





### SOLAR ENERGY FOR SOUTH PLAINS ELECTRIC COOPERATIVE MEMBERS

As your Touchstone Energy cooperative, South Plains Electric is your source for energy and information. Since member interest in solar power is growing locally, we offer the following information to help guide you through the decision-making process. Please refer to this information as needed or contact Jerry Jones at jnjones@SPEC.coop or 806.790.3663.

#### WHAT IS A GOOD FIRST STEP?

Every member should conduct their own energy audit to determine the home's level of energy efficiency. Solar systems can be expensive and an energy audit might identify cost-effective ways to reduce your energy usage. Check online for a local contractor to perform the audit or start with our free, self-guided, home energy audit called <u>Home Energy Adventure</u>.

By making sure your home is energy efficient, you could lower your electricity usage. Then, if you choose to install solar, a smaller system may be adequate. It's important to know how much power you use monthly to correctly size your solar system. Usage information is available on your electric bill, your online bill pay account, on the SPEC App (free download from your app store) or by calling our Member Service Representatives at 806.775.7766.

If you live in a subdivision with a homeowners' association, check with them for guidelines and restrictions on your solar installation before making any purchases.

#### WHAT IS NET METERING?

Net metering simply means that any electricity your solar system generates will be used for your power needs first and any excess will offset the cost of power you need to buy from South Plains Electric within a billing period. If your solar system is generating, you will see lower bills from the Cooperative.

If you purchase a solar system that produces more electricity than you need within a billing period, the Cooperative does not purchase the excess power, (please see our residential net metering rate on page two). The Cooperative credits you at the full retail cost for any solar electricity generated to offset your usage while most other utilities credit at the wholesale rate.

Even if you have net zero kilowatt hours for a billing period, you are still responsible for the facilities charge of \$27.97. The facilities charge covers the cost of keeping the Cooperative's system available to you.



#### SOLAR ENERGY FOR SOUTH PLAINS ELECTRIC COOPERATIVE MEMBERS

#### **RESIDENTIAL NET METERING RATE** — RATE 41

**Availability:** Available to members for all residential, (single family residence or one-unit apartment) usage, including lighting, power, home water supply, and domestic and non-irrigation wells under 5hp. This rate is subject to established rules and regulations, but not applicable for irrigation, commercial, or seasonal agricultural processing use.

This rate is available to net-metering members only. Net-metering members are defined as members who have placed a type of distributed generation which is no greater than 50 kW behind the Cooperative's meter. All members on this rate must adhere to the rules established in the Distributed Generation Procedures and Guidelines Manual for Members. Members must also sign an agreement "for interconnection and parallel operation of distributed generation" with the Cooperative. (A member qualifying for this rate will receive credit in kWh generated against kWh consumed in one billing period. Kilowatt-hour credits will only offset up to the amount of kWh consumed in each billing period. All other applicable charges will be billed.

Type of Service: Single phase and three phase at available secondary voltages. Frequency and voltage will be subject to reasonable variation.

Facilities Charge:\$27.97 per monthGenerator <50 kW<br/>Energy Charge:\$.081861 per kWh<br/>Pass-thru from power supplier. This will be a fixed monthly charge.

**Generator >50 kW** Additional charges will apply. Contact Cooperative for details.

**Minimum Charge:** The minimum charge under the above rate will be the applicable facilities charge as stated above, but does not include any applicable billing adjustments provided for under Tariff Section 20.

Billing Adjustments: Reference Tariff Section 20.

**Terms of Payment:** Each utility bill, regardless of the nature of the service(s), is due upon receipt and delinquent 16 days after issuance unless such day falls on a holiday or weekend, in which case payment is due on the next work day. If full payment is not received on or before the date such bill is due, the member's account will be considered delinquent and subject to disconnection, in accordance with the rules of the appropriate regulatory authority.



#### Rate Schedule » 41

#### ( Residential–Net Metering )

#### Availability:

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#### Type of Service:

Single phase and three phase at available secondary voltages. Frequency and voltage will be subject to reasonable variation.

Facilities Charge:	\$27.97 per month
Generator <50 kW	
Energy Charge:	\$.081861 per kWh
Standby Charge:	Pass-thru from power supplier. This will be a fixed monthly charge.
Generator >50 kW	Additional charges will apply. Contact Cooperative for details.

#### Minimum Charge:

The minimum charge under the above rate will be the applicable member charge as stated above, but not including any applicable billing adjustments provided for under Section 20, page 4.

