE, among others. The Month-to-Month standard neutrality charge may be updated annually. The Long Term neutrality charge is subject to change upon Commission order and will vary for the Standard Usage and High Off-Peak Usage customers.
Admin Fee	Included in customer cost structure, charged on per kWh basis. Administrative costs are lower for longer-term customers and range from €0.1-0.55/kWh depending on contract length and year.
Value of RE Price Certainty	Fuel clause charge is currently ~20% of customers’ bills; fuel clause charge is replaced with a fixed charge for each year of the program which results in an “initial premium” but provides “certainty about . . . future energy costs” as it does not fluctuate with fuel costs (i.e., there is potential savings if the fuel clause charge increases substantially).
Procurement Lead	Xcel Energy solely procures the resource.
Bundled RECs Management	RECs are retired by Xcel Energy on customers’ behalf (above compliance requirements); RECs registered with M-RETS and Xcel Energy will pursue Green-e certification.
Customer Facility Flexibility	Switchable for customers moving within the service territory.
Contract Time Commitment	Long Term: maximum 10 years.
Customer Limitations/ Eligibility	Month-to-Month: new and existing residential, commercial, and industrial customers paying fuel clause charge. Long Term: new and existing C&I and municipal customers, as well as regional government authorities paying fuel clause charge. Customers with at least 62.5% off-peak usage for a specified premise may participate in the High Off-Peak Usage option. All other customers will utilize the Standard Usage option. Total energy from Renewable*Connect, participation in other RE programs, and net metering combined cannot exceed 100% of customer usage.
Aggregation of Customer Facility Demand	Subscriptions are on a premise-by-premise basis, and there are no size restrictions in the program; aggregation is not applicable.

MINNESOTA—XCEL ENERGY	
Impact on Net Metering (On-Site Resources)	Customers are allowed to participate in net metering.
RE Facility Limitations/ Eligibility	All resources are located in Minnesota.
Commercial Risk Management	<p>Month-to-month customers can terminate their contract at any time.</p> <p>Long Term customers are subject to an early termination penalty of \$10/MWh multiplied by the customer’s last 12 months of usage; they are not allowed to move the same load to another “tranche” of Renewable*Connect resources.</p> <p>Full cost of program is covered by customers; any unsubscribed energy from wind and solar resource recovers cost through the fuel clause charge to nonparticipating customers.</p>
PUC Process	Approved August 12, 2019.
Status/RE Deals Signed	<p>Renewable*Connect Government was filed in late September 2016 as a supplement to this program and approved February 27, 2017. It mirrors Renewable*Connect and was designed for state or local government agencies. Customers enroll in capacity-based shares, rather than a fixed amount of energy per month. The full capacity of the first tranche, 3.3 MW, is allotted to the Minnesota Department of Administration.</p> <p>The pilot Renewable Connect tranche—50 MW of existing solar and wind—is fully subscribed. Customers include the State of Minnesota, City of Minneapolis, and the University of Minnesota.</p> <p>The transition between the pilot and finalized Renewable*Connect is expected to occur between 2019–2021. During this transition, Xcel Energy will provide a short-term bridge option, where additional RECs will be purchased from MISO.</p> <p>For enrollment in the Long Term offer, customers who entered into a five- or 10-year contract under the Renewable*Connect pilot program will have priority. Remaining customers should submit a letter of interest to Xcel Energy.</p>
Docket Information	Docket E002/M-15-985 (Pilot) and Docket E002/M-19-33

MISSOURI—AMEREN MISSOURI	
Tariff Name	Renewable Choice Program
Tariff Type	Rider; Subscriber Product and/or Market-Based Rate
Pilot Size/Period	<p>One or more new wind project(s).</p> <p>Capped at 400 MW; additional capacity will be considered if the program becomes fully subscribed.</p> <p>Resource(s) will be contracted when a minimum aggregate RE service level of 50 MW has been reached.</p>
Tariff/Contract Structure	<p>Customer enters into RE Service Agreement with Ameren Missouri that includes a 15-year commitment (unless a different subscription term is established for a specific RE block) to a fixed-price renewable service offering.</p> <p>Customer may subscribe to RE Service for a portion of an RE Block in single percentage increments from 0 to 100% of the customer's Annual Usage, at the customer's discretion based on their own goals and value considerations.</p> <p>Ameren Missouri will procure RE resources through either a PPA or third-party build to transfer, with sale of asset for Ameren Missouri to own.</p>
Customer Cost Structure	<p>Customer is subject to charges associated with existing service, including the Fuel Adjustment Clause and Energy Efficiency Investment Charge, if applicable.</p> <p>Under the program, the customer is then subject to an additional charge or credit—the customer Monthly RE Adjustment.</p> <p>Customer Monthly RE Adjustment: an adjustment that is calculated on a monthly basis. The adjustment represents the net financial settlement of each customer's subscribed portion of the wind resource in wholesale energy markets, plus the small administrative cost recovery component. If Ameren Missouri owns the wind asset, the adjustment will also include a risk premium of \$0.50/MWh.</p> <p>The adjustment will be based on the metered output of the wind resource(s) multiplied by the customer's RE Allocation Factor or the percentage of energy that was produced by the customer's share of the wind resource, which is then multiplied by the difference between the RE Price and the Wholesale Market Price.</p> <p>The adjustment will appear on the first monthly customer bill issued after the first month of operation of the wind generation and will continue monthly thereafter.</p> <p>The RE Price for each RE Block, in \$/MWh, consists of the RE Resource Price for a singular resource and the average RE Resources Prices for aggregated resources.</p>

MISSOURI—AMEREN MISSOURI	
Customer Cost Structure (continued)	The termination fee is calculated by looking at the average of the customer Monthly RE Adjustments the customer experienced over the 12-month period prior to termination and multiplying that monthly average by the number of months remaining in the term of the agreement.
Administrative Fee	Administrative charge: \$0.05–\$0.35 per MWh. Included in customer’s monthly RE adjustment.
Value of RE Price Certainty	Customers lock in contract price at the time of subscription. With the adjustment, it is possible to see lower utility bills if the wholesale market price for that month exceeded the RE price.
Procurement Lead	Ameren Missouri negotiates with the wind developers and procures resources; customers can choose to subscribe at the offered fixed price.
Bundled RECs Management	The RECs created by the generation of energy from the renewable resource will be retired by the company in the North American Renewables Registry (NARR) system on behalf of subscribing customers. RECs will not be used for any other purposes including for the company’s compliance with Renewable Energy Standard requirements.
Customer Facility Flexibility	Customers are permitted to transfer their subscription to new or different service accounts with Ameren Missouri if there is sufficient use to warrant subscription to the RE Service Level being transferred, or to other similar customers if interested parties can be identified.
Contract Time Commitment	15-year term of subscription, unless a different subscription term is established for a specific RE block.
Customer Limitations/ Eligibility	Two categories of participation: <ul style="list-style-type: none"> • Any nonresidential customer served under rate classifications 3(M)—Large General Service, 4(M)—Small Primary Service, or 11(M)—Large Primary Service that has at least 2.5 MW of demand, either at a single location or aggregated across a number of accounts • Any account of a governmental entity (i.e., county, city, town, or village) regardless of size

MISSOURI—AMEREN MISSOURI	
Aggregation of Customer Facility Demand	<p>Aggregation of meters by a single nongovernmental entity customer is permitted to meet the 2.5 MW minimum.</p> <p>Aggregation between different customers is not allowed, except as may be provided for with respect to customers that are affiliates of each other in the applicable RE Service Agreement.</p>
Impact on Net Metering (On-Site Resources)	Intent is not to limit net metering customers; customers participating in net metering may subscribe with net load.
RE Facility Limitations/Eligibility	Limited to wind projects located within MISO, with a preference for those within Missouri.
Commercial Risk Management	<p>At the company's discretion, customers may be deemed ineligible for the program if they have received a disconnection notice within 12 months preceding their application.</p> <p>If RE service is oversubscribed in relation to the available RE block, the customers will be subscribed in order of execution of RE Service Agreement.</p>
PUC Process	Approved June 27, 2018.
Status/RE Deals Signed	Enrollment closed on December 31, 2018, and Ameren received full nonbinding interest from customers.
Docket Information	Docket ET-2018-0063

MISSOURI—EVERGY (WESTAR ENERGY AND KCP&L)	
Tariff Name	Renewable Energy Rider, Schedule RER—referred to as “Renewables Direct”
Tariff Type	Rider; Subscriber Product and/or Market-Based Rate
Pilot Size/Period	Minimum 100 MW and maximum 200 MW.
Tariff/Contract Structure	Customer enters into a Participation Agreement with Evergy. Customer may subscribe in single percentage increments, up to 100% of the customer’s annual usage.
Customer Cost Structure	Standard service rate applies plus a Renewable Adjustment (RA) charge or credit. The RA is based upon the sale of the metered output of the renewable resource(s) into the wholesale market and is determined by: $(RMO \times SS) \times (SC - FMP)$. RMO (MWh): metered output from the renewable resource at the market node. Subscription Share (SS): determined at enrollment and reflects the proportion of the resource subscribed to, taking into consideration the annual capacity of the resource. Subscription Charge (SC) (\$/MWh): determined at enrollment and consists of the delivered price per MWh of the renewable resource plus the administration charge. Final Market Price (FMP) (\$/MWh): all market revenues and charges from selling into the wholesale market, divided by the actual metered hourly production for the calendar month. Customer must pay early termination fee, unless another eligible customer assumes the obligation for the renewables resource prior to termination date.
Administrative Fee	20-year Participation Agreement: \$0.10 per MWh (RMO). All other Participant Agreements: \$0.30 per MWh (RMO).
Value of RE Price Certainty	It is possible for customers to receive a lower cost than their standard rate.
Procurement Lead	Evergy leads procurement. Resource Procurement Periods will occur twice per calendar year, at a minimum, to meet renewal needs or the needs of Participation Agreements on the waiting list.
Bundled RECs Management	RECs will be transferred to the customer annually or per the customer’s request if requested. Otherwise, they will be retired on behalf of the customer.

