Energy policies in Southern Legislative Conference (SLC) member states are undergoing substantial changes as installations of distributed generation systems, such as rooftop solar panels and other small-scale renewable energy technologies, continue to expand. This expansion has been encouraged by state and federal tax credits, which have made renewable energy technology, especially solar energy technology, increasingly affordable. Further encouraging the installation of distributed generation technologies is the availability of net metering programs, whereby customers who generate some of their own electricity are able to offset their electricity bills by selling their excess power back to a utility provider. Net metering allows customers an opportunity to recoup the high initial cost of installing distributed generation systems, and may provide a positive return on investment. As a result of these incentives, in the United States, someone is installing a solar power system every four minutes.¹ According to Stateline, a state policy news provider, “more than 323,000 homeowners and businesses used solar panels in net metering programs in 2012, compared with 151,000 in 2010, an increase of 114 percent.”²

Increases in the use of distributed generation systems by consumers have led to an increase in demand for utilities to offer net metering. Of the 15 states represented by the SLC, 11 have statewide net metering policies, while Texas has a voluntary policy. Alabama, Mississippi and Tennessee do not yet have net metering policies in place. This SLC Regional Resource reviews the concept of net metering and analyzes the status and nature of net metering legislation and trends in SLC member states. In order to provide clarity to this topic, a glossary of terms has been provided. Additionally, Table 2 provides a summary of net metering policies in the SLC region.

### Net Metering

A variety of definitions of net metering can be found in the legislation and policies implemented by states. For the purposes of this SLC Regional Resource, net metering is defined as a billing system that allows utility customers to use the electricity they generate in excess of their consumption to offset their use of electricity from the grid.³ Although the most common form of distributed generation is solar, some states also include other technologies such as wind and micro-turbine; biomass; hydroelectric; geothermal electric; renewable fuel cell; tidal energy; wave energy; and anaerobic digestion.⁴ Net excess generation⁵ can be measured monthly or annually.

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¹ distributed generation – power generation at the point of consumption; a common example of a type of distributed generation is residential roof-top solar panels

² net excess generation – additional, unused electricity produced by a distributed generation source
Nationwide, most states’ net metering policies often are
established through legislation, with the legislative branch
directing the state public utilities commission to draft and
adopt administrative rules to implement net metering. While some states’ net metering policies apply to custom-
ers of all types of electric utilities (such as investor-owned
utilities, municipal utilities and electric cooperatives), oth-
ers apply only to customers of investor-owned utilities. State
policies vary widely by several other key criteria, including
individual system capacity limits, aggregate system capacity
limits, eligible customer types, eligible system types, treat-
ment of net excess generation at the end of a billing period,
and ownership of renewable energy credits (RECs) associated with customer generation.

**Capacity Limits**

Capacity limits are used to regulate the system size of net
metered installations, generally with a kilowatt-based limit.
According to the U.S. Energy Information Administration,
the average annual electricity consumption for a U.S. resi-
dential utility customer in 2012 was 10,837 kilowatt-hours
(kWh), an average of 903 kWh per month. Given that aver-
age consumption rate, Missouri, for example, has authorized
net metering for systems up to 100 kilowatts (kW), whereas
Kentucky has authorized net metering for systems up to 30
kW. However, in most SLC states, residential capacity lim-
its range from 10 kW to 25 kW.

Capacity limits vary widely by utility type, which can include
customer, technology and system type. North Carolina,
for example, has made capacity limits applicable only for
investor-owned utilities, while Louisiana has established
limits for commercial, agricultural and residential custom-
ers. States also often adopt different capacity limits for
individual systems and aggregate net metering systems. For
example, Arkansas has established system capacity limits for
individual customers but has no aggregate net metering ca-
pacity limit.

**Compensation for Net Excess Generation**

Customers who participate in net metering receive credit for
their net excess generation, generally on a monthly or annu-
al basis, and the rate at which customers are credited varies.
In West Virginia, customers receive credit at the retail rate on each subsequent bill; however, credit does not carry-
over from year to year. In Missouri, net excess generation is
credited to a customer’s next bill at an avoided-cost rate.
In contrast, Oklahoma electric utilities and regulated electric

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4 system capacity limit – the maximum amount of service or number of customers that a system can provide services to at a defined level of service
5 aggregate system capacity limit – the maximum amount of distributed generation energy that can be produced through the practice of utilizing a single generating system to offset electricity use on multiple meters
8 renewable energy credit (REC) – represents the property rights to the environmental, social and other non-power qualities of renewable electricity generation; an REC, and its associated attributes and benefits, can be sold separate from the underlying physical electricity associated with a renewable-based generation source

