

Renewable Energy Solutions

Consumer Generation Options – How it Works



TVPPA



energyright solutions **TVA**

Renewable Energy Solutions – Consumer Generation Options

TVA provides an array of programs for homes, businesses and industries that are offered in partnership with TVA's 155 local power companies and 57 directly served customers. Renewable Energy Solutions programs include the Green Power Providers program, the Solar Solutions Initiative and the Renewable Standard Offer. These programs consist of a specified MW allotment offered on an annual basis. Consumers may also request interconnection service and install renewable energy systems without participating in one of these renewable energy programs, specifically through the Dispersed Power Production (DPP) program. Options include self-generation, self-generation and selling excess to TVA and selling all generation under the DPP program. Consumers should contact their local power company to ensure the system meets all local policies and procedures that provide for safe and reliable connection.

Figure 1. Option Summary

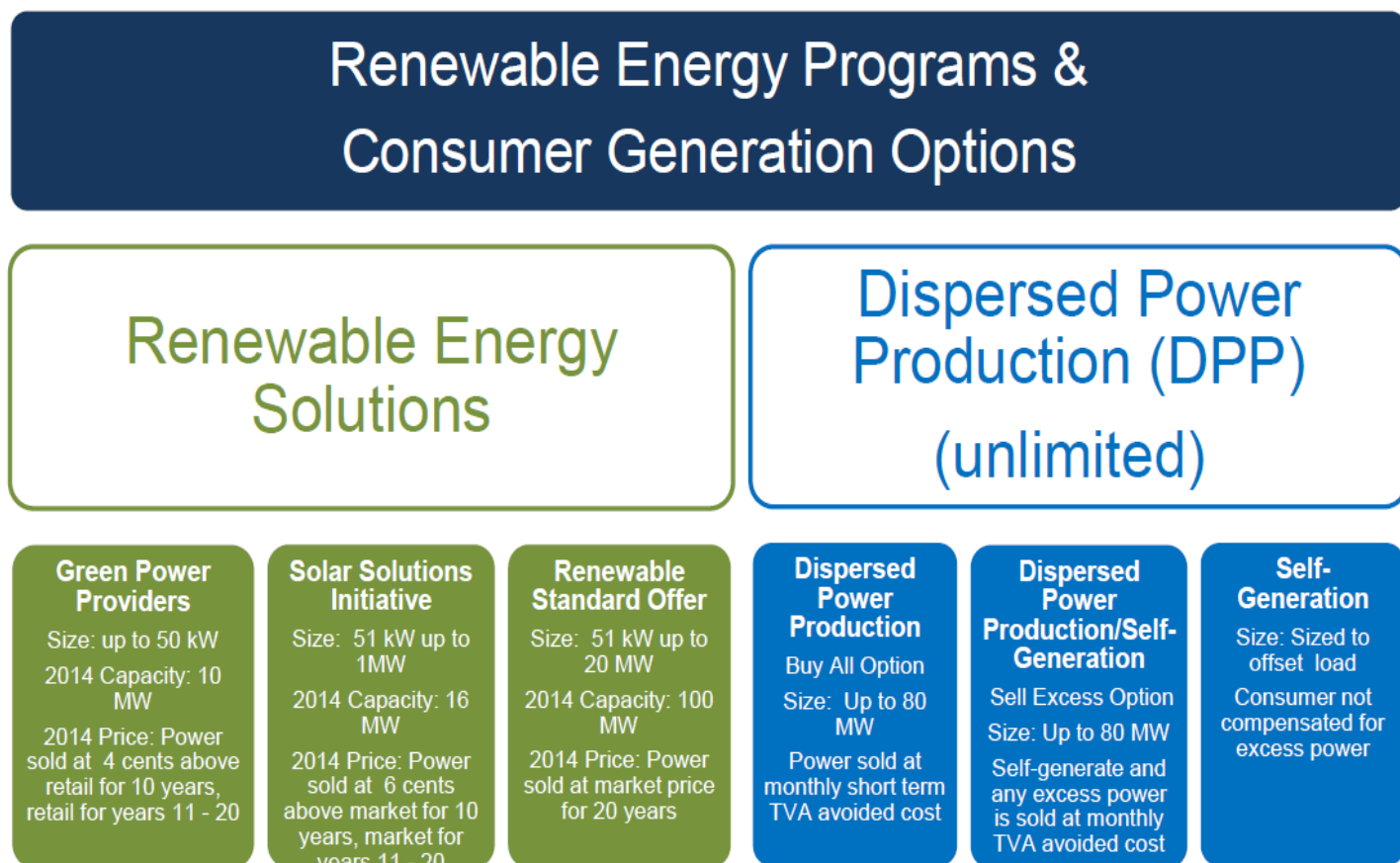
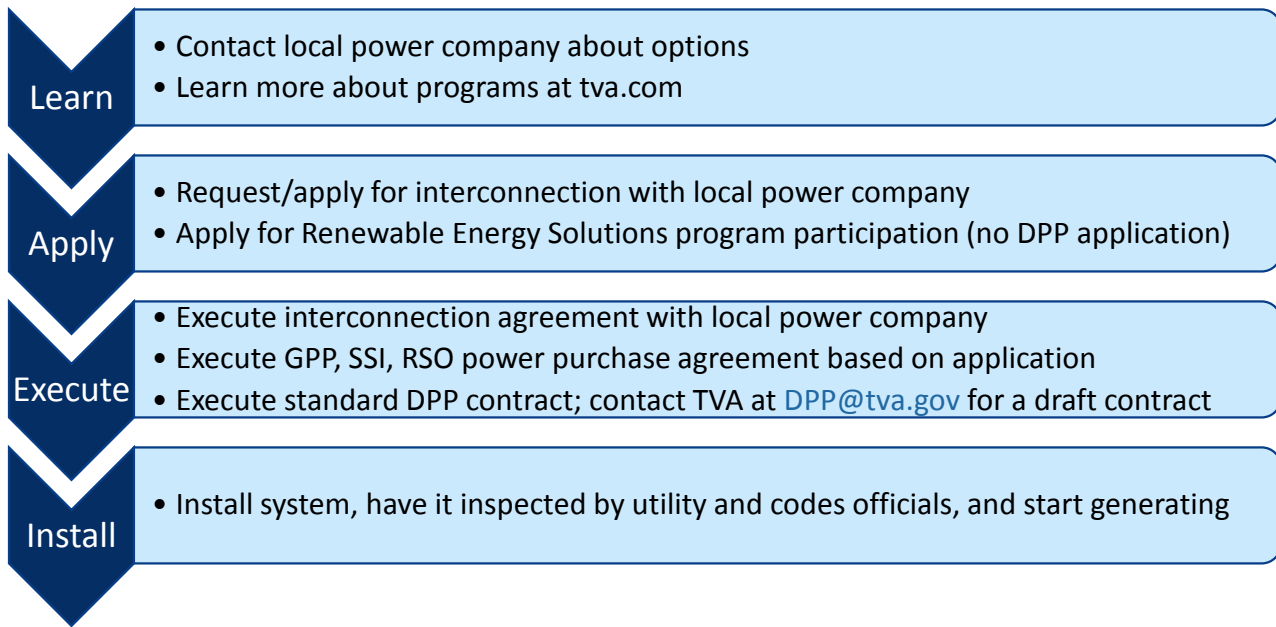