MISSOURI—EVERGY (WESTAR ENERGY AND KCP&L)	
Customer Facility Flexibility	Participants who move to another location within the company's Missouri service territory may request transfer of their subscription, provided the total kWh of the subscribed amount is less than the new location's average annual historical usage (actual or company estimated). If the existing subscription level exceeds the allowed usage amount at the new location, the subscription will be adjusted down accordingly.
Contract Time Commitment	Five, 10, 15, or 20 years. Customers subscribing to more than 20% of the resource will be required to commit to a minimum term of 10 years.
Customer Limitations/Eligibility	Nonresidential customers currently receiving permanent electric service on Schedule SGS, MGS, LGS, LPS, SGA, MGA, LGA, or PGA, with an annual average monthly peak demand greater than 200 kW. Customer accounts that participate in unmetered, lighting, net metering, or time-of-use service are not eligible for service under the RER tariff.
Aggregation of Customer Facility Demand	At Evergy's sole approval, aggregation is permitted for: <ul style="list-style-type: none"> • Customers that have an aggregate electric load of at least 2.5 MW based upon peak annual demand and an average of 200 kW per account; or • Governmental or municipal customers.
Impact on Net Metering (On-Site Resources)	Under this rate, net metering is not permissible.
RE Facility Limitations/Eligibility	Facilities will be new and located within SPP. Wind and solar facilities are top of considerations.
Commercial Risk Management	Customer bears all risks associated with market volatility.
PUC Process	Approved November 26, 2018.
Status/RE Deals Signed	The program is open for enrollment now.
Docket Information	Docket ER-2018-0145 and Docket ER-2018-0146

NEBRASKA—OMAHA PUBLIC POWER DISTRICT (OPPD)	
Tariff Name	Schedule No. 261 M—Large Power—High Voltage Transmission Level—Market Energy
Tariff Type	Tariff; Market-Based Rate
Pilot Size/Period	No limitations defined in the filing.
Tariff/Contract Structure	<p>Schedule No. 261 M is an extension of Rate 261 that enables large-power, high-voltage-transmission-level customers access to renewable energy, by either contracting through the utility or independently, at an MBR.</p> <p>OPPD will work with the customer to meet individual requirements.</p>
Customer Cost Structure	<p>Monthly rate:</p> <ul style="list-style-type: none"> • Service Charge: \$10,000 • Demand Charge: \$22.45 per kilowatt • Energy Charge: kWh consumed in any given hour multiplied by the appropriate cost to purchase energy from the Southwest Power Pool (SPP) for that hour • Fuel and Purchased Power Adjustment (from Schedule No. 461) <p>Minimum monthly bill applicable 18 months from initial service date:</p> <ul style="list-style-type: none"> • \$495,000 for customers taking service at 161,000 volts • \$4,500,000 for customers taking service at 345,000 volts <p>Late payment charge: 4% of monthly rate.</p>
Administrative Fee	The administration fee is built into the service charge.
Value of RE Price Certainty	By pricing the energy component of the customer bill at an hourly SPP market rate, this tariff can be combined with the generation from a renewable asset in order to partially or fully hedge the price risk typically associated with “contract for differences” tariffs and riders.
Procurement Lead	<p>Customers are able to contract for their renewable energy independently or can work with OPPD to secure this energy on their behalf.</p> <p>Only if the customer decides to take service under OPPD’s rate rider 499 would OPPD be the signatory to the purchase power agreement.</p>
Bundled RECs Management	REC management is arranged with the developer.

NEBRASKA—OMAHA PUBLIC POWER DISTRICT (OPPD)	
Customer Facility Flexibility	<p>RE resources can service multiple customers or meters; the District determines point(s) of delivery using information provided by customers regarding their requirements and determines metering points based on District requirements. Meters located away from the service point may affect charges.</p> <p>All transfers between sources must be performed as open transition transfers.</p> <p>Reconnection charge is equal to the minimum monthly charge for the preceding 12 months due to OPPD.</p>
Contract Time Commitment	<p>Customers must remain on this tariff for a minimum of 12 consecutive months.</p> <p>If the customer relies on OPPD to be signatory to a renewable PPA under rate rider 499, that rate contract will be in effect for the duration of the PPA.</p>
Customer Limitations/ Eligibility	<p>Customer in OPPD's Service Area taking service at a nominal standard voltage of 161,000 volts or 345,000 volts and owns its electric substation for the delivery of the service.</p> <p>Minimum demand of 20,000 kW for service at 161,000 volts or a minimum of 200,000 kW for services at 345,000 volts each month.</p> <p>A ramp-up period of 18 months is allowed before the minimum usage requirement begins.</p>
Aggregation of Customer Facility Demand	<p>Customers' high-voltage service must be measured by the District at a single metering; there is no aggregation of customer demand unless a customer takes emergency or special service in accordance with OPPD's Service Regulations.</p>
Impact on Net Metering (On-Site Resources)	<p>Under this rate, net metering is not permissible.</p>
RE Facility Limitations/ Eligibility	<p>No limitations. Customer is responsible for determining the technological and financial risks associated with renewable technology chosen. If customer chooses Schedule 499, OPPD will choose the lowest cost renewable option.</p>
Commercial Risk Management	<p>All customers must be in good credit standing as determined by OPPD policy.</p> <p>District assumes no liability for customer owned or contracted facilities.</p>
PUC Process	<p>Approved January 12, 2017.</p>
Status/RE Deals Signed	<p>Facebook has utilized the tariff for a total of 310 MW: a 200 MW wind project in 2017 and a 110 MW wind project in 2018.</p>
Docket Information	<p>January 12, 2017, Board Actions</p> <p>OPPD Rate Manual</p>

NEVADA—NV ENERGY	
Tariff Name	Green Energy Rider, Schedule NGR
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	Capped at 250,000 MWh although NV Energy can choose not to count special contracts against the total.
Tariff/Contract Structure	Two options for commercial customers: <ul style="list-style-type: none"> • Contract directly with NV Energy for 50% or 100% of monthly electricity usage. • Customer and NV Energy enter special contract for dedication of new or existing RE resources to the customer (this table focuses on option 2, which bundles energy and RECs).
Customer Cost Structure	Standard “otherwise applicable rate schedules” apply plus the full cost of the specific facility on a kWh basis. The NGR Rider rate for small customers is the 12-month average cost of the utility RE resources less the base tariff energy rate and the standard temporary RE development charge (recalculated quarterly). Special contract customers negotiate a cost structure that ensures there is no cost shifting to other ratepayers. The agreement requires approval by the PUC.
Administrative Fee	Cost recovery will be determined in the PUC review of the special contract.
Value of RE Price Certainty	Unspecified in the filing whether the NGR rider can be negative for special contract customers and appear as a bill credit against the otherwise applicable rate schedules. Contracts to date have avoided an explicit credit in any billing period but have utilized long-term avoided cost projections as a credit against long-term solar PPA prices. Protection from fuel clause adjustments may also be included in negotiations to deliver more of the fixed price value of RE.
Procurement Lead	In practice, procurement has been collaborative between the utility and customers.
Bundled RECs Management	RECs will be retired against the RPS requirement for the customer’s load first. RECs will then be retired for the incremental energy sold under the NGR beyond the RPS requirement.
Customer Facility Flexibility	Not defined in filing but designed primarily for large facilities rather than retail meters.
Contract Time Commitment	Negotiated but not less than two years.

NEVADA—NV ENERGY	
Customer Limitations/ Eligibility	<p>Northern Nevada: GS-2 meters or larger, demand between 50 and 500 kW or monthly usage larger than 10,000 kWh.</p> <p>Southern Nevada: LGS-1 meters and larger, monthly usage larger than 3,500 kWh.</p> <p>Customers can subscribe a portion or all of their monthly energy consumption.</p>
Aggregation of Customer Facility Demand	Not explicit in the filing, but limitations are described by meter, so aggregation is unlikely.
Impact on Net Metering (On-Site Resources)	NV Energy is not prohibited from also accepting net-metered energy from customers.
RE Facility Limitations/ Eligibility	<p>The power can be owned or procured by NV Energy.</p> <p>No geographic limitations seem to be explicitly set.</p>
Commercial Risk Management	<p>All contract risk falls on the customer.</p> <p>PUC must approve the contract demonstrating benefits to the customer, NV Energy, and nonparticipating customers.</p>
PUC Process	<p>Approved September 9, 2013.</p> <p>NV Energy applied to extend the special contract option of the rider to Southern Nevada via docket 14-0631; the PUC approved November 13, 2014.</p>
Status/RE Deal Signed	<p>Apple has utilized the tariff for a total of 320 MW: 20 MW of solar in 2013 (Docket 13-07005), 50 MW of solar in 2015 (Docket 15-11025), 200 MW of solar in 2017 (Docket 17-02007), and 50 MW of solar in 2018 (Docket 17-11002).</p> <p>Switch has utilized the tariff for a total of 179 MW: 100 MW of solar in 2015 (Docket 15-08005) and 79 MW of solar in 2015 (Docket 15-11028).</p> <p>City of Las Vegas renewable energy agreement approved in Docket 15-11026.</p>
Docket Information	Docket 12-11023 (Northern Nevada) and 14-06031 (Southern Nevada)

NEW MEXICO—PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)	
Tariff Name	Green Energy Rider, Rider No. 47
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	Initial and additional renewable procurements require commission approval.
Tariff/Contract Structure	<p>Customer enters into Special Service Contract with PNM, subject to approval by the New Mexico Public Regulation Commission.</p> <p>Contract minimum demand is 10 MW of RE.</p> <p>PNM makes necessary renewable procurement, which can be either owned or contracted through a PPA.</p>
Customer Cost Structure	<p>Special Service Rate, No. 36B, applies plus Green Energy rate; this rate recovers customer cost, allocated transmission, and production costs along with any fuel costs.</p> <p>Green energy rate consists of all costs associated with the initial RE procurements and the cost of any additional RE procurement.</p> <p>Excess Energy Production Credit for the amount of RE produced in excess of the amount consumed in each hour of the billing period, based on the Palo Verde market price during these hours.</p> <p>Early termination fee.</p>
Administrative Fee	None.
Value of RE Price Certainty	Not explicit in the filing.
Procurement Lead	Customer and utility work collaboratively to identify appropriate RE resources. Customer may initiate procurement of additional RE.
Bundled RECs Management	<p>RECs are registered with Western Renewable Energy Generation Information System on customer's behalf.</p> <p>If customer's usage exceeds energy supplied under the Initial Solar Facilities PPA (and any additional renewable energy procurement agreement), customer may elect to have PNM procure RECs equal to excess use from PNM at the cost to the customer.</p>
Customer Facility Flexibility	Customer may not move between sites.
Contract Time Commitment	Special Service Contract must have the same term as the customer's payment obligation for the RE procurements.