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*Abbreviations and definitions*

- **system capacity limit** – the maximum amount of service or number of customers that a system can provide services to at a defined level of service
- **aggregate system capacity limit** – the maximum amount of distributed generation energy that can be produced through the practice of utilizing a single generating system to offset electricity use on multiple meters
- **renewable energy credit (REC)** – represents the property rights to the environmental, social and other non-power qualities of renewable electricity generation; an REC, and its associated attributes and benefits, can be sold separate from the underlying physical electricity associated with a renewable-based generation source

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**Notes**

- [2] Nationwide, most states’ net metering policies often are established through legislation, with the legislative branch directing the state public utilities commission to draft and adopt administrative rules to implement net metering. While some states’ net metering policies apply to customers of all types of electric utilities (such as investor-owned utilities, municipal utilities and electric cooperatives), others apply only to customers of investor-owned utilities. State policies vary widely by several other key criteria, including individual system capacity limits, aggregate system capacity limits, eligible customer types, eligible system types, treatment of net excess generation at the end of a billing period, and ownership of renewable energy credits (RECs) associated with customer generation.

**Capacity Limits**

Capacity limits are used to regulate the system size of net metered installations, generally with a kilowatt-based limit. According to the U.S. Energy Information Administration, the average annual electricity consumption for a U.S. residential utility customer in 2012 was 10,837 kilowatt-hours (kWh), an average of 903 kWh per month. Given that average consumption rate, Missouri, for example, has authorized net metering for systems up to 100 kilowatts (kW), whereas Kentucky has authorized net metering for systems up to 30 kW. However, in most SLC states, residential capacity limits range from 10 kW to 25 kW.

Capacity limits vary widely by utility type, which can include customer, technology and system type. North Carolina, for example, has made capacity limits applicable only for investor-owned utilities, while Louisiana has established limits for commercial, agricultural and residential customers. States also often adopt different capacity limits for individual systems and aggregate net metering systems. For example, Arkansas has established system capacity limits for individual customers but has no aggregate net metering capacity limit.

**Compensation for Net Excess Generation**

Customers who participate in net metering receive credit for their net excess generation, generally on a monthly or annual basis, and the rate at which customers are credited varies. In West Virginia, customers receive credit at the retail rate on each subsequent bill; however, credit does not carry over from year to year. In Missouri, net excess generation is credited to a customer’s next bill at an avoided-cost rate. In contrast, Oklahoma electric utilities and regulated electric
cooperatives are not required to purchase net excess generation from customers.\textsuperscript{11} Notwithstanding these particular regulations, in most SLC states, customers are credited at the full retail electric rate. Because electric rates often include costs associated with maintaining the grid, such as poles, wires, meters and other infrastructure that make the electric grid safe and reliable, not all utility companies support this policy.\textsuperscript{12} Electric companies maintain that reimbursing customers for net excess generation at the retail rate raises the cost of electricity for customers who do not participate in net metering programs and allows net metering customers to avoid contributing to the maintenance of the grid.

**Ownership of Renewable Energy Credits (RECs)**

Renewable energy credits represent the property rights to the environmental, social, and other aspects of renewable electricity generation. An REC, and its associated attributes and benefits, can be sold separate from the underlying physical electricity associated with a renewable-based generation source. State net metering policies often specify ownership of RECs earned by renewable energy producers through electrical generation. State policies determine if the distributed generation customer retains the credits or if they are transferred to the utility or cooperative that purchases the excess generation. Owning RECs can be critical to meeting state renewable portfolio standards.\textsuperscript{13} In Arkansas,\textsuperscript{13} Kentucky,\textsuperscript{14} Missouri\textsuperscript{15} and Virginia\textsuperscript{16} the customer-generator\textsuperscript{16} retains their RECs. In North Carolina, the utility owns the RECs unless the customer chooses to participate in a net metering program under a time-of-use tariff\textsuperscript{14} with demand charges.\textsuperscript{17}

**Liability and Indemnity**

Because renewable generation technologies often are costly to acquire and install, many states have implemented measures to protect these investments. Some states, including Arkansas, Florida and Louisiana, require both parties (the customer-generator and the electric utility) to enter into indemnity agreements. Other states, such as North Carolina, Virginia, and West Virginia, require customer-generators to carry liability insurance. Kentucky requires that the customer-generator carry liability insurance and enter into an indemnity agreement with the electric utility. Customer-generators in Missouri must carry liability insurance if they produce more than 10 kW. Under Oklahoma’s policy, electric utilities are not allowed to require new liability insurance in addition to the generator’s standard property insurance.

