

FAQ - Member-owned Generation (Frequently Asked Questions)

- 1.) Does Bowie-Cass allow members to own and interconnect generation? Yes, BCEC allows members to have interconnected generation. In most instances, the generation consists of solar panels on a member's rooftop.
- 2.) What does "interconnected generation" mean? Interconnected generation means that the generator is connected through wires and the electric meter to the BCEC electric lines. You may see small solar powered lights along a road or sidewalk, or gate openers that have a solar panel and aren't connected to any other electrical source, these types of installations are not "interconnected generation".
- 3.) Where can I get information on types of "interconnected generation"? Most homeowners and small businesses that install interconnected generation in the northeast Texas area typically install solar panels that convert sunlight to electricity. The U.S. government conducts research and provides information from the National Renewable Energy Laboratory. You can access their website for information on a number of types of renewable energy at www.nrel.gov.
- 4.) What should I know if I am considering a solar generation installation? In the summer, solar generation will start making energy at about 7 a.m. and continue to about 7 p.m. The system will make differing amounts of energy during the day in direct relation to the intensity of sun that the solar installation experiences. This means that to get the maximum amount of solar generation in a day, the system should be pointed due south, installed at a 30 degree angle to the ground, and have an un-obstructed view (no tree shading) of the sky for as much of the day as possible. Varying any of these parameters will lead to reduced output of the solar system.
- 5.) Does Bowie-Cass buy back the output of the member-owned, interconnected generation? Yes, BCEC buys back excess generation at our avoided-cost of energy which varies monthly, but generally is about \$0.03/kWH.
- 6.) Will I continue to use my existing electricity meter? BCEC will replace your existing electric meter with a meter that collects additional data. In addition to the amount of energy that goes "in" the electric meter, the new meter will also collect the energy that comes "out of" the electric meter and the "net" amount of these two values. The meter will continue to send in data remotely like it does now.
- 7.) What are the economics of member-owned, interconnected generation? In general, BCEC sells electricity to residential members at approximately \$0.10/kWH (\$0.06484 Summer Rate + \$0.035 PCRF) so every kWH that you don't buy from BCEC is worth \$0.10 (10 cents). Your generation consultant

should be able to make an estimate of how many kWh you would generate annually and may be able to give you estimates of monthly generation. For the best case scenario, you will be able to use all of your generated energy each month so if your generation can generate 500 kWh per month on a regular basis then your energy savings on your BCEC bill would be \$50.00 per month (500 kWh x \$0.10/kWh). (This calculation doesn't include other charges that might apply.) You can compare this to your monthly payment (or the equivalent payment if you deduct any down payment) for the generator plus increases in maintenance, insurance, and property tax costs. This is fairly simplistic and is the Best Case Scenario.

Another way to look at this situation is based upon the cost per kWh of the energy. As noted, BCEC sells electricity to residential members at approximately \$0.10/kWh. Your generating system also has a lifetime cost per kWh that you can calculate and use to compare to the BCEC electric rate. If you take the cost of the generating system and divide by the lifetime energy generated (provided by your generation consultant), you will have a simple cost per kWh of the purchased generating system. To illustrate this example, if your generating system together with its power source (natural gas, diesel, gasoline in some instances, etc.) has a lifetime cost of \$30,000; the estimated annual energy generation is 12,000 kWh and the estimated life of the system is 20 years, then the average energy cost of the system per kWh is \$0.125/kWh ($\$30,000 / 12,000 \text{ kWh} / 20 \text{ Years}$). Initially, in this case, it is simple to compare the BCEC rate of \$0.10/kWh versus the generation cost of \$0.125/kWh.

- 8.) What will be my electric rate if I install interconnected generation? BCEC has three (3) options for members who have interconnected generation. (All options also apply charges for the basic rate that you are on now.) Option 1, Rate 100, is most appropriate for members who don't put much energy back onto the BCEC system and can be thought of as the "Give Back" program. Option 2, Rate 120, is most appropriate for members with moderate sized generation who regularly put energy back onto the BCEC system and is termed the "Net Metering" program. Option 3, Rate 110, is most appropriate for large generation installations and is termed the "Net Billing" program. (The aim of this type of installation is to "sell" electricity back to BCEC on a regular basis.) Your bill will be figured differently depending upon which program you are on.
- 9.) What are the terms of Rate 100, the "Give Back" program? The Give Back program is offered to all generation sources that are less than 10 kW in size. For the Give Back program, you will be billed at standard rates for all energy that goes IN the meter and all energy that flows OUT of the meter is "given" back to BCEC. There is no additional monthly charge applied. This may be the appropriate rate for someone who installs a relatively small generating system or who installs a moderate sized generating system together with a relatively large energy usage on a monthly basis. As noted later, other options have an extra \$15.00/month charge. Since BCEC charges approximately \$0.10/kWh, you

must regularly put 150 kWh/month back onto the BCEC system, and re-use it in the same month, to economically justify the extra \$15.00/month charge required with the alternative rates.

A sample monthly bill calculation for a Residential Member would be:

Rate 100 – Give Back		
Description	Amount	Unit
Net Monthly Usage	1,000	kWH
Net Monthly Generation	30	kWH
Net Monthly Energy Billing	N/A	kWH
Basic Monthly Charge	\$ 22.50	
Extra Monthly Charge	0.00	
Energy Charge (1000x\$0.06484/kWH)	64.84	
PCRF Charge (1000x\$0.03500/kWH)	35.00	
Energy Buy Back (0x\$0.03/kWH)	0.00	
Total	\$ 122.34	

The Give Back program allows members who may make a smaller investment to participate in member-owned generation and use as much of their generation as possible before the energy flows out of the meter. By using the energy before it flows out of the meter, these members are lowering their electric bill by the amount of energy that they don't buy from BCEC.