#### Billing Adjustments:

Reference Section 20, page 4.

#### Terms of Payment:

Each utility bill, regardless of the nature of the service(s), is due upon receipt and delinquent 16 days after issuance unless such day falls on a holiday or weekend, in which case payment is due on the next work day. If full payment is not received on or before the date such bill is due, the member's account will be considered delinquent and subject to disconnection, in accordance with the rules of the appropriate regulatory authority.

#### Rate Schedule » (Billing Adjustments)

The Cooperative will adjust all bills in accordance with the following adjustments, if applicable.

The Power Cost Recovery Factor (PCRF) will be applied to each kWh sold in addition to any monthly minimum, contract minimum, or annual minimum charges and will not apply toward satisfying any minimum charges.

#### Power Cost Recovery Factor (PCRF):

The monthly charges will be increased or decreased on a uniform per kWh basis computed monthly as follows: PCRF = (A-B+C)/kWh (A-B-C)/kWh

#### Where:

vner	PCRF=	Power Cost Recovery Factor (expressed in \$/kWh) to be applied to estimated energy sales for the billing period.
	A=	Total estimated purchased electricity cost from all suppliers including fuel for the billing period.
	B=	Total estimated purchased electricity costs from all suppliers including fuel which are included in the Cooperative base rates.
		The base power cost is computed as: $B = (D) (kWh)$
	D=	Base power cost in \$/kWh sold of \$0.074698 for all billing months.
	C=	Adjustment to be applied to the current monthly billing to account for differences in ac- tual purchased electricity costs and actual PCRF revenues recovered in previous periods. Costs for purchased electricity and sales to members under the Large Power over 2,000 kW rate schedule will be excluded.
	kWh=	Total estimated energy sales for billing period.
	NOTE:	Base Power Cost = Cost of Purchased Power $\div$ Total kWh Sales

#### Sales Tax/Franchise Tax:

All bills will be adjusted by the amount of any sales tax, franchise tax or other tax attributable to the sale of electric service to the member unless member has previously provided satisfactory proof of exemption to the Cooperative.

#### **Penalty:**

All accounts will be subject to penalties on delinquent accounts as per Cooperative policies.







# 10 STEPS TO TAKE BEFORE INSTALLING SOLAR

As your Touchstone Energy cooperative, South Plains Electric Cooperative wants to be your source for energy and information. Since solar power generation is rapidly becoming more widely available, we put together this information to help answer your questions. Contact us for more information about solar.

#### **10 STEPS TO TAKE BEFORE INSTALLING SOLAR**

As prices decline and technology improves, installing a residential solar system—also called a photo-voltaic or solar panel system makes sense for some consumers. However, even with these recent improvements in solar energy, it's important to find out the facts before committing to a purchase. Consider these points as you explore whether solar is right for your situation.

#### 1. MAKE YOUR HOME MORE ENERGY EFFICIENT BEFORE BUYING A SOLAR SYSTEM.

Adding insulation, sealing air leaks and completing other basic fix-it projects make sense for several reasons. You can cut your energy costs immediately, and you'll also be able to reduce the size of solar energy system you purchase. Go to <u>SPEC.coop</u> for additional information and resources to help you manage your energy costs.

### 2. RESEARCH, RESEARCH, RESEARCH, BEFORE INVESTING IN A SOLAR SYSTEM.

South Plains Electric Cooperative should be one of your first contacts. Experts at South Plains Electric can answer basic rate questions and provide resource materials.

# **3. UNDERSTAND HOW A SOLAR SYSTEM MESHES WITH YOUR COOPERATIVE'S SYSTEM.**

Most solar systems are designed to provide you with a portion of the electricity needed, but won't provide 100 percent of your needs. At night and on cloudy days, and possibly at other high-energyuse times, you'll need more power than your solar energy system can produce. That means you'll still be connected to South Plains Electric Cooperative's power lines. Because these systems are grid-connected, energy can flow both ways. South Plains Electric sets appropriate policies and rates for connecting solar energy systems to their lines (the grid). As you begin to explore solar systems, be sure you ask Cooperative experts about rate structures, interconnection, essential safety precautions and any other connection-related details.

#### 4. REVIEW YOUR CURRENT ENERGY USE SO YOU CAN DETERMINE WHAT SIZE SOLAR ENERGY SYSTEM TO INSTALL.

You can review your past energy use online at the Cooperative's bill pay site, on the SPEC App, or by calling a member service representative. One pertinent bit of information that will be useful is looking at how your energy use fluctuates throughout the day. Having that information will help you determine the size and type of system best suited to your situation.