**SLC State Net Metering Policies**

Net metering policies vary state by state, due to each state’s unique needs and concerns. This section briefly summarizes net metering policies in the SLC region by state. As indicated earlier, Alabama, Mississippi and Tennessee do not have net metering policies in place and have not been included in the summary.

**Arkansas**

In 2001, the Public Service Commission was directed to establish net metering rules by House Bill 2325.\textsuperscript{18} The legislation empowered the Commission to “establish appropriate rates, terms and conditions for net metering contracts, including a requirement that metering equipment be installed to both accurately measure the electricity supplied by the electric utility to each net metering customer and also to accurately measure the electricity generated by each net metering customer that is fed back to the electric utility over the applicable billing period.”\textsuperscript{19} It also permitted the Commission to authorize a utility to assess a fee or charge if the utility’s direct costs of interconnection\textsuperscript{**} and administration of net metering outweigh the “distribution system, environmental and public policy benefits of allocating costs among the electric utility’s entire customer base.”\textsuperscript{20} The bill also gave

\textsuperscript{**} interconnection – a link between a utility’s network with equipment or facilities not belonging to that network

\textsuperscript{11} renewable portfolio standards – a requirement in any given year, in a given state, that requires an electric utility to own credits (RECs) in an amount equal to a certain percentage of electric energy sold in the preceding calendar year by the electric utility to retail customers

\textsuperscript{12} customer-generator – an electric retail customer who owns and operates a customer-sited generation project utilizing an alternative or renewable energy resource or a net metering system

\textsuperscript{13} time-of-use tariff – electricity prices are set for a specific time period on an advance or forward basis, typically not changing more often than twice a year. Prices paid for energy consumed during these periods are pre-established and known to consumers in advance, allowing them to vary their usage in response to such prices
the Commission the authority to expand the scope of net metering.

In 2007, House Bill 2334 was enacted to expand the availability of net metering. In 2012, the Commission amended the net metering rules to exempt local, state, and federal government entities and agencies from previously required indemnity agreements and, a year later, approved new net metering tariffs for all electric utilities under its jurisdiction.

Renewable energy systems up to 25 kW in capacity and non-residential systems up to 300 kW in capacity are eligible for net metering. There is no limit specified for the aggregate capacity of all net metered systems. Customer-generators are permitted to carryover net excess generation month to month during an annual billing cycle and retain ownership of REC. Net excess generation is credited at the utility’s retail rate; however, any remaining net excess generation is forfeited to the utility four months after the end of each annual billing cycle.

Florida

The Public Service Commission adopted rules for net metering and interconnection for renewable energy systems up to 2 megawatts (MW) in capacity in March of 2008. These rules apply only to investor-owned electric utilities. The following June, the Legislature enacted House Bill 7135 confirming that the Commission had the authority to adopt the March 2008 rules. This legislation also required municipal electric utilities and cooperatives to “develop a standardized interconnection agreement and net metering program for customer-owned renewable generation” by July 1, 2009.

Under the Commission’s rules, net excess generation is carried forward at the utility’s retail rate to a customer’s subsequent bill for up to 12 months. At the end of a 12-month billing period, the electric utility compensates the customer-generator for any remaining net excess generation at the utility’s avoided-cost rate. Customer-generators retain ownership of REC, but are permitted to sell the REC back to the utility.

All electric utilities are required to file annual reports with the Commission. These reports detail the number of customer-generators and the size, type and location of their renewable energy systems; the aggregate capacity of net metered generation; amount of energy delivered to and generated from interconnected customers; and total energy payments made to interconnected users. Although the Commission does not have authority over municipal electric utilities and electric cooperatives, these electric providers also are required to file annual reports with the Commission.

Georgia

The Georgia Cogeneration and Distributed Generation Act of 2001 required that all electric utilities make “either bi-directional metering or single directional metering available to customer-generators depending on how the distributed generation facility is connected to the distribution system of the electric service provided.” Eligible renewable technologies include photovoltaics, wind and fuel cells. Net metering programs are available through all electric utilities and applicable to commercial, industrial, residential, nonprofit, local, state and federal government, agricultural and educational sectors. Limits for residential projects are set at 10 kW, and limits for commercial projects are set at 100 kW. The aggregate capacity of distributed generation systems is limited to 0.2 percent of a utility’s system peak demand from the previous year. Any net excess generation is credited to the customer-generator’s bill at a predetermined rate filed with the Public Service Commission, though a customer may choose to sell all electricity from a system, rather than using the generated electricity. Georgia’s law does not address REC ownership.