NEW MEXICO—PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)	
Customer Limitations/ Eligibility	<p>Only new customers that cause at least 10 MW of renewable resources to be acquired by PNM.</p> <p>Customer must achieve a load factor of at least 75%.</p>
Aggregation of Customer Facility Demand	Aggregation is not allowed.
Impact on Net Metering (On-Site Resources)	No limitations are defined in the filing.
RE Facility Limitations/ Eligibility	<p>RE secured under Additional Renewable Energy Procurements open to PNM, PNMR, or other third parties.</p> <p>RE must adhere to the requirements governed by the Federal Energy Regulatory Commission generation interconnection process.</p>
Commercial Risk Management	<p>Customer is liable for early termination payments on any remaining RE procurement obligations.</p> <p>In the event of a delay or failure to deliver RE or RECs, PNM will offset the costs to supply RE from an alternative source and the equivalent RECs with proceeds from damages, credit support, or other compensation from the supplier who failed to deliver.</p>
PUC Process	Approved August 17, 2016.
Status/RE Deals Signed	Facebook has utilized the tariff for a total of 396 MW: 30 MW of solar and 216 MW of wind in 2017, and 150 MW of solar in 2018 under three additional contracts.
Docket Information	Docket 16-00191-UT

NEW MEXICO—PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)	
Tariff Name	Voluntary Solar Renewable Energy Program—Solar Direct for Governmental and Large Commercial customers, Rider No. 50
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	50 MW (30 MW reserved for Governmental customers)
Tariff/Contract Structure	<p>Voluntary Renewable Energy Program supplies customers with solar energy beyond that what is required for RPS compliance.</p> <p>Customer and PNM enter into a Service Agreement, which establishes the subscription period, the rate, early termination fee, and other relevant terms and conditions related to the Voluntary Renewable Energy Program.</p> <p>PNM makes necessary renewable procurement, which can be either owned or contracted through a PPA.</p>
Customer Cost Structure	<p>Standard applicable rates and riders apply, plus the Contract Rider Rate plus/minus charges and credits related to the production and allocation of RE.</p> <p>Contract Rider Rate will be \$0.02173/kWh over the term of the Service Agreement.</p> <p>Monthly charges and credits:</p> <ul style="list-style-type: none"> • Monthly Solar Production Charge • Monthly Administrative Charge • Monthly WREGIS Fee to retire RECs • Fuel and Purchased Power Credit • Non-Fuel Variable Cost Credit as approved in the last general rate case • Renewable Portfolio Standard Cost Credit <p>Early termination fee. This ensures that the nonparticipating customers will not subsidize the program.</p>
Administrative Fee	Administrative charge: \$0.0553758 (\$/kW-month).
Value of RE Price Certainty	Customers can lock in portion of their usage at a fixed price for 15 years.
Procurement Lead	Customer and utility work collaboratively to identify appropriate RE resources.
Bundled RECs Management	RECS are retired or transferred to customer's Western Renewable Energy Generation Information System account on customer's behalf.
Customer Facility Flexibility	Customers are permitted, with PNM's approval, to transfer all or a portion of their subscription.

NEW MEXICO—PUBLIC SERVICE COMPANY OF NEW MEXICO (PNM)	
Contract Time Commitment	15-year minimum.
Customer Limitations/ Eligibility	Governmental customers receiving service from PNM and customers receiving retail rate from PNM on Schedules 3B, 3C, 3D, 3E, 4B, 5B, 15B, 30B, and 35B with a monthly average Aggregated Billable Demand of at least 2,500 kW. Customer's subscription may not exceed 60% of the capacity of the solar facility.
Aggregation of Customer Facility Demand	Customers may aggregate to reach the 2,500 kW requirement.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/ Eligibility	Solar facility or facilities that are procured in addition to RPS requirements.
Commercial Risk Management	Customer assumes the risk associated with production and future fuel prices.
PUC Process	Proposed May 31, 2019.
Status/RE Deals Signed	Tariff has not yet been approved by the commission. Customer must submit and execute a NOI indicating RE subscription size. For the current 50 MW resource, customers have already submitted an NOI. Pending Commission approval, customers will then execute the Service Agreement.
Docket Information	Docket 19-00158-UT

NORTH CAROLINA—DUKE ENERGY	
Tariff Name	Green Source Rider, Rider GS
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	Capped at 1,000,000 MWh and new applications will not be received after December 31, 2016.
Tariff/Contract Structure	<p>Customer makes request and commitment for a certain amount of RE.</p> <p>Duke will dedicate output from one of its facilities or procure RE through a PPA with an independent facility to try to match the source with a customer’s annual demand, RECs, and contract term.</p> <p>If supplier fails to deliver, Duke will attempt to find a replacement.</p>
Customer Cost Structure	<p>Standard general service tariff and all riders apply plus the total cost of the PPA and RECs (Rider GS) determined on an hourly basis.</p> <p>Customer receives bill credit for “all in” avoided capacity and energy costs for the RE produced over the month to offset the premium.</p> <p>Early termination fee is equal to the net present value of the remaining PPA cost.</p>
Administrative Fee	<p>\$2,000 application fee.</p> <p>\$500 fee per month, plus 0.02 cents per kWh surcharge on RE purchased.</p>
Value of RE Price Certainty	<p>No exemption from the fuel price surcharges or any other riders; however, the allocation of actual fuel costs to GS customers as a class will be reduced by the fuel-related component of the avoided energy credit and the balance of actual fuel costs allocated instead to non-GS customers.</p> <p>Bill credit for the avoided cost of the RE cannot exceed the actual cost of PPA and RECs.</p>
Procurement Lead	Duke will negotiate with the facility, but customers have the right to review the offer and the estimated bill credit and not go forward.
Bundled RECs Management	Retired by Duke on behalf of the customer using NC-RETs.
Customer Facility Flexibility	Customers do not expect Duke to allow moving contracts between meters.
Contract Time Commitment	Negotiated. Three to 15 years.

NORTH CAROLINA—DUKE ENERGY	
Customer Limitations/ Eligibility	<p>DEC NC customers only—former Progress service territory is not eligible.</p> <p>Nonresidential customers, OPT-V tariffs only (previous OPT-G, OPT-H OPT-I).</p> <p>OPT-V: Optional power service, time of use with voltage differential.</p> <p>New loads of at least 1 MW since July 30, 2012.</p>
Aggregation of Customer Facility Demand	Customers may aggregate multiple facilities for the contract and to reach the 1 MW floor.
Impact on Net Metering (On-Site Resources)	No limitations are defined in the filing.
RE Facility Limitations/ Eligibility	<p>Duke Carolina RE facility or an independent RE facility.</p> <p>RE facilities operational on or after 2007.</p> <p>Solar facility must be located within Duke Energy Carolinas jurisdiction, either DEC NC or DEC SC. Formerly Progress service territories are excluded.</p>
Commercial Risk Management	<p>Customer must provide a letter of credit, surety bond, or other form of security for payment of all costs (PPA, RECs, etc.).</p> <p>All contract risk falls on customer.</p>
PUC Process	Approved December 19, 2013.
Status/RE Deals Signed	<p>Google solar project in Rutherford County; two additional solar projects with an anonymous company; and one additional customer has entered into four renewable energy agreements on a confidential basis.</p> <p>Although the three-year pilot has concluded, existing customers may continue to utilize the Green Source Rider.</p>
Docket Information	Docket E-7, Sub 1043

NORTH CAROLINA—DUKE ENERGY	
Tariff Name	Green Source Advantage, GSA
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	<p>New RE capped at 600 MW.</p> <p>Portions of the program are initially reserved for a three-year period after program approval: 250 MW for the University of North Carolina (UNC) and 100 MW for military customers.</p> <p>All other eligible customers: 160 MW to Duke Energy Carolinas (DEC) and 90 MW to Duke Energy Progress (DEP).</p> <p>Any reserved capacity not subscribed to by UNC and military customer will be made available for subscription by any eligible GSA customer.</p> <p>Five-year program.</p>
Tariff/Contract Structure	<p>Customer, Duke Energy, and RE Supplier where applicable enter into GSA Service Agreement outlining service terms and the negotiated rates and charges for the contract term per the GSA Program. The customer is responsible for paying the GSA Product Charge to the facility owner and, in return, the customer receives the GSA Bill Credit.</p> <p>Duke Energy will enter into a second contract, the GSA PPA, with RE supplier for the delivery of energy and capacity. The GSA PPA price will be equal to the bill credit selected by the customer.</p>
Customer Cost Structure	<p>Standard general retail service plus the GSA Product Charge and admin costs, minus the GSA Bill Credit.</p> <p>GSA Product Charge: the energy produced by the RE facility multiplied by the cost outlined in the GSA Service Agreement.</p> <p>GSA Bill Credit: customer can elect either the avoided cost bill credit or the hourly rate bill credit.</p> <p>Avoided cost bill credit or “Administratively Established Avoided Cost Bill Credit” is equal to the fixed levelized avoided energy and capacity rate as approved by the Commission.</p> <p>DEC Hourly rate bill credit or “Hourly Marginal Avoided Cost Bill Credit” is applicable to each hour and varies with the service territory:</p> <ul style="list-style-type: none"> • DEC hourly rate bill: Hourly Energy Charge, equal to the expected marginal production cost and other related costs, plus the Rationing Charge, equal to the marginal capacity cost during hours with generation constraint • DEP hourly rate bill: Marginal Energy Cost (kW/hr), including marginal fuel and variable operating and maintenance expenses, plus the Tiered Capacity Charge (kW/hr) <p>The hourly rate cannot be lower than zero.</p> <p>Early termination fee.</p>

NORTH CAROLINA—DUKE ENERGY	
Admin Fee	\$2,000 application fee. Refundable only if there is insufficient capacity available. \$375/month, plus \$50 per billed account.
Value of RE Price Certainty	Customers lock in contract price, credit, and contract term length at the time of subscription. The customer is shielded from increases to the standard energy charge, including power cost adjustments, etc.
Procurement Lead	Customer shall identify and propose to Duke Energy a GSA facility developed by the RE Supplier, either Duke Energy, a third-party developer, or a Duke Energy affiliate.
Bundled RECs Management	RECs will be transferred directly to customer from the RE Supplier per the GSA Service Agreement. Terms of the transfer will be negotiated by the customer with the RE Supplier.
Customer Facility Flexibility	Multiple customers could negotiate with a single RE supplier and share a single RE facility of their choosing.
Contract Time Commitment	Avoided cost bill credit: two, five, 10, 15 or 20 years. Hourly rate bill: Maximum 20 years.
Customer Limitations/ Eligibility	North Carolina military customers, University of North Carolina system customers, and large nonresidential customers. Large nonresidential customers receiving concurrent service from DEC or DEP must have: <ul style="list-style-type: none"> • Contract demand equal to or greater than 1 MW; or • Multiple service locations that, in aggregate, are equal to or greater than 5 MW. Annual capacity developed or procured under the tariff cannot exceed 125% of customer's aggregate maximum annual peak demand at service location(s).
Aggregation of Customer Facility Demand	Customer may aggregate multiple locations to achieve the 5 MW participant threshold, so long as, each account is located in the same service territory as the RE facility.
Impact on Net Metering (On-Site Resources)	There are no eligibility restrictions against customers who are currently net metering.