#### 5. TALLY UPFRONT COSTS.

South Plains Electric Cooperative does not sell, install, or maintain solar energy systems, so you will either purchase or lease a system from a contractor who is not a part of the Cooperative. If you purchase a solar system, you will be the owner, and you'll be responsible for the purchase price, as well as ongoing maintenance and repair costs. If leasing is the option you prefer, you will pay less initially, but you'll likely have higher ongoing costs. In either case, it pays to spend time figuring out all the expenses you'll be responsible for during the life of the system. These may include: installation (in addition to the price of the system), interconnection costs, insurance, taxes, and possibly others, too. If you are leasing, ask contractors about the length of the term, if the contract is transferrable to a new homeowner should you sell your home. potential for price increases, as well as the same questions you'd ask if you were to purchase a solar energy system. In the "credit" column of your price comparisons, look at any incentives, rebates and tax credits offered for either a purchase or a lease.

#### 6. SEARCH FOR INCENTIVES, REBATES AND TAX CREDITS.

Any financial incentives available will help reduce your investment costs. Opportunities vary by state and locale, and many have expiration dates. One database offering details is <u>www.dsireusa.</u> org. This site includes a clickable, interactive map, showing federal and state incentives, credits, exemptions, grants, loans, and rebates for residential and commercial/industrial projects. In addition, your contractor should have up-to-date details about incentives available where you live.

#### 7. ACCEPT SHORT- AND LONG-TERM RESPONSIBILITIES.

If you purchase a solar energy system, you'll need to meet the requirements of South Plains Electric Cooperative's interconnection agreement. That includes paying any costs of connecting to the Cooperative's grid. Local officials are responsible for conducting safety inspections, but it's your responsibility to notify them in advance about your installation. After the interconnection requirements are met, and the safety and integrity of your system are met, SPEC will make the connection to the grid. And, as the owner of the system, you'll be responsible for



#### 8. FOLLOW ALL SAFETY PRECAUTIONS.

Most solar systems are grid-connected. Because of the twoway flow of electricity, excess energy your solar energy system collects during the daytime flows into your Cooperative's lines. This shoulders you with the responsibility for the safety of your Cooperative linemen, others who may come in contact with a downed power line and your Cooperative's equipment. Improper connection and maintenance of your system may endanger people and the reliability of the grid.

#### 9. CHOOSE A REPUTABLE CONTRACTOR/INSTALLER.

South Plains Electric is not associated with any solar companies. Start with a list of options garnered from website research, local or state Better Business Bureaus, renewable energy associations, your state energy office, your state Attorney General's office, extension service staff and any other local experts you can call on for assistance and advice. Contact at least a few of those contractors appearing on your list, especially if recommended by multiple state and local experts. Whittle your list after asking many questions, checking out other installations the contractor has completed, comparing bids (get at least three), checking references and thoroughly examining contracts. If possible, ask a contract specialist or lawyer to review the contractor Before Signing a Contract),

#### **10. MAINTAIN GOOD RECORDS.**

Keep files on your pre-purchase research and pre-installation data provided by your Cooperative, as well as bids, contracts, inspection reports, maintenance records and all other details you may need to refer to in the future. In addition, you'll want to know about system performance, so set up a system to track and compare your actual system performance with predictions provided by the contractor/ installer.



South Plains Electric Cooperative, Inc. Your Touchstone Energy® Cooperative







# QUESTIONS TO ASK A Solar Contractor

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#### QUESTIONS TO ASK SOLAR CONTRACTORS BEFORE SIGNING A CONTRACT

As with any major home improvement project, purchasing from the right installer/contractor is every bit as important as the product you are purchasing. Due diligence is critical to ensure you get the best system, for a fair price, and that it's installed correctly and on time.

#### QUESTIONS ABOUT THE CONTRACTOR'S/COMPANY'S BACKGROUND

Ask these questions to be sure the contractor knows the business thoroughly and has satisfied other customers. Also, be sure to request copies of insurance documents, certifications and licenses, so you know that the contractor and installers have gone through required training. Be sure to call former customers and check out other installations the contractor has completed. You should query local Better Business Bureaus and your state Attorney General's office, and check online rating services for comments about the contractor and the equipment you plan to purchase.