Kentucky

In 2004, statewide net metering legislation, Senate Bill 247, was enacted requiring all investor-owned utilities and rural electric cooperatives to offer net metering to customers with solar electric systems of 15 kW in capacity or less. In 2008, Senate Bill 83 expanded the net metering law by requiring electric utilities to offer net metering to customers who generate electricity with photovoltaic, wind, biomass, biogas or hydroelectric systems with capacities up to 30 kW. The bill directed the Public Service Commission to issue rules by January 2009, and electric utilities were given 90 days from the issue date to file tariffs, including all terms and conditions of net metering programs.

With the exception of Tennessee Valley Authority utilities, net metering is available to all customers of investor-owned
utilities and rural electric cooperatives. Net excess generation is credited to the customer-generator at the retail rate and credits are allowed to carry over indefinitely. The Commission is authorized to limit a utility’s obligation to offer net metering if the cumulative generating capacity of net metered systems reaches 1 percent of the utility’s single-hour peak load during the previous year. Under Kentucky’s law, customers retain ownership of their RECs.

**Louisiana**

Net metering is available for residential customers up to 25 kW in capacity. Net metering facilities may apply for, and be entitled to, state or federal funding for a portion of project costs. In 2008, Senate Bill 359 increased net metering capacity limits of commercial and agricultural generators from 100 kW to 300 kW. The increase was approved by the Public Service Commission in May 2011 and, the following July, the Commission adopted standards that determine the appropriate billing rate of renewable energy systems exceeding 300 kW capacity on a case-by-case basis. Once any utility’s net metering purchases exceed 0.5 percent of its retail peak, it no longer is obligated to offer net metering. Louisiana’s law does not address the ownership of RECs.

**Missouri**

Under the provisions of Senate Bill 54, established in 2007, net metering is made available to customers on a first-come, first-served basis until the total generating capacity of all net metering systems equals 5 percent of the utility’s single-hour peak load during the previous year, after which the commission for a public utility or the governing body for other electric utilities may increase the total rated generating capacity of net metering systems to an amount above 5 percent. Systems must be intended to offset part or all of a customer’s electricity consumption and must be located on the premises owned, operated, leased or otherwise controlled by the customer-generator. RECs are owned by the customer-generator.

Unlike many SLC states, customer net excess generation is credited at the utility’s avoided-cost rate, not the retail rate. Credits expire one year after issuance without compensation. Providers are required to offer the exact same electrical energy rates, rate structure, and monthly contractual or tariff changes to regular customers and customer-generators.

Finally, electric utilities must offer an all-in-one application for systems of 10 kW in capacity or less that includes a simple interconnection request, procedures and a brief set of terms and conditions.

**North Carolina**

In 2005, the Utilities Commission established a requirement that Duke Energy, Progress Energy and Dominion North Carolina Power, the three major investor-owned utilities in the state, offer net metering. The Commission required that net metering “be made available to a utility customer that owns and operates a solar photovoltaic system, wind-powered, or biomass-fueled renewable energy facility without battery storage. The renewable energy facility may have a capacity of up to 20 kW for a residential customer-generator and a 100 kW capacity for a non-residential customer-generator.”

In 2007, Senate Bill 3 directed the Commission to consider allowing larger generators to participate in net metering programs. In 2009, after a thorough investigation, the Commission did increase system capacity limits of renewable energy facilities to 1 MW. The Commission also ordered the three electric utilities to file annual reports indicating the number of net metering applicants and customer-generators, aggregate amounts of on-peak and off-peak generation credited and ultimately granted by the utility, and the reasons for any rejection or removal of customer-generators from net metering.

Customers are permitted to participate in net metering programs under any available rate schedule. However, if a customer chooses to receive service under any tariff other than a time-of-use demand tariff, all RECs associated with the generation must be surrendered with no compensation. Under the time-of-use tariff, on-peak generation is used to offset on-peak consumption, and off-peak generation is used to offset off-peak consumption. Any remaining on-peak generation is then used to offset off-peak consumption, while off-peak generation only may be used to offset off-peak consumption.