NORTH CAROLINA—DUKE ENERGY	
RE Facility Limitations/ Eligibility	<p>GSA facility must be located within Duke Energy’s service territory (DEC or DEP) in either North Carolina or South Carolina, and in the same service territory as the customer’s accounts.</p> <p>Facility must have completed the System Impact Study under the North Carolina Interconnection Procedures (NCIP) or the South Carolina Generator Interconnection Procedures (SC GIP) to interconnect.</p>
Commercial Risk Management	All contract risk falls on customer.
PUC Process	Approved August 5, 2019.
Status/RE Deals Signed	<p>Customer must submit an application during the program enrollment period. The application must identify: the annual amount of RE to be developed or procured on behalf of the customer, the RE Supplier, contract term, and the bill credit option.</p> <p>Along with the application, customer must submit a standard-form term sheet identifying the GSA facility, facility owner, and the negotiated price.</p> <p>The initial enrollment period to apply to the reserved capacity is expected to open October 1, 2019. Enrollment for the remaining capacity will follow.</p>
Docket Information	<p>Docket E-2 Sub 1170 Duke Energy Carolinas</p> <p>Docket E-7 Sub 1169 Duke Energy Progress</p>



OREGON—PORTLAND GENERAL ELECTRIC (PGE)	
Tariff Name	Green Energy Affinity Rider (GEAR), Schedule 55, branded as “Green Future Impact”
Tariff Type	Rider; Subscriber Product
Pilot Size/ Period	Current cap is 300 MW: 100 MW under the PGE Supply Option and 200 MW under the Customer Supply Option.
Tariff/Contract Structure	<p>Participants choose the extent of utility involvement:</p> <ul style="list-style-type: none"> • PGE Supply Option: competitive bid process determines RE facilities. • Customer Supply Option: customer identifies RE facility for PGE to procure. <p>Customer enters Subscriber Agreement with PGE to purchase a subscription share, up to the customer’s yearly consumption, of a new renewable facility.</p> <p>PGE or customer under the Customer Supply Option may enter into a PPA with an RE power producer.</p>
Customer Cost Structure	<p>Standard “applicable cost of service schedule” applies, including all relevant riders, supplemental schedule, and regulatory adjustments.</p> <p>In addition, customer receives the following charges:</p> <ul style="list-style-type: none"> • PPA cost for each MWh contracted • Administrative charge • Risk adjustment (if applicable—applied when customer contract term is shorter than the PPA term) • Credit for energy value and capacity value (\$/MWh) <p>This risk adjustment is expressed as a percentage of the PPA price. PGE currently estimates the risk premium on a 10-year contract to be between 1% and 5% of a 15-year PPA price.</p> <p>PGE Supply Option: The credit values for energy and/or capacity will be determined at the time of PPA execution, fixed over the length of the contract. The credit cannot exceed the cost of participating in the program.</p> <p>Customer Supply Option: customer may choose to develop either a fixed credit mirroring the PGE Supply Option credit or a floating credit, subject to Commission approval.</p> <p>Early termination charge.</p>
Administrative Fee	<p>Administrative charge accounts for program costs and other program expenses.</p> <p>Current estimated administrative cost is \$1.00 / MWh.</p>
Value of RE Price Certainty	<p>Long-term renewable energy price certainty over the term of the agreement.</p> <p>For initial offering, bill credit for the avoided cost of the RE cannot exceed the actual cost of PPA.</p>

OREGON—PORTLAND GENERAL ELECTRIC (PGE)	
Procurement Lead	<p>PGE Supply Option: PGE will procure the resource. Customers have the right to review pricing prior to executing subscription agreement.</p> <p>Customer Supply Option: PGE and customer collaboratively source RE resource(s), subject to PGE’s minimum PPA standards, and PGE retains final approval over any PPA terms and conditions.</p> <p>Resources will be procured only with 90% customer subscription.</p>
Bundled RECs Management	RECs will be retired on behalf of subscribing customers.
Customer Facility Flexibility	Not explicit in the filing.
Contract Time Commitment	Five to 20 years.
Customer Limitations/ Eligibility	<p>PGE Supply Option: nonresidential customers whose aggregate demand across all retail schedules exceeds 30 kW.</p> <p>Customer Supply Option: customers with an average load greater than 10 aMW.</p>
Aggregation of Customer Facility Demand	Customers may aggregate multiple facilities and meters to reach the >30 kW participant threshold.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/ Eligibility	PGE Supply Option: new wind or solar resource located in Oregon.
Commercial Risk Management	<p>If RE is insufficient to meet customer’s contracted amount, PGE will contract for RECs and retire RECs from an alternative source.</p> <p>Risk premium will balance uncertainties related to differing contract lengths.</p> <p>Risk adjustment will be eliminated if the subscription length matches the PPA length.</p>

OREGON—PORTLAND GENERAL ELECTRIC (PGE)	
PUC Process	PGE Supply Option: approved March 5, 2019.
Status/RE Deals Signed	~160 MW have been contracted: 60 MW under the PGE Supply Option and 100 MW under the Customer Supply Option (which is still pending approval). Customers include Adobe, Comcast, Daimler Trucks North America, Digital Realty, Oregon Health & Science University, Portland Community College, Portland State University, and the cities of Beaverton, Hillsboro, Lake Oswego, Milwaukie, Portland, Salem, West Linn, and Wilsonville, along with Multnomah and Washington Counties.
Docket Information	Docket UM 1953

SOUTH CAROLINA—DUKE ENERGY	
Tariff Name	Green Source Advantage, GSA
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	New RE capped at 150 MW: 113 MW in DEC and 37 MW in DEP.
Tariff/Contract Structure	<p>Customer, Duke Energy, and RE Supplier enter into GSA Service Agreement outlining service terms and the negotiated rates and charges for the contract term per the GSA Program. The customer is responsible for paying the GSA Product Charge to the facility owner and, in return, the customer receives the GSA Bill Credit.</p> <p>Duke Energy enters second contract, the GSA PPA, with RE supplier for the delivery of energy and capacity. The GSA PPA price will be equal to the bill credit selected by the customer.</p>
Customer Cost Structure	<p>Standard general retail service plus the GSA Product Charge and admin costs, minus the GSA Bill Credit.</p> <p>GSA Product Charge: the energy produced by the GSA facility in the prior billing month multiplied by the cost outlined in the GSA Service Agreement.</p> <p>GSA Bill Credit: customer can elect either the avoided cost bill credit or the hourly rate bill credit.</p> <p>Avoided cost bill credit or “Administratively Established Avoided Cost Bill Credit” is equal to the fixed levelized avoided energy and capacity rate as approved by the Commission.</p> <p>DEC Hourly rate bill credit or “Hourly Marginal Avoided Cost Bill Credit” is applicable to each hour and varies with the service territory:</p> <ul style="list-style-type: none"> • DEC hourly rate bill: Hourly Energy Charge, equal to the expected marginal production cost and other related costs, plus the Rationing Charge, equal to the marginal capacity cost during hours with generation constraint • DEP hourly rate bill: Marginal Energy Cost (kW/hr), including marginal fuel and variable operating and maintenance expenses, plus the Tiered Capacity Charge (kW/hr) <p>The hourly rate cannot be lower than zero.</p>
Admin Fee	<p>\$2,000 application fee. Refundable only if there is insufficient capacity available.</p> <p>\$375/month, plus \$50 per billed account.</p>
Value of RE Price Certainty	Customers lock in contract price, credit, and contract term length at the time of subscription.
Procurement Lead	Customer shall identify and propose to Duke Energy a GSA facility developed by the RE Supplier, either a third-party developer or a Duke Energy affiliate.
Bundled RECs Management	RECs will be transferred directly to customer from the RE Supplier. Terms of the transfer will be negotiated by the customer with the RE Supplier.