Currently, BCEC has less than 10 members on this rate plan.

- 10.) What are the terms of Rate 120, the “Net Metering” program? The Net Metering program is offered to all generation sources that are less than 100 kW. For the Net Metering program, BCEC acts as a “bank” during the month and you can “deposit” and “withdraw” energy as needed. At the end of the month, BCEC will read your meter and subtract the withdrawals from the deposits. If you are a net user of energy during the month, you will be billed at standard rates for “net” energy used in the month. If you are a net generator of energy during the month, BCEC will buy this excess energy back at our avoided-cost for the month. There is an additional monthly charge applied of \$15.00/month for the Net Metering program.

Two sample monthly bill calculations for a Residential Member would be:

Rate 120 – Net Metering		
Net Monthly User of Energy		
Description	Amount	Unit
Net Monthly Usage	1,000	kWH
Net Monthly Generation	300	kWH
Net Monthly Energy Billing	700	kWH
Basic Monthly Charge	\$ 22.50	
Extra Monthly Charge	15.00	
Energy Charge (700x\$0.06484/kWH)	45.39	
PCRF Charge (700x\$0.03500/kWH)	24.50	
Energy Buy Back (0x\$0.03/kWH)	0.00	
Total	\$ 107.39	

Rate 120 – Net Metering		
Net Monthly Generator of Energy		
Description	Amount	Unit
Net Monthly Usage	1,000	kWH
Net Monthly Generation	1,300	kWH
Net Monthly Energy Billing	-300	kWH
Basic Monthly Charge	\$ 22.50	
Extra Monthly Charge	15.00	
Energy Charge (0x\$0.06484/kWH)	0.00	
PCRF Charge (0x\$0.03500/kWH)	0.00	
Energy Buy Back (-300x\$0.03/kWH)	-9.00	
Total	\$ 28.50	

This example is interesting and may cause people to want to buy a very large generating system because they will be selling energy back BCEC. However, if you review the example in the 2nd paragraph of Item #7, you will have a simple cost per kWh of the purchased generating system. Typically, the cost per kWh of the installed system is more than the \$0.03/kWh that you may receive from BCEC. In the example in Item #7, the average cost of the generating system per kWh was \$0.125/kWh (\$30,000 / 12,000 kWh / 20 Years)). Using this example, you could be losing \$0.095/kWh (\$0.125/kWh - \$0.03/kWh) for every kWh of energy that you over-produce.

Currently, BCEC has more than 50 members on this rate plan.

- 11.) What are the terms of Rate 110, the “Net Billing” program? The Net Billing program is offered to all generation sources that are less than 100 kW and required for generation sources that are 100 kW and over. For the Net Billing program, you will be billed at standard rates for all energy that goes IN the meter and all energy that flows OUT of the meter will be bought back at our avoided-cost for the month. There is an additional monthly charge applied of \$15.00/month for the Net Billing program.

Two sample monthly bill calculations for a Residential Member would be:

Rate 110 – Net Billing		
Net Monthly User of Energy		
Description	Amount	Unit
Net Monthly Usage	1,000	kWH
Net Monthly Generation	300	kWH
Net Monthly Energy Billing	N/A	kWH
Basic Monthly Charge	\$ 22.50	
Extra Monthly Charge	15.00	
Energy Charge (1,000x\$0.06484/kWH)	64.84	
PCRF Charge (1,000x\$0.03500/kWH)	35.00	
Energy Buy Back (-300x\$0.03/kWH)	-9.00	
Total	\$ 128.34	

Rate 110 – Net Billing		
Net Monthly Generator of Energy		
Description	Amount	Unit
Net Monthly Usage	1,000	kWH
Net Monthly Generation	1,300	kWH
Net Monthly Energy Billing	N/A	kWH
Basic Monthly Charge	\$ 22.50	
Extra Monthly Charge	15.00	
Energy Charge (1,000x\$0.06484/kWH)	64.84	
PCRF Charge (1,000x\$0.03500/kWH)	35.00	
Energy Buy Back (-1,300x\$0.03/kWH)	-39.00	
Total	\$ 89.34	

Currently, BCEC doesn't have any members on this rate plan.

- 12.) If you sell electricity at \$0.10/kWH, why do you buy member-generated electricity back at \$0.03/kWH? BCEC doesn't generate electricity. Just like members, each month BCEC gets an "electric bill" from our power supplier. (The cost of power from the power supplier is strictly a "pass through" charge in that BCEC passes that cost through to the end consumer. The cost of power is passed through by a component of the residential consumer rate (\$0.06484/kWH) charge and the Power Cost Recover Factor (PCRF) charge.) Each month, BCEC calculates what we paid the power supplier for the energy that we purchased and that is how we set the price of the energy that we buy back from member-owned generation. This is called the "avoided cost" meaning that we have avoided the same cost that we would have paid to our power supplier. If BCEC paid more than the avoided costs to members with member-owned generation, then the remaining members of BCEC would be making up the difference and be paying more than they would have without the member-owned generation. In other words, the other members would be subsidizing the members with member-owned generation.
- 13.) Why do member-owned generation members have to pay the \$15.00 extra monthly charge? Similar to the answer to Item# 12, there is a basic cost of

providing service each month to each member. For residential members, the monthly cost of providing service is approximately \$35.00 per month. BCEC doesn't recover the full cost of the service through the monthly basic residential charge of \$22.50, but recovers it through a combination of the basic monthly charge and a small amount of each kWh of energy sold. For members with member-owned generation, BCEC may not collect the full amount of the cost of providing service since their aim is to reduce or eliminate their net energy purchases. The extra \$15.00 monthly charge is to ensure that the remaining members don't subsidize the members with member-owned generation.

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