**Oklahoma**

An early proponent of net metering, the Oklahoma Corporation Commission (OCC) adopted terms and conditions of
purchase in 1988, the first SLC state to do so. These rules make net metering available to all customer classes and do not set limits on the amount of aggregate generation. Additionally, electric utilities are not permitted to require new liability insurance as a condition for interconnection. In 2014, the Legislature passed Senate Bill 1456, enabling electric utilities to petition the Commission for permission to apply a fixed charge to customer-generators who install net metered generation on or after November 1, 2014. Immediately after signing the bill into law, Governor Mary Fallin issued an executive order clarifying that Senate Bill 1456 did not mandate an increase in electricity charges and directed the Commission to consider alternative rate reforms. The law does not apply to electric cooperatives, which are not regulated by the Commission.

Unlike the renewables portfolio standards adopted by other states, which require electric utilities to retire RECs to demonstrate compliance, Oklahoma does not require electric utilities to purchase and retire RECs. Instead, each utility in Oklahoma that owns or operates electricity generation facilities must file a report with the OCC each year by March 1. The report must document the total installed capacity of all generation facilities, number of kilowatt-hours generated by each facility, and the energy source for each facility. Because of this difference, Oklahoma’s net metering policy does not address REC ownership.

**South Carolina**

In 2014, the General Assembly passed Senate Bill 1189 to create the voluntary Distributed Energy Resources Program and ordered the Public Service Commission to develop new net metering rules. An expansive bill, Senate Bill 1189 offered many guidelines regarding eligible systems, system size, cost recovery and rate structuring rules. Net metering is limited to resident customers with systems of 20 kW in capacity or less and nonresidential customers with systems that are less than 1 MW in capacity or that meet 100 percent of demand. The law holds the utility responsible for maintaining an account of total electricity produced and consumed. When more electricity is produced than consumed in a month, excess credits carryover to the next month. Electric utilities are required to compensate customer-generators for any excess electric production on an annual basis. Excess generation credits cannot be used to pay for non-volumetric charges. South Carolina’s law does not explicitly address RECs.

New net metering rates will be established after the Office of Regulatory Staff and/or outside consultants conduct a cost-benefit analysis of distributed generation. The Commission will use the cost-benefit analysis to determine what costs are incremental and recoverable and any additional service charges that customer-generators should pay in order to have access to the grid.

Finally, the new law includes a grandfather clause for customer-generators participating in net metered facilities prior to the availability of new net metering facilities. These customer-generators are permitted to remain in historic net metering programs through December 31, 2020.

**Texas**

Currently, Texas does not offer a statewide net metering program. However, the cities of Brenham and El Paso have instituted net metering and interconnection procedures. Additionally, Austin Energy, the municipal utility of Austin, Texas, and San Antonio City Public Service (CPS Energy) have made net metering available to their customers. REC ownership is not specified in the policies of the cities of Brenham and El Paso, nor is it specified under Austin Energy’s policy. CPS Energy offers a rebate program to customers who enroll in net metering. If customers choose to enroll in this program, REC ownership is transferred to CPS Energy. Table 1 provides an overview of these four programs.

**Virginia**

In 1999, net metering was established with the passage of Senate Bill 1269, or the Virginia Electric Utility Restructuring Act, as currently amended, and makes net metering available on a first-come, first-served basis until the capacity owned and operated by customer-generators reaches 1 percent of an electric distribution company’s adjusted Virginia peak-load forecast for the previous year. In April 2009, the governor signed House Bill 2155 into law, making changes to the net metering policy in Virginia. The revised law allowed electric utilities to approve a higher capacity limit at their discretion.

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111 non-volumetric charge – a flat charge to the end-use customer regardless of the amount of consumption for a given period of time
Table 1: Texas Net Metering Programs