- 1. How long have you been in business?
- 2. Are you licensed to do business in Texas?
- 3. How many solar energy systems have you installed? Can you provide a list of consumer references in my area? Can I talk with former customers and also see successful installations?
- 4. Who will do the installation at my site? Are they employees or subcontractors? If you involve subcontractors, do they work with a number of other employers, too? Have these subs worked on many of your installations?
- 5. What training have you and your installers had, and what, if any, certifications do you and your installers hold? Do you have an installer with a Master Electrician license, and is there an installer on your team licensed to install solar?
- 6. Does your company carry these types of insurance: general liability for at least \$1 million, professional liability, workers compensation, other types?
- 7. Have you ever been involved in a legal dispute involving a solar installation?



#### QUESTIONS ABOUT THE INSTALLATION AT YOUR HOME

Ask these questions to find specific details on what the contractor is proposing and why, as well as general information on what you can expect during and after installation.

- 1. What size and type of system do you recommend for my site? Why?
- 2. Are there any steps I must take before the installation-such as removing trees or replacing my roof?
- 3. What brand(s) of systems do you install? What advantages do these brands offer over other options? Are the systems manufactured in the U.S. or elsewhere?
- 4. What warranties do you and the manufacturer offer? Do you offer a warranty on installation? If the manufacturer is not located in the U.S., are there any difficulties with warranty work? How do I make a claim on defective or short-lived equipment?
- 5. What tax credits, rebates and other incentives will this installation qualify for? Who files the paperwork for any/all of these incentives?
- 6. How much of my energy usage will this system provide?
- 7. What will the payback period be?
- 8. Will I be able to monitor the output of my panels? What is the process for doing so?
- 9. How and when will you involve staff from my electric cooperative in the installation? Do you have experience interconnecting with utility grids?
- 10. Will permits be needed for this installation? Who obtains them and pays any fees?
- 11. When will you begin the installation? How long will it take to complete?
- 12. What is your daily schedule? (For example, is it M-F, 8 a.m. to 5 p.m., with an hour for lunch?)
- 13. Will you be on the job site daily? If not, how will we communicate if there are questions or problems that arise? And how do I reach you after hours?

- 14. If my energy use changes, can l increase the number of solar panels later?
- 15. Is it possible the installation may cause my roof to leak? If so, does your company take responsibility for repairs?

#### **QUESTIONS ABOUT THE BID/CONTRACT**

All of this information should be included in both your bid and on the contract you sign. Check these details carefully, then compare to other bids you obtain. (Get at least three bids, all in writing.) Be wary of any really low bids. If the contractor can't supply the information, ask why not. After checking any contract to be sure this information is included, have a contract expert or lawyer review the contract before signing it.

- 1. Is this bid an estimate or a fixed price? What is the process you will follow if you find unexpected problems with this installation and want to charge extra to fix the problems?
- 2. Does the bid include the total cost of the project, including components, materials and labor?
- 3. Does the bid include a breakdown of each of the components (make and model number, size/kWh per year, as well as price of each) so I can see what each portion will cost?
- 4. Does the bid include details about permits?
- 5. Does the bid include the time frame for beginning and ending the installation?
- 6. Does the bid include warranty information, as well as how to place a claim?
- 7. Does the bid include expected operation and maintenance costs; projected monthly, annual and lifetime costs and savings; and projected energy production?
- 8. Does the bid include payment options, as well as financing details?
- 9. Does the bid include details about who will file paperwork for tax credits, rebates and other incentives?
- 10. What documentation will I receive when the project is done? (This may include lien releases and other contract-related paperwork, as well as warranties, operating manuals and more.)



#### **QUESTIONS ABOUT PAYMENT**

Ask these questions so you know how you will be billed and the expected payment due dates.

- 1. How much will the down payment be? When will it be due?
- 2. What is the payment schedule?
- 3. How long after work is completed will the final payment be due?
- 4. Do you offer financing or have a relationship with a bank that offers financing?









# **SOLAR ENERGY FREQUENTLY ASKED QUESTIONS**

As your Touchstone Energy cooperative, South Plains Electric Cooperative is your source for energy and information. Since interest in solar power generation is growing, we put together a series of fact sheets to help answer your questions. Contact us for more information about solar and assistance in making decisions about whether solar is a good option for you.

#### HOW DO WE GENERATE ELECTRICITY FROM THE SUN?

Solar energy systems work when sunlight hits a solar photovoltaic module (solar panel) and causes electric current to flow. The current produced from the solar panels is controlled and regulated by an inverter, which converts direct current (DC) to alternating current (AC), needed for use by household appliances. The electrical panel is where the power gets distributed throughout your house; any excess electricity may be sent from the panel back to the Cooperative's power grid.