SOUTH CAROLINA—DUKE ENERGY	
Customer Facility Flexibility	Multiple customers could negotiate with a single RE supplier and share a single RE facility of their choosing.
Contract Time Commitment	Maximum 20 years.
Customer Limitations/ Eligibility	<p>New or existing nonresidential customers receiving concurrent service from DEC or DEP must have:</p> <ul style="list-style-type: none"> • Minimum annual peak demand of 1 MW; or • Multiple service locations that, in aggregate, are equal to or greater than 1 MW. <p>Annual capacity procured under the tariff cannot exceed 125% of customer's aggregate maximum annual peak demand at service location(s).</p>
Aggregation of Customer Facility Demand	Customer may aggregate multiple locations to achieve the 1 MW participant threshold, so long as, each account is located in the same service territory as the RE facility.
Impact on Net Metering (On-Site Resources)	There are no eligibility restrictions against customers who are currently net metering.
RE Facility Limitations/ Eligibility	GSA facility must be located within Duke Energy's service territory (DEC or DEP) in either North Carolina or South Carolina, and in the same service territory as the customer's accounts. Facility must have completed the System Impact Study under the NCIP or SC GIP to interconnect.
Commercial Risk Management	No requirements listed in the filing.
PUC Process	Filed with South Carolina Public Service Commission on October 10, 2018.
Status/RE Deals Signed	<p>Customer must submit an application during the program enrollment period. The application must identify: the annual amount of RE to be procured on behalf of the customer, the RE Supplier, contract term, and the bill credit option.</p> <p>Along with the application, customer must submit a standard-form term sheet identifying the GSA facility, facility owner, and the negotiated price.</p> <p>The enrollment period will open upon Commission approval and remain open for a period of 18 months, or when the maximum available capacity is exhausted, whichever occurs first.</p>
Docket Information	Docket 2018-320-E

UTAH—ROCKY MOUNTAIN POWER (RMP)	
Tariff Name	Service from Renewable Energy Facilities, Schedule 32
Tariff Type	Tariff; Sleeved PPA
Pilot Size/Period	Capped at 300 MW total peak delivered to all customers. PUC can increase without returning to the legislature.
Tariff/Contract Structure	RE facility is selected by the customer, not RMP. Two contracts: <ul style="list-style-type: none"> • Between RMP and the customer • Between RMP and the RE facility Same pricing and duration for both contracts. RMP takes ownership of the electricity from RE facility.
Customer Cost Structure	RE is charged at the price negotiated between the customer and the developer of the RE facility; distribution and delivery charges are priced at rates specific to this tariff. Daily demand charges apply to the renewable energy contract capacity. Supplemental energy and supplemental demand are priced at rates from the otherwise applicable tariff for the customer. Services are balanced at 15-minute intervals for every meter; excess generation in the 15-minute block cannot be credited to the customer or allocated to another meter.
Administrative Fee	Administrative charges of \$150 per month for each delivery point (meter) and \$110 per generator per month, irrespective of the number of delivery points.
Value of RE Price Certainty	New schedule that could theoretically deliver lower cost than standard retail rates. Reduced exposure to fuel price volatility to the degree that energy is procured from RE facility, subject to backfilling RE generation with supplemental and backup service.
Procurement Lead	Customers bring the PPA to RMP and lead on the PPA negotiations.
Bundled RECs Management	REC contracts directly entered between RE facility and the customer.
Customer Facility Flexibility	RE facility can service multiple customers or customer meters; a customer served by multiple RE facilities will pay a monthly fee for each facility.

UTAH—ROCKY MOUNTAIN POWER (RMP)	
Contract Time Commitment	Negotiated. Identical for both contracts.
Customer Limitations/ Eligibility	<p>Only customers otherwise on Schedules 6, 8, or 9.</p> <p>Schedule 6: nonresidential customers with a load less than 1,000 kW (distribution voltage).</p> <p>Schedule 8: load of 1,000 kW or more (distribution voltage).</p> <p>Schedule 9: high voltage customers.</p> <p>Customers must contract for 2 MW or more and cannot contract for more capacity in MW than their peak demand. This limitation, combined with the 15-minute matching of resource to demand, means the tariff likely limits the ability to reach a 100% renewable energy goal.</p>
Aggregation of Customer Facility Demand	Aggregation of meters by a single customer is allowed to meet the 2 MW minimum, but fees and power produced/used in 15-minute usage blocks are by meter.
Impact on Net Metering (On-Site Resources)	Net metering of electricity purchased from the facility by customers is not allowed.
RE Facility Limitations/ Eligibility	<p>Facilities in Utah or outside the state if it's a baseload resource connected to the RMP system.</p> <p>Can be owned by the customer, the utility, a third party, or a combination.</p>
Commercial Risk Management	Customer must prove reasonable credit.
PUC Process	<p>Approved March 20, 2015.</p> <p>Directing legislation, SB 12 was effective May 8, 2012.</p>
Status/RE Deals Signed	The University of Utah has utilized the tariff in 2018 for a new 20 MW geothermal project located Nevada.
Docket Information	Docket 14-035-T02 , implementing SB 12

UTAH—ROCKY MOUNTAIN POWER (RMP)	
Tariff Name	Renewable Energy Purchases for Qualified Customers, Schedule 34
Tariff Type	Tariff; Sleeved PPA
Pilot Size/Period	No cap on customers.
Tariff/Contract Structure	Customer enters into contract with Rocky Mountain Power; Rocky Mountain Power enters the PPA.
Customer Cost Structure	<p>Two options:</p> <ul style="list-style-type: none"> • Standard tariff rate +/- incremental charge. Incremental charge is equivalent to the difference between the RE cost and the avoided cost; or • Standard tariff rate +/- alternative methodology. Alternative methodology is set forth in contract. <p>Commission approval required for either cost structure. Customer cost must meet the standard of being just and reasonable and in the public interest, with evaluation including consideration of use of system facilities and contributions to system fixed costs.</p> <p>Customer is responsible for all costs related to contract for remaining term with early termination.</p>
Administrative Fee	<p>Proposed \$5,000 application fee.</p> <p>Standard administrative fee for metering and billing: \$110 per generation source, \$150 per delivery point, and \$50 per any additional delivery points.</p>
Value of RE Price Certainty	<p>Negotiated PPA pricing provides long-term resource price certainty for customers.</p> <p>Protection from fuel clause adjustments and other rate disaggregation may also be included in negotiations for new customers to deliver more of the fixed price value of RE.</p>
Procurement Lead	Customer and Rocky Mountain Power work together to identify RE resources.
Bundled RECs Management	RECs will be deposited into an account maintained by or on behalf of the customer and will be retired.
Customer Facility Flexibility	Renewable resource is transferrable to another customer who takes service under the tariff.
Contract Time Commitment	At a minimum, customer contract with RMP must match the length of time in the RE facility contract.

UTAH—ROCKY MOUNTAIN POWER (RMP)	
Customer Limitations/ Eligibility	Only customers with an aggregate electric load of at least 5 MW based on peak annual demand.
Aggregation of Customer Facility Demand	<p>Aggregation of meters by a single customer is allowed to meet the 5 MW minimum; aggregation is not allowed beyond this initial qualifier.</p> <p>One application fee will be assessed on a customer aggregating multiple points of delivery.</p> <p>RE facility can service multiple customers or customer meters; a customer served by multiple RE facilities will pay a monthly fee for each facility.</p>
Impact on Net Metering (On-Site Resources)	Not specified in the filing.
RE Facility Limitations/ Eligibility	<p>Can be owned by the utility, the customer, or a third party.</p> <p>RE resource must include bundled RECs.</p>
Commercial Risk Management	Customer must prove reasonable credit.
PUC Process	Approved August 18, 2016.
Status/RE Deals Signed	<p>Facebook has utilized the tariff for 122 MW of solar in 2019.</p> <p>Park City, Salt Lake City, Summit County, Park City Mountain Resort, Deer Valley Resort, and Utah Valley University have indicated they will utilize 78 MW collectively under this tariff or Schedule 32. RMP is actively pursuing resources and has released a solicitation request for wind, photovoltaic (PV) solar, or geothermal renewable energy located in Utah.</p>
Docket Information	Docket 16-035-T09

VIRGINIA—DOMINION ENERGY	
Tariff Name	Schedule MBR
Tariff Type	Tariff; Market-Based Rate
Pilot Size/Period	<p>Capped at 200 MW.</p> <p>Sixty days after approval from commission, customers can enroll until November 1, 2019 or until cap is reached, whichever occurs first.</p> <p>Concludes on December 31, 2022.</p>
Tariff/Contract Structure	<p>MBR is attractive to customers that are independently contracting with a renewable energy facility in the PJM region through a virtual PPA. Their renewable energy contract is exposed to the volatility of the PJM markets.</p> <p>Companion tariff to the standard Rate Schedule GS-3 or GS-4, with an MBR reflecting the PJM Interconnection wholesale market prices.</p> <p>Minimum term of three years, with automatic renewals, on a year-to-year basis.</p>
Customer Cost Structure	<p>Rate schedules reflect pricing in the PJM Interconnection wholesale market.</p> <p>Rate design components: Distribution Service Charges, MBR Charges, and Electricity Supply Service Charges.</p> <p>MBR Charges:</p> <ul style="list-style-type: none"> • Generation Demand (or Capacity) Charge = all kW of generation demand @ generation demand billing rate per kW • Generation Energy Charge = all kWh @ day-ahead of locational marginal price per kWh • PJM Ancillary Service Charge • PJM Administrative Fee Charge • Margin charge <p>Margin charge for each kWh of total monthly energy consumption. Charge covers any differences between the MBR and the actual marginal PJM costs to serve participating customers (and provides some contribution to administrative and fixed costs for Dominion Energy).</p> <p>Depending on PJM pricing and usage levels, the net MBR charge—the variance between MBR charges and applicable Rate Schedule GS-3 or GS-4 charges—could result in either a credit or a charge.</p>
Administrative Fee	Included in customer cost structure, charged on per kWh basis.
Value of RE Price Certainty	By linking their cost of electricity directly to the same market, customers can offset any high cost of power consumed from the market with the revenue from the high price their renewable energy earned in the market.
Procurement Lead	Not applicable.