<table>
<thead>
<tr>
<th>Jurisdiction / Utility</th>
<th>Eligible Renewable</th>
<th>Applicable Sectors</th>
<th>System Capacity Limit</th>
<th>Net Excess Generation</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brenham</td>
<td>Photovoltaics, wind, biomass, microturbines, other distributed generation technologies</td>
<td>Commercial, industrial, general public/consumer, nonprofit, schools, state government, agricultural, institutional</td>
<td>10 MW</td>
<td>Monthly excess credited at utility’s avoided-cost rate</td>
<td>Distributed-generation ordinance, enacted 09/16/2010</td>
</tr>
<tr>
<td>El Paso Electric</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, geothermal electric, small hydroelectric, wave energy, fuel cells using renewable fuels, other distributed generation technologies</td>
<td>Commercial, residential, nonprofit, schools, local government, construction, multi-family residential, low-income residential, institutional</td>
<td>For most customer-generators: 50 kW or 100 percent of estimated/actual electricity consumption, whichever is less</td>
<td>Credited to customer-generator at avoided-cost rate; if credits exceed $50, a refund check is issued</td>
<td>Texas Utilities Code 39.554, effective 06/17/2011; Public Utilities Commission of Texas Substantive Rules 25.211 and El Paso Electric Company Schedule No. 48, effective 09/01/2011</td>
</tr>
<tr>
<td>San Antonio City Public Service (CPS Energy)</td>
<td>Photovoltaics</td>
<td>Commercial, industrial, residential, nonprofit, schools, institutional</td>
<td>None</td>
<td>Customer-generator reimbursed at avoided-cost rate ($0.0165/kWh)</td>
<td>CPS Energy</td>
</tr>
<tr>
<td>Austin Energy</td>
<td>Solar thermal electric, photovoltaics, landfill gas, wind, biomass, geothermal electric, municipal solid waste, anaerobic digestion, small hydroelectric, tidal energy, wave energy</td>
<td>Commercial</td>
<td>20 kW</td>
<td>Credited to customer’s next bill at avoided-cost rate</td>
<td>Ordinance No. 20120607-055-Distributed-generation from Renewable Sources Rider, enacted 06/07/2012</td>
</tr>
</tbody>
</table>

Source: Database of State Incentives for Renewables & Efficiency

and permitted customers served on the basis of time-of-use tariffs to participate in net metering. The law also established ownership of RECs for the customer-generator. Customers are offered a one-time option to sell their RECs to the utility, but this does not preclude the utility from voluntarily entering into an agreement for the sale and purchase of RECs at any time.49

In 2011, House Bill 1983 required residential customer-generators exceeding 10 kW in capacity to pay a monthly standby charge, developed by the utility and approved by the Corporation Commission.50 Dominion Power has been approved to charge a transmission and distribution standby charge to any residential net metering customer who owns and operates, or contracts to own and operate, an electric generation system with a capacity greater than 10 kW and less than 20 kW.51 The net metering policy was amended again in 2013 with the passage of House Bill 1695, creating net metering programs for agricultural customers of investor-owned utilities and electric cooperatives.52 House Bill 1695 allows for net excess generation to be carried over on a monthly basis. At the end of each 12-month period, customer-generators have the option to carryover any net excess generation or sell it to the utility at the wholesale cost. The credit amount carried forward cannot exceed the amount of energy purchased during the previous year.

West Virginia

In January 2007, the Public Service Commission issued an order accepting the state’s consensus agreement on interconnection and net metering; the agreement included provisions for interconnecting net metered systems.53 In 2009, House Bill 103 directed the Commission to adopt net metering and interconnection rules and standards.54 Under these rules, net metering is available to all retail electricity...
customers. System capacity limits vary depending on the customer type and electric utility type, as specified by the Commission. The rules require that net metering tariffs be identical to the tariff for which the customer would qualify if that customer was not a customer-generator, in terms of rate structure, retail-rate components and monthly charges. Customers on a time-of-use tariff are permitted to participate in net metering programs. Net excess generation can be carried over to each subsequent bill of a customer-generator. REC ownership is not specified under West Virginia’s rules.

Conclusion

As the use of distributed generation technology continues to grow, electric utility customers likely will continue to call for access to net metering programs. It is important for state policymakers and public utility commissions to continue to balance customer demand with the impacts that distributed generation technologies have on the electric power grid as well as the electric utilities. This balance may include assessing the actual costs and benefits to the utility, tracking the number of participants in net metering programs, and formulating rate structures that require customer-generators to contribute to the maintenance of the grid.

Additionally, the examination of access to renewable generation technologies and net metering programs by low-income individuals and what policies can be developed to expand this opportunity also may be a consideration by policymakers.

From 2012 to 2013, solar generation in the Southern region (including Maryland, Puerto Rico and the U.S. Virgin Islands) grew by 87 percent. While solar generation represents only one segment of renewable generation, it is instructive to note growth in this industry as it relates to the promulgation of additional regulation in areas not immediately associated with net metering. Policymakers may consider crafting regulations for the protection of public safety officials, such as firefighters. Such regulations could include specifications on access and spacing of photovoltaic panels to ensure roof access, provide pathways to specific areas of the roof, and provide opportunities for smoke ventilation areas and to provide safe emergency access to the roof.

These conversations, which are just beginning in some SLC states, provide an opportunity for continued legislative action in the Southern region.