Figure 2: Process Flow:



As indicated in Figure 2, consumers interested in any of these options should contact their local power company about the applicable program or process to ensure safe and reliable operation of the electric system.

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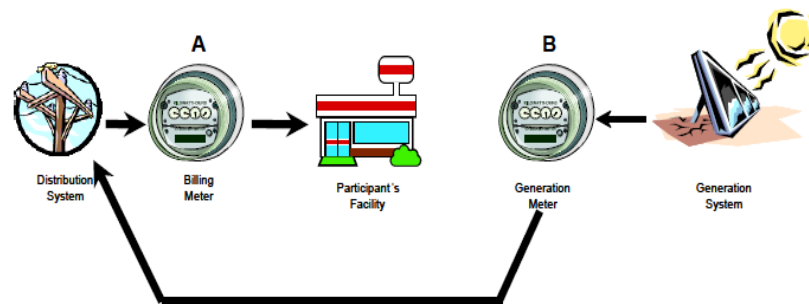


Green Power Providers (GPP)

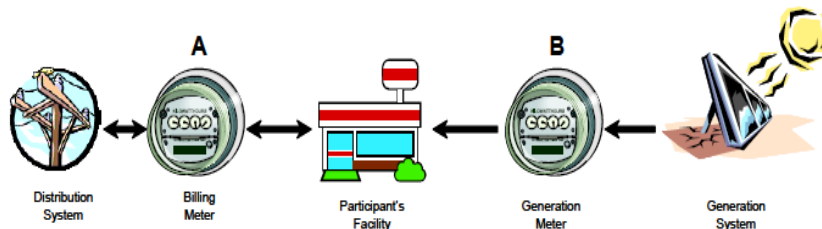
Description: Green Power Providers is an innovative and sustainable renewable energy solution offered by TVA and participating local power companies. The program is targeted for residential and commercial consumers who wish to install small-scale renewable energy systems up to 50 kilowatts (kW). Local power companies are also eligible for the program. Eligible technologies include solar, wind, low-impact hydro, and biomass.

Interconnection & Metering: Interconnection is subject to local power company fees, policies, and procedures. Local power companies have two options for interconnection, either Supply Side Interconnection or Load Side Interconnection for each installation. Dual metering is required through the GPP program, and TVA purchases the second meter that records generation.

Supply Side Interconnection



Load Side Interconnection – option subject to local power company discretion



For More Information:

www.tvagreenpowerproviders.com

GPP Hotline: contact your local power company or call 1-866-673-4340

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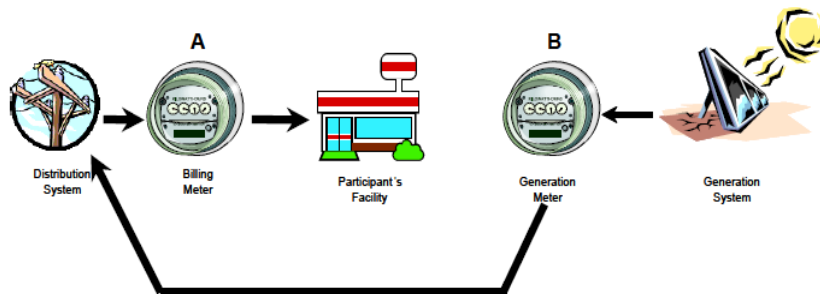


Solar Solutions Initiative (SSI)

Description: Solar Solutions Initiative is a pilot program for solar projects in the Valley (> 50 kW up to 1 MW) that use local, NABCEP-certified installers. The program is open to consumers, developers, and local power companies who wish to install mid-size solar energy systems. The SSI purchase price includes a 10-year overlay to the base market prices offered in the Renewable Standard Offer (RSO). It is intended to continue to support local jobs and investment as well as grow local clean energy sources at cost-effective rates.

Interconnection & Metering: Interconnection is subject to local power company fees, policies, and procedures. Projects must be interconnected via Supply Side Interconnection. Dual metering is required through the SSI program, and TVA purchases 100% of the energy output from the generation meter. Participant is responsible for all metering and interconnection-related costs. In addition, TVA also requires a program application fee of \$1,000 plus \$1.00/kW for systems up to 1 MW.

Supply Side Interconnection



For More Information:

<http://www.tva.com/renewablestandardoffer/ssi.htm>

RSO/SSI Hotline: 423-751-2372

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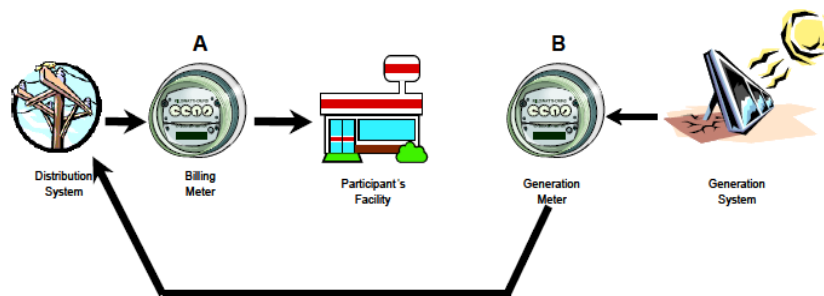


Renewable Standard Offer (RSO)

Description: Renewable Standard Offer is a program for medium to larger renewable energy projects in the Valley (> 50 kW up to 20 MW). The program is open to consumers, developers, and local power companies who wish to install mid to large-size renewable energy systems. Eligible technologies include solar, wind, and biomass energy. The RSO is a 20-year wholesale or market-based program that pays generators for renewable energy based on the hour, day and season generation occurs. It is intended to continue to support local jobs and investment as well as grow local clean energy sources at cost effective rates.