VIRGINIA—DOMINION ENERGY	
Bundled RECs Management	REC management is arranged with the developer. Likely, the customer retains and retires the RECs.
Customer Facility Flexibility	Not applicable.
Contract Time Commitment	Minimum three years.
Customer Limitations/Eligibility	<p>High load-factor commercial and industrial customers.</p> <p>Customers who would otherwise take service under GS-3 (nonresidential secondary voltage customer) or GS-4 rate (nonresidential transmission or primary voltage) schedules.</p> <p>Must also have:</p> <ul style="list-style-type: none"> • A measured peak demand of 5 MW or more during at least three billing months in the current and previous 11 billing months; • Billing history with Dominion Energy for at least 12 consecutive billing months in the current and previous 11 billing months; and • An average monthly load factor of at least 85%.
Aggregation of Customer Facility Demand	Tariff is applied to individual meters only.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/Eligibility	Not applicable, though contracts for RE facilities in the PJM market with similar locational marginal price profiles would be ideal to maximize the value of the MBR product.
Commercial Risk Management	<p>Customer bears all risks associated with market volatility.</p> <p>Customer must sign an officer certification affidavit certifying that the customer understands the risks and potential rate volatility.</p>
PUC Process	<p>Approved September 23, 2016.</p> <p>Pending the approval and effective date of Schedule MBR, Large General Service MBR, Schedule MBR may close to new customers.</p>
Status/RE Deals Signed	<p>Amazon Web Services has utilized 180 MW of solar through multiple contracts.</p> <p>Microsoft has utilized the tariff for 315 MW of solar.</p>
Docket Information	Docket PUE-2015-00108

VIRGINIA—DOMINION ENERGY	
Tariff Name	Schedule RF
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	Pilot program will be available for enrollment for a five-year period, but not limited in size.
Tariff/Contract Structure	<p>Customer works with Dominion Energy to develop the construction of new RE project(s).</p> <p>Customer enters into a Renewable Facilities Agreement (RFA) with Dominion Energy outlining commitment to enhance the cost-effectiveness of one or more RE project(s) to be constructed and operated by Dominion Energy as a system resource, e.g. purchase the RECs from the project, contribute land acquisition, etc.</p> <p>Subsequently, customer and Dominion Energy will contract (under a Confirmation) for the pricing and additional terms and conditions of the exchange of RECs, up to 100% of the project's production.</p> <p>Customer must also enter into an Electric Service Agreement (ESA) for the same term.</p> <p>Late payment and early termination fees will be negotiated.</p>
Customer Cost Structure	<p>Schedule RF is a companion tariff to support the development of new renewable energy generation facilities.</p> <p>Schedule RF charge will appear as a new line item on existing monthly retail service bill. The price and term are negotiated and contracted for under the RFA and Confirmation. Customer has the option of a fixed or escalating contract price.</p> <p>All other payment terms will be in accordance with the applicable Principal Tariff.</p> <p>Customer pays an incremental cost for the renewable attributes, making the RE resource more cost effective for all and improving the likelihood of commission approval of the new RE resource. The cost of the facility will be rate based and benefits all utility customers with energy and capacity.</p>
Administrative Fee	None.
Value of RE Price Certainty	Customer negotiates incremental cost of program participation.
Procurement Lead	Dominion Energy works collaboratively with the customer to identify appropriate RE project(s).
Bundled RECs Management	The customer retains all rights to RECs produced by the RE facilities constructed under Schedule RF.

VIRGINIA—DOMINION ENERGY	
Customer Facility Flexibility	<p>Customers may identify one or more service accounts, so long as the account is in the same name as the qualifying account and are assigned to the customer’s service location.</p> <p>The account must also:</p> <ul style="list-style-type: none"> • Meet Schedule RF’s eligibility requirements (e.g., billed on the applicable Principal Tariff); • Be identified in the applicable Confirmation; and • Have its load located within Dominion’s service territory. <p>Customer, with approval, may assign or delegate the RFA and Confirmation to an affiliate, subsidiary, or tenant.</p>
Contract Time Commitment	Term is negotiable.
Customer Limitations/ Eligibility	<p>Existing or new customers taking service under one of the following Principal Tariffs: GS-1, GS-2, GS-2T, GS-3, GS-4, Schedule 10, MBR–GS-3, and MBR–GS-4.</p> <p>Customers must purchase a minimum of 2 MW of Environmental Attributes (or RECs) annually from one or more projects.</p>
Aggregation of Customer Facility Demand	Customers may aggregate multiple facilities to reach the minimum load requirement of 2 MW.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/ Eligibility	New renewable energy project(s) will be proposed in accordance with Va. Code § 56-576.
Commercial Risk Management	Parties will determine appropriate credit requirements.
PUC Process	Approved March 26, 2018.
Status/RE Deals Signed	<p>Customers may enroll for a period of five years from the initial effective date of June 1, 2018 until May 31, 2023.</p> <p>Facebook has utilized the tariff for 240 MW of solar.</p>
Docket Information	Docket PUR-2017-00137

VIRGINIA—DOMINION ENERGY	
Tariff Name	Renewable Energy Supply Service, Schedule RG
Tariff Type	Rider; Sleeved PPA
Pilot Size/Period	Capped at 50 customers. The program will conclude after three years if there is no customer participation.
Tariff/Contract Structure	Customer can request a specific RE facility/resource and RE purchase size from either a third-party RE generator or Dominion-owned resource. Dominion negotiates and enters into a Renewable Generation PPA with the RE generator, noting the customer as a third-party beneficiary. Second contract between Dominion and the customer, Schedule RG Agreement, assigns costs and risks to the customer.
Customer Cost Structure	Standard general service tariff rates and riders apply plus the Net Schedule RG Settlement charge or credit. Net Schedule RG Settlement: <ul style="list-style-type: none"> • Schedule RG Charge • Schedule RG Adjustment • Schedule RG Administrative Charge RG Charge equals all applicable RE and REC costs as negotiated in the PPA. RG Adjustment reflects the market value of RE and equals the PJM settlement credits (e.g., energy credits, balancing, ancillary, etc.) from the PPA, if applicable, and/or Dominion RE resource. Net Schedule RG Settlement can be distributed among a single customer's multiple accounts.
Administrative Fee	\$2,000 application fee. Schedule RG Administrative charge applies to each RE resource and may serve multiple accounts for the same customer. The charge is the greater of: <ul style="list-style-type: none"> • \$500 for each 30-day billing period • \$0.25 per MWh
Value of RE Price Certainty	It is possible to see lower utility bills if the Schedule RG Adjustment exceeds the Schedule RG Charge and Administrative Charge.
Procurement Lead	Dominion negotiates with RE generator on behalf of the customer and/or will work with the customer to construct a Dominion-owned RE resource.

VIRGINIA—DOMINION ENERGY	
Bundled RECs Management	RECs are retired by Dominion Energy on the customer's behalf.
Customer Facility Flexibility	One customer is limited to RE from one RE facility, per each respective RG Agreement.
Contract Time Commitment	Matches the RE resource term in the RG Agreement.
Customer Limitations/ Eligibility	Commercial and industrial customers currently taking service under: GS-1, GS-2, GS-2T, GS-3, GS-4, and Schedule 10, 27, and 28 principal tariffs.
Aggregation of Customer Facility Demand	Not explicit in the filing.
Impact on Net Metering (On-Site Resources)	Customers with on-site resources are allowed to participate in net metering. Schedule RG RE resources cannot be used for net metering purposes.
RE Facility Limitations/ Eligibility	RE facilities within the PJM Interconnection. Minimum capacity of 1 MW.
Commercial Risk Management	All contract risk falls on the customer.
PUC Process	Approved November 6, 2018.
Status/RE Deals Signed	The pilot rider, under Case PUE-2012-00142 , was not used. Three-month enrollment period will begin 60 days after approval and, at a minimum, once per year thereafter. Enrollment may also occur outside the three-month period if the customer identifies an RE generator or requests that a Dominion-owned resource be constructed on behalf of the customer.
Docket Information	Case PUR-2017-00163

VIRGINIA—DOMINION ENERGY	
Tariff Name	Schedule MBR, Large General Service Market-Based Rate
Tariff Type	Pilot; Market-Based Rate
Pilot Size/Period	Capped at 400 MW. Concludes on November 1, 2022.
Tariff/Contract Structure	<p>MBR is attractive to customers that are independently contracting with a renewable energy facility in the PJM region through a virtual PPA. Their renewable energy contract is exposed to the volatility of the PJM markets.</p> <p>Customer and Dominion Energy enter into Agreement for Electric Service, which Schedule MBR is a part of.</p> <p>Schedule MBR is a companion tariff to the standard Rate Schedule GS-3 or GS-4, with an MBR reflecting the PJM Interconnection wholesale market prices.</p> <p>Minimum term of three years, with automatic renewals, on a year-to-year basis throughout the life of the tariff or until December 31, 2025.</p>
Customer Cost Structure	<p>Rate schedules reflect pricing in the PJM Interconnection wholesale market.</p> <p>Rate design components: Distribution Service Charges and Electricity Supply Service Charge, including MBR Generation Charges.</p> <p>MBR Generation Charges:</p> <ul style="list-style-type: none"> • Generation Demand (or Capacity) Charge = all kW of generation demand @ generation demand billing rate per kW • Generation Energy Charge = all kWh @ day-ahead of locational marginal price per kWh • PJM Ancillary Service Charge • PJM Administrative Fee Charge • Margin charge per each kWh of total monthly energy consumption <p>Generation Demand is based on customer's five coincident peaks average.</p> <p>Margin charge covers any differences between the MBR and the actual marginal PJM costs to serve participating customers (and provides some contribution to administrative and fixed costs for Dominion Energy). Margin charge for customers with load factors of 85% or greater equals \$0.85.</p> <p>Minimum Charge is established in the Agreement and applies only when the Contract Minimum Demand and Contract Dollar Minimum are not reached.</p> <p>Contract Minimum Demand: equal to 70% of the customer's highest projected kVA demand.</p>

VIRGINIA—DOMINION ENERGY	
Customer Cost Structure (continued)	Contract Dollar Minimum is equal to 50% of the customer's lowest projected monthly bill less the sum of taxes, fuel, and any facilities charges. The Contract Dollar Minimum terminates at the end of the initial contract term.
Admin Fee	Included in customer cost structure, charged on per kWh basis.
Value of RE Price Certainty	By linking their cost of electricity directly to the same market, customers offset any high cost of power consumed from the market with the revenue from the high price their renewable energy earned in the market.
Procurement Lead	Not applicable.
Bundled RECs Management	REC management is arranged with the developer.
Customer Facility Flexibility	Not applicable.
Contract Time Commitment	Minimum three years.
Customer Limitations/ Eligibility	Nonresidential customer electing to receive or currently receiving service with a measured peak demand of 5 MW or more within the current or previous 11 billing months. This must be achieved only once. Customer must have proper metering and related communication equipment.
Aggregation of Customer Facility Demand	Tariff is applied to individual meters only.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/ Eligibility	Not applicable, though contracts for RE facilities in the PJM market with similar locational marginal price profiles would be ideal to maximize the value of the MBR product.
Commercial Risk Management	Customer bears all risks associated with market volatility. Customer must sign an officer certification affidavit certifying that the customer understands the risks and potential rate volatility.