Glossary

» aggregate system capacity limit – the maximum amount of energy that can be produced through the practice of utilizing a single distributed generation system to offset electricity use on multiple meters

» avoided-cost rate – the cost the utility would incur if it was to generate or purchase power from another source

» customer-generator – an electric retail customer who owns and operates a customer-sited generation project utilizing an alternative or renewable energy resource or a net metering system

» distributed generation – power generation at the point of consumption; a common example of a type of distributed generation is residential roof-top solar panels

» interconnection – a link between a utility’s network with equipment or facilities not belonging to that network

» net excess generation – additional, unused electricity produced by a distributed generation source

» net metering – a billing system that allows utility customers to use the electricity they generate in excess of their consumption to offset their use of electricity from the grid

» non-volumetric charge – a flat charge to the end-use customer regardless of the amount of consumption for a given period of time

» renewable energy credit (REC) – represents the property rights to the environmental, social, and other qualities of renewable electricity generation; a REC, and its associated attributes and benefits, can be sold separate from the underlying physical electricity associated with a renewable-based generation source

» renewable portfolio standards – a requirement in any given year, in a given state, that mandates an electric utility to own credits (RECs) in an amount equal to a certain percentage of electric energy sold in the preceding calendar year by the electric utility to retail customers

» retail rate – the rate paid by consumers of electricity provided by a given utility

» system capacity limit – the maximum amount of service or number of customers that a system can provide services to at a defined level of service

» time-of-use tariff – electricity prices are set for a specific time period on an advance or forward basis, typically not changing more often than twice a year; prices paid for energy consumed during these periods are pre-established and known to consumers in advance, allowing them to vary their usage in response to such prices

» volumetric charge – a single, average rate multiplied against the number of kWh and/or kW consumed
References


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10. “Missouri Incentives/Policies.”


15. "Missouri Incentives/Policies.”


17. "North Carolina Incentives/Policies.”


19. Ibid.

20. Ibid.


25. Ibid.

26. "Florida Incentives/Policies.”


31. “Kentucky Incentives/Policies.”

32. Ibid.


34. “Louisiana Incentives/Policies/.


36. "Missouri Incentives/Policies.

37. Ibid.


39. Ibid.


41. “North Carolina Incentives/Policies.”


46. Gregory et al., South Carolina Distributed Energy Resource Program.

47. Ibid.


51. "Virginia Incentives/Policies.


<table>
<thead>
<tr>
<th>State</th>
<th>Arkansas</th>
<th>Florida</th>
<th>Georgia</th>
<th>Kentucky</th>
<th>Louisiana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible Renewable</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, microturbines using renewable fuels, small hydroelectric, fuel cells using renewable fuels, microturbines</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, CHP/cogeneration, hydrogen, small hydroelectric, tidal energy, wave energy, ocean thermal</td>
<td>Photovoltaics, wind, fuel cells, fuel cells using renewable fuels</td>
<td>Photovoltaics, wind, biomass, hydroelectric, biogas, small hydroelectric</td>
<td>Photovoltaics, wind, biomass, hydroelectric, geothermal electric, small hydroelectric, fuel cells using renewable fuels, microturbines</td>
</tr>
<tr>
<td>Applicable Sectors</td>
<td>Commercial, industrial, residential, general public/consumer, nonprofit, schools, local government, state government, federal government, agricultural, institutional</td>
<td>Commercial, industrial, residential, nonprofit, schools, local government, state government, tribal government, federal government, agricultural, institutional</td>
<td>Commercial, residential, nonprofit, schools, local government, state government, federal government, agricultural, institutional</td>
<td>Commercial, residential, agricultural</td>
<td></td>
</tr>
<tr>
<td>Applicable Utilities</td>
<td>Investor-owned utilities and electric cooperatives</td>
<td>Investor-owned utilities</td>
<td>All utilities</td>
<td>Investor-owned utilities, electric cooperatives (except TVA distribution utilities)</td>
<td>All utilities</td>
</tr>
<tr>
<td>Net Excess Generation</td>
<td>Credited to customer’s next bill at retail rate. Following an annual billing cycle, up to an amount equal to 4 months’ average usage can be carried over into the next annual billing cycle</td>
<td>Credited to customer’s next bill at retail rate; excess reconciled annually at avoided-cost rate</td>
<td>Credited to customer’s next bill at a predetermined rate filed with the Public Service Commission</td>
<td>Credited to customer’s next bill at retail rate; carries over indefinitely</td>
<td>Credited to customer’s next bill at retail rate; carries over indefinitely</td>
</tr>
<tr>
<td>System Capacity Limit</td>
<td>300 kW for non-residential; 25 kW for residential</td>
<td>2 MW</td>
<td>100 kW for non-residential; 10 kW for residential</td>
<td>30 kW</td>
<td>Commercial and agricultural: 300 kW; Residential: 25 kW</td>
</tr>
</tbody>
</table>