#### HOW MUCH ELECTRICITY CAN I GENERATE?

That depends on several factors. 1) The size of your system. You can determine how much electricity you want to produce: then size your system accordingly. Note that you can start out small and add on. A system that will generate 100 percent of your energy needs is expensive, so most systems are sized to generate only a portion of your home's needs. 2) Your site. If you have a shade-free area from 9 a.m. to 3 p.m., you'll be able to collect more sun and produce more energy than if your site is shaded. 3) Your region. The more sunny days in your area, the more electricity you'll be able to generate. You can find online calculators to help answer this question in more detail, and installers can provide details about your situation, too.

#### WHAT HAPPENS WITH A SOLAR ENERGY SYSTEM AT NIGHT AND ON CLOUDY DAYS?

Battery-backed or grid-independent systems use on-site energy storage to store excess energy produced during the day for use at night or when the sun is not producing enough power. Choosing this option will add significant cost and maintenance to your system. Most people opt for grid-connected systems for reduced cost, maintenance and high reliability. With this type of system, your Cooperative continues to provide energy to you when you need it 24/7. Your solar energy system will produce energy, and even excess energy, on sunny days. Your system will not collect sunlight at night and on cloudy days. That means, you will continue to draw electricity from the Cooperative during these times.

#### WHAT HAPPENS WITH A SOLAR ENERGY SYSTEM DURING POWER OUTAGES?

Most grid-connected solar energy systems shut down to prevent back-feeding electricity into de-energized power lines that may have fallen or that line crew members may be working on. It's important to have this shut-down feature to prevent injuries—and even death—to those working on the line.



# WILL SOUTH PLAINS ELECTRIC COOPERATIVE BUY ANY EXCESS ENERGY I PRODUCE WITH A SOLAR SYSTEM?

Grid connected solar energy systems are connected to the Cooperative's power lines. That means electricity can flow both ways (to your home from your Cooperative, and from your solar energy system back to the electrical grid). Particularly on sunny days when your energy use may be low, your solar energy system may produce excess energy that can flow back to the grid. The excess energy will offset the cost of energy you use when your solar energy system is not generating at the retail rate. However, if your solar energy system produces more energy than you use in a billing period, you will not receive money back for the extra energy. Even if you have zero kilowatt hours for a billing period, you are still responsible for the facilities charge of \$27.97. The facilities charge covers the cost of keeping the Cooperative's system available to you. Check with SPEC to get specific details for your system, including requirements for interconnection, safety, metering and applicable rates.

#### HOW MUCH DOES A SOLAR ENERGY SYSTEM COST?

The price of solar energy components varies depending on the size of the system (generating capacity), type and quality of the components purchased and complexity of the system selected. The good news for consumers is that the cost of solar energy has declined dramatically, while the technology has improved, equally dramatically. Installation costs depend on the size and complexity of the system, but also on the home layout and construction. For example, a simple, south-facing roof allows for an easier install than a roof with hips and valleys. In addition, some homes require structural or wiring upgrades. To determine your costs, look for online calculators to help you estimate your pricing, and also get bids from reputable installers.

# ARE THERE INCENTIVES AND TAX CREDITS FOR INSTALLING SOLAR ENERGY SYSTEMS?

Yes. There may be federal, state or local income tax credits, property tax exemptions and rebate programs from government agencies. These vary by state, city and utility, and may also depend on whether the system is purchased or leased. Find information about your state's programs: www.dsireusa.org. Be sure to consult with your financial and tax advisor.

#### HOW LONG IS THE PAYBACK PERIOD ON A SOLAR ENERGY SYSTEM?

The payback period ranges depending on the system cost, available rebates and incentives, the amount of electricity produced, and the retail price of electricity you purchase from your Cooperative.

#### HOW CAN I KNOW IF A SOLAR ENERGY SYSTEM WILL WORK ON MY HOUSE?

To begin, you can look at factors such as which direction your home faces, the condition of your roof, and obstructions such as trees and other buildings that may block the sun during the peak generation period of 9 a.m. to 3 p.m. Solar contractors can provide a more detailed analysis on what to expect.

#### HOW DO I GET STARTED WITH SOLAR?

Before choosing a solar system, be sure that your home is as energy efficient as possible; you may want to get a home energy audit to help determine which improvements will be most beneficial. Investing in energy efficiency provides a faster return on your investment. By improving your home's energy efficiency first. you will reduce your overall energy use and may reduce the size of solar energy system needed-that saves more money. Also make sure your roof is in tip-top shape. If yours is older, you may need to repair or replace it before installing solar. Research contractors thoroughly before investing in a system; get at least three quotes before choosing a one. Be sure to work closely with South Plains Electric Cooperative for advice and assistance on interconnecting with the grid. We can provide information and history of your energy usage that can help you size your system and evaluate savings. Co-op staff has experience in working with other members and solar contractors.