VIRGINIA—DOMINION ENERGY	
PUC Process	Filed with Virginia PUC on December 11, 2018.
Status/RE Deals Signed	<p>Tariff has not yet been approved by the commission. This tariff is designed to improve Schedule MBR by increasing the availability of the program, aligning the Generation Demand and transmission service charges with the PJM method, and lowering the Margin Charge. Pending the approval and effective date of this tariff, the existing Schedule MBR may close to new customers.</p> <p>Enrollment will close October 31, 2022.</p>
Docket Information	Docket PUR-2018-00192



WASHINGTON—PUGET SOUND ENERGY (PSE)	
Tariff Name	Long-Term Renewable Energy Purchase Rider, Schedule No. 139, branded as “Green Direct”
Tariff Type	Tariff; Subscriber Product
Pilot Size/Period	Under the first tranche, aggregate subscription is limited to a total load of 75 aMW. The first phase of this initial tranche is comprised of a wind resource (approximately 137 MW) and the second phase of a solar resource (approximately 150 MW).
Tariff/Contract Structure	<p>Customer enters into Service Agreement with PSE that outlines energy costs for RE resources.</p> <p>Customer must contract for 100% of the load at all meters located at each service address they elect to enroll.</p> <p>PSE signs fixed-price, 10- to 20-year contract with RE generators.</p>
Customer Cost Structure	<p>Energy-related costs in standard schedule are replaced by the RE contract PSE signs plus expenses; other standard schedule elements and rates (e.g., demand charges) remain the same.</p> <p>Monthly rates include:</p> <ul style="list-style-type: none"> • Energy Charge Credit: \$0.0470009 per kWh • Resource Option Energy Charge: \$0.048500 per kWh <p>Energy Charge Credit consists of energy-related power costs of the system portfolio. Adjusted per general rate case, power cost-only rate case, or other power cost adjustments.</p> <p>Resource Option Energy Charge consists of energy and RECs costs, losses and taxes, billing system updates, and annual reporting of RECs. This is a fixed cost, escalating at 2% per year, and outlined in the tariff.</p> <p>Fee for early exit to cover customer’s commitment, less a credit for the market/avoided cost of power.</p>
Administrative Fee	Captured in the cost of the service agreement.
Value of RE Price Certainty	<p>The customer is shielded from increases to the standard energy charge, including power cost adjustments, etc.</p> <p>The customer is not shielded from changes to monthly fees, demand charges, etc.</p> <p>If the RE price in the service agreement falls below the utility mix energy price, customer will pay the lower rate.</p>
Procurement Lead	Customers can provide input regarding the RE resources and terms of the Service Agreement.

WASHINGTON—PUGET SOUND ENERGY (PSE)	
Bundled RECs Management	Retired on behalf of the customer. The customer may also join Western Renewable Energy Generation Information System at their expense and the RECs will be transferred to be retired.
Customer Facility Flexibility	Not explicit in the filing; expectation is the contract could move between meters in the service territory.
Contract Time Commitment	Initial tranche phase 1: 10, 15, or 20 years. Initial tranche phase 2: 10, 15, or 18 years.
Customer Limitations/ Eligibility	Commercial, nonresidential meters; includes most commercial customers taking electric service on Schedules 24, 25, 26, 31, 40, 43, 46, and 49. Customers must have a minimum aggregated load of 10,000,000 kWh per year, in PSE's service area; or be a municipal, county, state, or federal institution.
Aggregation of Customer Facility Demand	Customers select which service addresses (one to all) to commit to the rider.
Impact on Net Metering (On-Site Resources)	Not explicit in the filing.
RE Facility Limitations/ Eligibility	Resources can be provided by IPPs or be PSE-owned. RE is delivered to PSE balancing authority area; no geographic limitation explicitly set.
Commercial Risk Management	If RE is insufficient, PSE will work with customer to source and retire RECs from an alternative source, with costs limited to that expected under Schedule 139. If RE is inadequate, PSE may terminate the contract with customer, with no liability to customer or PSE.
PUC Process	Approved September 28, 2016.
Status/RE Deals Signed	The first tranche—137 MW—is fully subscribed. Customers include Target, REI, Starbucks, Western Washington University, Sound Transit, King County, the Port of Seattle, the State of Washington, Western Washington University, Whatcom County, and cities of Anacortes, Bellevue, Bellingham, Issaquah, Lacey, Mercer Island, Olympia, Snoqualmie, Tumwater, Langley, and Kirkland. Other customers not included.

WASHINGTON—PUGET SOUND ENERGY (PSE)	
Status/RE Deals Signed (continued)	The second tranche—150 MW—is fully subscribed. Customers include Capitol Campus Amazon, Kaiser Permanente, Providence St. Joseph Health, T-Mobile, Walmart, the Department of Transportation, Ecology, Health, Labor & Industries, Social & Health Services, Washington State Patrol, Bellevue College, Issaquah School District, Port of Bellingham, University of Washington Bothell, Sound Transit (additional load), and the cities of Bellevue Utilities, Kent, Issaquah (additional load), and Redmond.
Docket Information	Docket UE-160977

WISCONSIN—MADISON GAS & ELECTRIC (MGE)	
Tariff Name	Renewable Energy Rider
Tariff Type	Rider; Sleeved PPA and/or Subscriber Product
Pilot Size/Period	No limitations for new customers. Existing customers are capped at 25 MW, with the potential to increase this cap as necessary.
Tariff/Contract Structure	Customer enters into a RER-1 service agreement dedicating the new or existing renewable resource, with power owned or procured by MGE.
Customer Cost Structure	Customer's otherwise applicable rate schedule applies plus the Renewable Resource Rate, except fuel cost surcharges and credits. Renewable Resource Rate: costs associated with the specific renewable energy resources, including any up-front contributions or administrative charges. Late payment charge. Early termination fee.
Administrative Fee	Not explicit in filing.
Value of RE Price Certainty	Customers have the ability to negotiate price and term at the time of subscription. Price certainty (e.g., fixed, fixed escalation) and hedge value can be included in contract terms, subject to the constraints of the source project(s) for the renewable energy.
Procurement Lead	Customer can provide input regarding the RE resources and terms of the service agreement.
Bundled RECs Management	Customer can work with utility regarding REC management.
Customer Facility Flexibility	No limitations defined in the filing.
Contract Time Commitment	Negotiated term approved by commission.
Customer Limitations/Eligibility	Existing or new customers on rate schedules: Cg-4, Cg-2, Cg-6, Sp-3, and Cp-1. Customer participation may be limited on bill payment and collection histories.
Aggregation of Customer Facility Demand	Customers with multiple accounts may aggregate any, up to all, of their eligible accounts.

WISCONSIN—MADISON GAS & ELECTRIC (MGE)	
Impact on Net Metering (On-Site Resources)	Not explicit in filing.
RE Facility Limitations/ Eligibility	No limitations defined in the filing; customer can work with utility to meet multiple facility requirements.
Commercial Risk Management	Customer must prove reasonable credit. Any risk sharing must be approved as part of the PSCW contract approval.
PUC Process	Approved July 25, 2017.
Status/RE Deals Signed	The City of Middleton and the Middleton-Cross Plains Area School District have utilized the rider for 1.5 MW of solar in 2019. Dane County has expressed interest in utilizing the tariff for ~8 MW of solar.
Docket Information	Docket 3270 -TE-102

WISCONSIN—WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	
Tariff Name	Dedicated Renewable Energy Resource (DRER)
Tariff Type	Pilot tariff; Sleeved PPA
Pilot Size/Period	No cap on customers.
Tariff/Contract Structure	Customer and WEPCO enter into a DRER service agreement identifying the RE resource, including relevant details and MISO pricing node, and associated cost. DRER service agreement is subject to approval by the Public Service Commission of Wisconsin.
Customer Cost Structure	Standard “otherwise-applicable rate schedule(s),” including relevant service rates, adjustments, and credits apply, plus the cost outlined in the DRER service agreement. In addition, customer receives the following credits: <ul style="list-style-type: none"> • Monthly energy generation credit equal to the Energy Credit Value, based on the settled MISO market value of the RE, applied to the lesser of energy generation or actual consumption • Monthly capacity credit equal to 1/12th of the resources annual amount, as accredited by MISO <p>Late payment, 1% per month, applied to outstanding charges.</p> <p>Termination fees will be negotiated.</p>
Administrative Fee	None.
Value of RE Price Certainty	Not explicitly stated in filing.
Procurement Lead	Not explicitly stated in filing.
Bundled RECs Management	The customer will be assigned all RECs.
Customer Facility Flexibility	Not explicitly stated in filing.
Contract Time Commitment	Term is negotiable.

WISCONSIN—WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	
Customer Limitations/ Eligibility	<p>Customers currently taking service under the general secondary, general primary, or lighting rate schedules.</p> <p>Existing customer participation is limited to 150 MWac of existing load. No limits placed on new customer demand.</p>
Aggregation of Customer Facility Demand	Individual customers (as defined by a tax ID number or a single unit of government) may enter into a service agreement up to their aggregated load; however, under no circumstances will multiple customers be allowed to aggregate eligible accounts under a single service agreement.
Impact on Net Metering (On-Site Resources)	Not applicable.
RE Facility Limitations/ Eligibility	New, Wisconsin-based renewable energy resource owned by WEPCO and interconnected to either the American Transmission company transmission system or the company's distribution system.
Commercial Risk Management	Parties will determine appropriate credit requirements in the DRER service agreement.
PUC Process	Approved December 12, 2018.
Status/RE Deals Signed	Customer enrollment is ongoing.
Docket Information	Docket 6630-TE-102

WISCONSIN—XCEL ENERGY	
Tariff Name	Renewable*Connect
Tariff Type	Rider; Subscriber Product
Pilot Size/Period	128 GWh Additional renewable procurements require commission approval.
Tariff/Contract Structure	Customers can choose 100 kWh blocks or 100% of their annual load. Two contract lengths: month-to-month or five years, or for a designated single event. Five-year contract: Customer will sign a Customer Agreement confirming program details and terms.
Customer Cost Structure	<p>Customer usage is settled monthly.</p> <p>The blend of resources assigned to pilot tranche will determine the fixed kWh price of the program which replaces the fuel clause charge.</p> <p>Stated kWh price for customers based on:</p> <ul style="list-style-type: none"> • Resource cost • Capacity credit • “Neutrality adjustment” • Marketing and administrative costs <p>The resource cost for month-to-month and single event customers is based on production costs and will be updated. For five-year customers, the resource cost is fixed for the contract term. For 2019, the resource cost is:</p> <ul style="list-style-type: none"> • Month-to-month or single event: \$0.04344 (\$/kWh) • Five-year: \$0.03994 (\$/kWh) <p>The capacity credit for Renewable*Connect customers reflects the market-based value of the capacity of the renewable energy project in the regional market. The capacity credit is calculated as the product of the MISO accreditation percentage and will be updated annually. The capacity credit for 2019 is \$0.03396.</p> <p>“Neutrality adjustment” is an attempt to avoid cost shifting to nonparticipating customers; charge includes line and curtailment losses and the cost of integrating variable RE and stranded asset effects, among other costs. For 2019, the neutrality adjustment is \$0.0327 per kWh.</p> <p>Marketing and administrative costs are lower for five-year customers. For 2019, the marketing and administrative cost is:</p> <ul style="list-style-type: none"> • Month-to-month or single event: \$0.0550 (\$/kWh) • Five-year: \$0.0200 (\$/kWh)
Admin Fee	Included in customer cost structure, charged on per kWh basis.