Source: Database of State Incentives for Renewables & Efficiency
<table>
<thead>
<tr>
<th>Missouri</th>
<th>North Carolina</th>
<th>Oklahoma</th>
<th>South Carolina</th>
<th>Virginia</th>
<th>West Virginia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar thermal electric, photovoltaics, wind, hydroelectric, small hydroelectric, fuel cells using renewable fuels</td>
<td>Photovoltaics, landfill gas, wind, biomass, hydroelectric, hydrogen, anaerobic digestion, small hydroelectric, tidal energy, wave energy, fuel cells using renewable fuels</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, municipal solid waste, CHP cogeneration, small hydroelectric</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, CHP cogeneration, hydrogen, small hydroelectric, tidal energy, wave energy, fuel cells using renewable fuels</td>
<td>Solar thermal electric, photovoltaics, wind, biomass, hydroelectric, geothermal electric, fuel cells, small hydroelectric, renewable fuels, fuel cells using renewable fuels</td>
<td></td>
</tr>
<tr>
<td>Commercial, industrial, residential, nonprofit, schools, local government, state government, federal government, agricultural, institutional</td>
<td>Commercial, industrial, residential, nonprofit, schools, local government, state government, tribal government, federal government, agricultural, institutional</td>
<td>Commercial, industrial, residential, general public/consumer, schools, local government, state government, federal government</td>
<td>Commercial, residential, general public/consumer, nonprofit, schools, utility, investor-owned utility, institutional</td>
<td>Commercial, industrial, residential, nonprofit, schools, local government, state government, agricultural, institutional</td>
<td></td>
</tr>
<tr>
<td>All utilities</td>
<td>Investor-owned utilities</td>
<td>Investor-owned utilities, regulated electric cooperatives</td>
<td>All utilities with more than 100,000 customers, excluding cooperatives</td>
<td>Investor-owned utilities, electric cooperatives</td>
<td>All utilities</td>
</tr>
<tr>
<td>Credited to customer’s next bill at avoided-cost rate; credits expire after 12 months</td>
<td>Utilities and regulated electric cooperatives are not required to purchase monthly net excess generation from customers</td>
<td>Credited to customer’s next bill on a monthly basis; annual pay out to customer zeros out monthly carryover</td>
<td>Credited to customer’s next bill at retail rate; after 12-month cycle, customer may opt to carryover credit indefinitely or to receive payment at avoided-cost rate</td>
<td>Credited to customer’s next bill at retail rate with no annual true-up (perpetual carryover)</td>
<td></td>
</tr>
<tr>
<td>100 kW</td>
<td>Individual system: 1 MW; residential: 20 kW; non-residential: 100 kW</td>
<td>100 kW or less; 25,000 kWh/year or less</td>
<td>20 kW for residential; 1,000 kW or 100 percent of demand for non-residential</td>
<td>500 kW for non-residential; 20 kW for residential</td>
<td>Investor-owned utilities with more than 30,000 customers: 2 MW for industrial; 50 kW for commercial; 25 kW for residential. Investor-owned utilities with fewer than 30,000 customers, municipal utilities and cooperatives: 50 kW for commercial and industrial; 25 kW for residential</td>
</tr>
</tbody>
</table>
This report was prepared by Policy Analyst Anne Roberts for the Energy & Environment Committee of the Southern Legislative Conference (SLC) of The Council of State Governments (CSG), under the chairmanship of Representative William E. “Bill” Sandifer III of South Carolina. This report reflects the body of policy research made available to appointed and elected officials by the Southern Office.

The Southern Office of The Council of State Governments, located in Atlanta, Georgia, fosters and encourages intergovernmental cooperation among its 15 member states. In large measure, this is achieved through the ongoing work of the standing committees of its Southern Legislative Conference and supporting groups. Through member outreach in state capitols, policy research, international member delegations, staff exchange programs, meetings and fly-ins, staff support state policymakers and legislative staff in their work to build a stronger region.

Founded in 1947, the SLC is a member-driven organization and the largest of four regional legislative groups operating under CSG and comprises the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

The SLC’s six standing committees provide a forum which allows policymakers to share knowledge in their area of expertise with colleagues from across the South. By working together within the SLC and participating on its committees, Southern state legislative leaders are able to speak in a distinctive, unified voice while addressing issues that affect their states and the entire region.