# SOLAR OWNERSHIP OPTIONS

As your Touchstone Energy cooperative, South Plains Electric is your source for energy and information. Since interest in solar power generation is growing, we put together a series of fact sheets to help answer your questions. Contact us for more information about solar and assistance in making decisions about whether solar is a good option for you.

#### **RENT OR BUY?**

These are options you face when searching for a place to live and when you need a new vehicle. You'll face these same choices when you invest in solar. Here are some points to consider when exploring various methods of adding solar to your home.

#### **PURCHASE**

- You'll be responsible for making the decisions on what system to purchase, choosing a reputable contractor, and more. It's a big investment, so you'll need to spend time researching, asking questions, obtaining multiple bids and reviewing contracts.
- To cover the cost of purchasing your solar system, you can pay cash or obtain a loan. The system will be yours, and you'll reap the benefits of all power you generate from the system.
- Because you are the owner of the system, you'll have to pay up front for the components and all installation and connectivity costs. You'll most likely be responsible for maintenance and repair costs, and will bear liability for the system. While some installers offer service and maintenance contracts, not all do. You may be able to negotiate that in your contract: be sure to get details in writing before signing.

• As the system's owner, you'll be able to take advantage of federal, state and local incentives. (Consult your financial/tax advisor).

#### LEASE (THIRD-PARTY OWNERSHIP)

If leasing is an option for you, consider these points.

- Leasing should reduce your up-front costs to install a solar system. Some leases offer a no-money-down option, and some leasing programs are structured so that the projected savings in electricity purchases offsets the lease payments.
- You'll notice a wide range of solar lease programs. Variables include the amount of money you'll have to pay up front, the length and term of the lease, and responsibilities, both yours and the leasing company's. The differences between lease offers can be enormous, so be sure you understand all terms and conditions, and that you determine which options are most advantageous to your situation.
- With most solar leases, you'll enter into a long-term contract usually 15 to 20 years. Although the system is installed on your home's roof, you won't own the system, can't claim Renewable Energy Credits (RECs), and can't take advantage of any state or federal incentives. That's because those rights belong to the leasing company. You will, however, receive all power produced by the solar system, at the rate negotiated in your contract.



There are two primary leasing arrangements you might encounter. In one, you would sign a long-term lease for the hardware—like leasing a car. The second involves entering into a contract to purchase the power produced by the solar system that the leasing company installs on your roof.

• Some third-party solar companies also offer the opportunity for consumers to purchase their panels, either during or at the end of the contract. If you are interested in this option, be sure it is in the contract you sign.









# SOLAR SYSTEMS WHAT SIZE IS RIGHT FOR YOU?

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#### SOLAR SYSTEMS: WHAT SIZE IS RIGHT FOR YOU?

All solar energy systems begin with a series of small photovoltaic (PV) cells that produce electricity directly from sunlight. These PV cells are combined to form a module or panel. Several panels are connected together to form an array or a solar system. Arrays can be small—from a few panels to power a roadside warning sign or a remote cabin—up to a large array covering hundreds of acres as part of a utility-scale solar farm.

Solar systems generally can be divided into three types, based on size.

#### **ROOFTOP SYSTEMS**

This type of system is most often thought of as a residential system, although rooftop systems may also be installed on commercial and industrial facilities. However, for the most part, rooftop systems are smaller in scale, and for practical purposes, have far less capacity to produce solar than other types.

- As the name suggests, rooftop systems are mounted on a roof. This may be a home, a commercial/industrial building, a public building, or even a parking garage.
- The actual amount of energy produced depends on the location. Typical home rooftop systems are sized to produce between 2 and 10 kilowatts (kW). On average, 75 square feet of solar

panels are needed to produce each kilowatt of direct current (DC) power during peak solar periods.

- Ownership of rooftop systems can vary. The system may be owned by the building's owner. A leased solar system may be owned by the company installing the leased system, or a community solar system may be owned by the electric cooperative installing it.
- The energy produced by the rooftop solar system helps offset energy use of the building on which it is installed. During some times of the day or months of the year, it may produce more energy than is used within the home or commercial building.
- The number of solar panels installed on the building can be expanded over time, depending on the size and configuration of the building, and the owner's desire to install additional capacity.