WISCONSIN—XCEL ENERGY	
Value of RE Price Certainty	Fuel clause charge is currently ~20% of customers' bills; fuel clause charge is replaced with a fixed charge for each year of the program which results in an "initial premium" but provides "certainty about . . . future energy costs" as it does not fluctuate with fuel costs (i.e., there is potential savings if the fuel clause charge increases substantially).
Procurement Lead	Xcel Energy solely procures the resource.
Bundled RECs Management	RECs are retired by Xcel Energy on the customer's behalf (above compliance requirements); RECs registered with M-RETS and Xcel Energy will pursue Green-e certification.
Customer Facility Flexibility	Switchable for customers moving within the service territory.
Contract Time Commitment	Two options: month-to-month or five years; longer term has lower prices.
Customer Limitations/ Eligibility	Available to all residential, commercial, and industrial customers paying fuel clause charge. Except customers participating in Windsource, Schedule VRE-1. Customers with new or existing load are eligible to purchase up to 100% of their load. Total energy from Renewable*Connect, participation in other RE programs, and net metering combined cannot exceed 100% of customer usage.
Aggregation of Customer Facility Demand	Subscriptions are on a premise-by-premise basis, and there are no size restrictions in the program; aggregation is not applicable.
Impact on Net Metering (On-Site Resources)	Customers are allowed to participate in net metering.
RE Facility Limitations/ Eligibility	Resources must be within Xcel Energy's NSPW and NPS system; resources may be located outside of Wisconsin. Xcel Energy wind and solar resources that have recently been approved by the PUC; Odell Wind Farm and North Star, Marshall, and Aurora Solar Project. Pilot includes facilities already approved in order to offer customers pilot as soon as possible. Program expansion may include other suppliers or Xcel Energy-owned assets.
Commercial Risk Management	Month-to-month customers can terminate their contract at any time.

WISCONSIN—XCEL ENERGY	
Commercial Risk Management (continued)	<p>Five-year contract customers are subject to an early termination penalty of \$10/MWh multiplied by the customer’s last 12 months of usage; they are not allowed to move the same load to another “tranche” of Renewable*Connect resources.</p> <p>Full cost of program is covered by customers; any unsubscribed energy from wind and solar resource recovers cost through the fuel clause charge to nonparticipating customers.</p>
PUC Process	Approved December 27, 2018.
Status/RE Deals Signed	Enrollment opened March 2019.
Docket Information	Docket 4220-TE-102



WYOMING—BLACK HILLS ENERGY	
Tariff Name	Large Power Contract Service
Tariff Type	Tariff; Sleeved PPA
Pilot Size/Period	No limitations defined in the filing.
Tariff/Contract Structure	<p>The company, Black Hills Energy, negotiates and enters PPA with renewable energy generator, but Black Hills Energy will work with the customer to meet individual RE requirements and service terms.</p> <p>Second contract, a Confidential Large Power Service Agreement, between Black Hills Energy and customer assigns the rates, terms, and conditions of the service.</p>
Customer Cost Structure	<p>Monthly rate consists of the following:</p> <ul style="list-style-type: none"> • Energy Charge (\$/kWh): energy procured or generated by the Black Hills on behalf of the customer billed on a monthly basis based on actual energy costs (including any necessary ancillary charges). • Transmission costs (\$): cost to use Black Hills Energy's transmission system and the costs allocated to customer for network service as defined in Service Agreement. • Microgrid Management Fee (\$/kW-mo): based on the Billing Capacity of the on-site generation equipment as defined in the Service Agreement. Starting number set in Docket 20003-146-ET-15, but negotiable. <p>Billing Capacity is equal to the capacity of the on-site installed generating equipment. Energy service provided in this tariff will be limited to 85% of the Billing Capacity. The energy is limited to 85% of the Billing Capacity to provide for planning reserves for the customer. This provides for additional reliability for the customer if a unit doesn't start when it's called on.</p> <p>Customer is not subject to the Power Cost Adjustment nor the Demand Side Management Surcharge.</p> <p>Late payment charge.</p> <p>If Black Hills utilizes the customer backup generation, Black Hills will pay the customer a fee based on market pricing for capacity.</p>
Administrative Fee	Administrative costs (\$/kW-mo) are based on the Billing Capacity of the on-site generation equipment as defined in the Service Agreement. Starting number set in Docket 20003-146-ET-15, but negotiable.
Value of RE Price Certainty	Customers have the option to lock in contract pricing and length once a counterparty is identified and a renewable energy project is built and producing energy. The customer is shielded from utility energy charges, including Power Cost Adjustments.
Procurement Lead	Customer and utility work collaboratively to identify appropriate RE resources.

WYOMING—BLACK HILLS ENERGY	
Bundled RECs Management	Black Hills Energy will retire RECs on behalf of the customer.
Customer Facility Flexibility	RE resources can service multiple customers or meters that are already taking service under this tariff.
Contract Time Commitment	Customers must remain on this tariff for a minimum of four years.
Customer Limitations/Eligibility	<p>New customer load interconnected with Black Hills Energy's system, with an expected capacity requirement of 13,000 kW or greater.</p> <p>Customers must have backup generators on-site that are consistent with Black Hills Energy's standards. Customer must agree to allow Black Hills Energy dispatched customer-owned generation on-site for the purpose of providing backup service for customer's load and maintaining reliability.</p> <p>Customer must also meet one or more of the following conditions:</p> <ul style="list-style-type: none"> • Customer accepts nonstandard electric service for new load. • Customer has unique requirements for the new load. • Customer intends to acquire its electric service for new load from a source other than Black Hills Energy absent service under this tariff. This is demonstrated by having the ability to take service at another location and can be done on a case-by-case basis.
Aggregation of Customer Facility Demand	Facility Demand is measured by meter along with the Billing Capacity; therefore, aggregation is unlikely but not specifically addressed in the docket.
Impact on Net Metering (On-Site Resources)	Net metering is not permitted under this tariff.
RE Facility Limitations/Eligibility	No limitations are defined in the filing.
Commercial Risk Management	<p>Customer must prove reasonable credit.</p> <p>Customer bears all risks associated with market volatility.</p>
PUC Process	Approved July 28, 2016.
Status/RE Deals Signed	Microsoft utilized the Large Power Contract Service to partially supply its Cheyenne datacenter from existing wind projects.
Docket Information	Docket 20003-146-ET-15 (Record No. 14242)

ENDNOTES

¹ For additional information on utility renewable energy programs, including green pricing programs, and bundled vs. unbundled RECs, see the United States Environmental Protection Agency’s [“Guide to Purchasing Green Power.”](#)

² For additional information on the rationale behind customers seeking green tariffs from utilities, see WRI’s [“Above and Beyond: Green Tariff Design for Traditional Utilities.”](#)

³ For additional information on community solar programs, see the U.S. Department of Energy’s [“A Guide to Community Solar: Utility, Private, and Non-profit Project Development.”](#)

⁴ The tariffs differ in which party initiates the renewable energy project negotiations—the utility or the customer. Procurement lead identifies who leads the relationship with the developer.

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GLOSSARY OF TERMS

C&I Commercial and industrial customers.

Demand Charge Daily or monthly charges paid by large electricity customers for their peak demand in kilowatts from the grid. This is a measure of the capacity they require from the grid in a time period.

Fuel Clause Charge Or “fuel clause adjustment” is the per-kWh charge Xcel Energy customers are billed to recover the cost of the generation resources required to supply all customers with electricity.

GS General service.

IOU Investor-owned utility.

IPP Independent power producer, a company that generates and sells power.

MISO Midcontinent Independent System Operator, the Independent System Operator (ISO) and Regional Transmission Organization (RTO) providing open-access transmission service and monitoring the high-voltage transmission system in the Midwest United States and Manitoba, Canada, and a southern United States region which includes much of Arkansas, Mississippi, and Louisiana.

Net Metering A billing mechanism that credits customers supplying surplus solar or other renewable energy power to the public grid.

NGR tariff/rate Name given to NV Energy’s green tariff and rider rate.

OARS Otherwise applicable rate schedule for customers served by NV Energy.

OPT tariff Duke “Optional Power Service, Time of Use” tariff structure.

PJM Pennsylvania-New Jersey-Maryland Interconnection, regional transmission organization (RTO) that coordinates

the wholesale electricity in parts of 13 Mid-Atlantic and Midwestern states and Washington, DC.

PPA Power purchase agreement.

PUC State public utility commission which regulates the electric utilities in a given state.

PURPA The Public Utility Regulatory Policies Act is a federal law that requires utilities to purchase renewable energy produced by certain qualifying facilities (QFs), such as wind, solar, geothermal, and small hydroelectric resources. Avoided cost (the cost a utility avoids as a result of the QF) forms the basis for determining QF purchase pricing.

RE Renewable energy.

REC Renewable energy certificate attributed to renewable generation under state RPS requirements.

REPSA Renewable Energy Purchase and Sales Agreement.

Rider Additional rate applied to an electricity tariff.

RMP Rocky Mountain Power.

RPS Renewable Portfolio Standard, for example, state-law requirements as to the proportion of energy sold by a regulated utility that must come from specified types of RE generation.

SB Senate bill.

Sleeved PPA Customer negotiates directly with a renewable energy generator, then contracts through a utility.

Subscriber Products Utility has procured renewable energy, then sells portions to customers.

Tariff Electricity pricing, and price structure, charged to customers.

Tranche A tranche refers to a specific set of resources and customer terms offered.

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World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.

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