Interconnection & Metering: Interconnection is subject to local power company fees, policies, and procedures. Projects must be interconnected via Supply Side Interconnection. Dual metering is required through the RSO program, and TVA purchases 100% of the energy output from the generation meter. Participant is responsible for all metering and interconnection-related costs. In addition, TVA also requires a program application fee of \$1,000 plus \$1.00/kW for systems up to 1 MW and \$5,000 plus \$1.00/kW for systems above 1 MW up to 20 MW.

Supply Side Interconnection



For More Information:

<http://www.tva.com/renewablestandardoffer/index.htm>

RSO/SSI Hotline: 423-751-2372

Consumer Generation Options

Dispersed Power Production (DPP) & Self-Generation

Description: Generation facilities that qualify for the Dispersed Power Production Program (DPP), a program that has been available since 1981. For generation facilities with output of up to 1 MW, there are no FERC filing requirements. A participant choosing this type and size of installation may (1) use all of the output of its qualified facility to supply its own requirements i.e. “self-generate” and reduce retail power usage with no consumer credits or payments for any excess generation, or (2) use a portion of output to supply its own requirements and sell the excess to TVA, or (3) sell the entire output of the qualified facility to TVA.

Interconnection & Metering: The customer must contact the local power company (LPC) to arrange safe and reliable connection to the grid. This arrangement should include provisions for system protection, e.g., islanding prevention and disconnect switch. Customer should also notify TVA of the interconnection; however, for facilities up to 50 kW, no screening or other review is required by TVA Transmission. Interconnection costs will be paid for by the customer.

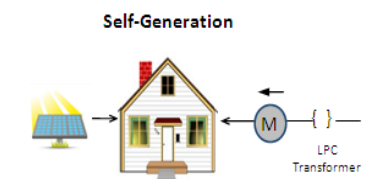
Metering requirements should be documented in the same arrangement with LPC as the interconnection. Self-generation option requires a meter capable of recording only received kW/kWh. Self-Generation & DPP Contract option requires a bi-directional meter capable of recording received and delivered kW/kWh on separate channels. The DPP Sell-All Contract option requires two meters (one for electricity purchased by customer from LPC and one for electricity generated by customer and sold to TVA). Metering costs will be paid for by the customer. Customers that wish to sell power to TVA and are interested in receiving prices that vary by time of day are required to install interval meters capable of recording half-hourly data.

Power Sales: Customers wishing to participate in the DPP program and sell power to TVA should contact TVA at dpp@tva.gov for a standard DPP contract. The prices paid under DPP are set by TVA and are currently updated monthly. There are currently no program volume caps for participation in the DPP program. Residences or businesses will continue to buy electricity as needed from their LPC.

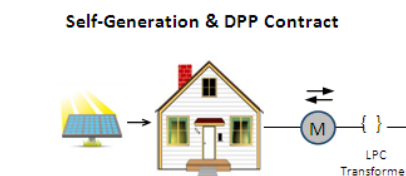
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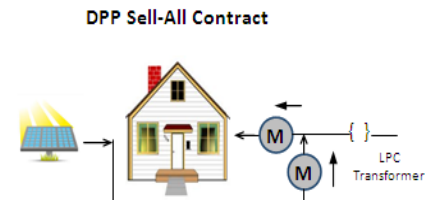
(3)



Electricity that is produced serves customer loads first. Customer buys additional electricity from LPC as needed. Excess electricity that is delivered to the grid flows without payment.



Electricity that is produced serves customer loads first. Excess electricity that is delivered to the grid is purchased by TVA. Customer buys additional electricity from LPC as needed.



All electricity that is produced and delivered to the grid is sold to TVA. Customer buys entire electricity needs from LPC.

For More Information:

Contact your local power company about Self-Generation options – note that since there are relatively few DPP participants across the Valley, it may take some time for LPCs to accommodate interested participants through billing and metering modifications.

Contact TVA for TVA DPP Guidelines: <http://www.tva.com/abouttva/pdf/dispersed.pdf> or DPP hotline: 423-751-8640 or email dpp@tva.gov