#### **UTILITY-SCALE SYSTEMS**

- Utility-scale systems may range from a capacity of 500 kW to hundreds of megawatts (MW).
- For perspective, a 1-MW alternating current (AC) solar array can produce enough energy to power about 200 homes (depending on location) and may cover 5-7 acres. Because of the amount of land required, utility-scale projects are often located in more



rural, less populated areas.

- Because of their size, most utility-scale solar systems are installed in a fixed-tilt ground-mount configuration. This means that the panels are placed on the ground (rather than on a building), and are tilted in place to gain maximum exposure to sunlight.
- A solar array can be installed on marginal land that can't be used for agriculture or building sites, such as brownfield sites, landfills and airport buffer areas. However, the site must be relatively flat or south-sloping without significant shading from vegetation or other obstructions.
- Utility-scale solar systems owned and/or operated by an electric cooperative usually feed electricity directly into the transmission or distribution grid. The Cooperative provides solar power to members in one of two ways: by adding the power to the Co-op's power portfolio—which benefits all Cooperative members; or by selling power directly to individual members who are motivated to purchase solar energy. Some cooperatives also support a community solar program, described below.

#### **COMMUNITY SOLAR SYSTEMS**

- South Plains Electric Cooperative has community solar projects in the Lubbock and Childress areas.
- The size and scope of community solar systems typically fall between rooftop systems and utility-scale systems. Community solar systems are larger than residential rooftop systems but usually smaller than utility-scale projects. The capacity of these systems is typically between 20 kW and 1 MW (enough to power between 4 and 200 homes).
- Local cooperatives build, operate and maintain their own community solar systems. Often these systems are located within the cooperative's service territory. Smaller systems are most likely to be local. One advantage: members can actually see the system "in action."

- Ground-mounting is the most common installation method, although some community solar installations have been placed on top of parking garages and public buildings.
- Ownership models vary, but in all cases, members who purchase solar through the cooperative community solar system receive credit on their bill for their share of the output from the solar system. The two most common ownership methods are:
  - » Members may purchase or lease a portion or unit of the system.
  - » Members subscribe to a unit of capacity from the project, they don't own any part of it.
- There are significant advantages to community solar projects for both the co-op and the member. These include being able to participate in solar even if your home is not suited to supporting a solar system or if you don't want the upfront investment. Participating in a community solar program offers economies of scale. That is, it's cheaper per unit to build a large system rather than a small one, and there is more flexibility for consumers to participate. Cooperative advantages also include the economy of scale and the ability to manage the power inputs to a greater degree.



South Plains Electric Cooperative, Inc. Your Touchstone Energy® Cooperative

# MEMBER 1 - SAMPLE BILL



# 06/10/22

Serv	vice	No.	Rdg.	l	Reading		Multiplier	кwн	Charges
From	То	Days	Code	Previous	Prese	nt	Multiplier	Usage	Unarges
04/30/22	05/31/22	31	3	9747	1025	8	1	511	27.97
			2	5480	623	5	1	755	0.00
0.03250	0 PCRF FA	CTOR							0.00
CITY	TAX								0.44
PUC	ASSESSMEN	NT							0.05
CITY	FRANCHISE	FEE							1.40
TOTAL C	URRENT BIL	L DUE 0	7/01/22						29.86
PREVIOU	JS AMOUNT	DUE							14.20
THANK Y	OU FOR YO	UR PAYI	MENT 06	/03/22					-29.86
PREVIOU	JS CREDIT B	ALANCE							-15.66
TOTAL A	MOUNT DUE								14.20
COMPARISO		s Service	Total		Avg. KWH/Day	Cost Per Day	ТС	TAL DUE	\$ 14.20
Current Billing P		31	51		16	0.90	Due Date	07/01/22	Bill is Delinquent After Due Date
Previous Billing		28	32	-	12	0.44			
Same Period Las	st Year	28	33	9	12	1.00	After D	ue Date Pay:	14.81

### 01/12/22

Serv	vice .	No.	Rdg.		eading			КШН	<u> </u>	
From	То	Days	Code	Previous	Present		Multiplier	Usage		Charges
11/30/21	01/02/22	33	0	4597	6213		1	1616		160.26
			2	3434	3588		1	154		-12.61
0.00000	0 PCRF FA	CTOR								0.00
CITY	TAX									2.33
PUC	ASSESSMEN	IT								0.25
CITY	FRANCHISE	FEE								7.38
	URRENT BIL		2/01/22							157.61
	IS AMOUNT I									31.37
	OU FOR YOL		MENT 01	/05/22						-31.37
TOTAL A	MOUNT DUE									157.61
COMPARISO		Service	Total		g. KWH/Day	Cost Per Day	TO	TAL DUE	\$	157.61
Current Billing P		33	16		49	4.47	Due Date	02/01/22	Bill is De	linguent After Due Date
Previous Billing		30	69	-	23	1.79	After Du			
Same Period Las	t Year	34	17	80	52	3.95	After Du	e Date Pay:		164.99

# **MEMBER 1- HISTORY**



Bill Date 🦊	🕂 🛍 Bill Amount	Read Date	KWH 📶 ঝ	TOD KWH 1
07/13/22	53.06	07/03/22	773	587
06/10/22	29.86	05/31/22	511	755
05/10/22	14.20	04/30/22	326	780
04/12/22	41.83	04/02/22	739	629
03/11/22	140.85	03/01/22	1203	300
02/09/22	139.97	01/30/22	1266	183
01/12/22	157.61	01/02/22	1616	154
12/10/21	57.38	11/30/21	695	380
11/09/21	26.01	10/31/21	469	508
10/12/21	46.11	10/03/21	661	475
09/13/21	60.88	09/03/21	842	487
08/11/21	59.73	08/01/21	722	380
07/13/21	55.95	07/06/21	869	568

Bill Date 🦊	📬 🛍 Bill Amount	Read Date	KWH 📶 🕂	TOD KWH 1
06/11/21	29.86	06/01/21	339	636
05/11/21	29.86	05/04/21	416	789
04/13/21	29.86	04/02/21	599	679
03/12/21	109.27	03/02/21	1241	273
02/09/21	125.44	01/31/21	1370	125
01/12/21	143.47	01/03/21	1780	188
12/09/20	52.97	11/30/20	656	332
11/10/20	43.37	11/05/20	825	528
10/13/20	29.84	10/02/20	490	555
09/14/20	59.95	09/02/20	842	449
08/13/20	59.50	08/02/20	781	394
07/14/20	30.90	07/05/20	566	552
06/10/20	29.84	06/08/20	523	841

Bill Date 🦊	🕂 🛍 Bill Amount	Read Date	KWH 📶 ঝ	TOD KWH 1
05/12/20	29.84	05/04/20	476	820
04/13/20	54.79	03/31/20	734	356
03/11/20	99.74	03/06/20	1169	189
02/12/20	119.98	02/10/20	1453	189
01/14/20	109.36	01/10/20	1544	233
12/11/19	93.46	12/09/19	1284	235
11/11/19	34.56	11/06/19	587	509
10/11/19	30.69	10/09/19	441	428
09/12/19	106.80	09/11/19	1364	285
08/13/19	123.12	08/08/19	1536	228
07/12/19	31.83	07/09/19	639	611
06/11/19	29.84	06/08/19	492	1014
05/13/19	29.84	04/26/19	294	1397

# MEMBER 2 - SAMPLE BILL



# 03/16/22

Serv From	vice To	No. Days	Rdg. Code	Rea Previous	ading Present		Multiplier	KWH Usage		Charges
02/01/22	03/06/22	33	3	16797	17507		1	710		27.97
02/01/22	00/00/22	00	2	6587	7315		1	728		0.00
0.02000	0 PCRF FA	CTOR	_	0001	1010		•	120		0.00
CITY		oron								0.44
	ASSESSMEN	JT								0.05
	FRANCHISE									1.40
	URRENT BIL		4/04/22							29.86
	IS AMOUNT I									58.74
	OU FOR YOU		MENT 02	/11/22						-58.74
TOTAL A	MOUNT DUE									29.86
COMPARISO	DNS Days	Service	Total	KWH Avg.	KWH/Day C	ost Per Day	TO	TAL DUE	\$	29.86
Current Billing P	eriod	33	71	0	22	0.85	Due Date	04/04/22	Billie	Delinguent After Due Date
Previous Billing	Period	28	61	6	22	1.97			Din is	
Same Period Las	t Year	48	18	19	38	2.88	After Due	e Date Pay:		31.25

### 09/15/21

Serv	vice	No.	Rdg.	Re	ading		Markinling	кwн		Charman
From	То	Days	Code	Previous	Presen	t	Multiplier	Usage		Charges
08/03/21	09/07/21	35	0	8797	11600	)	1	2803		257.43
			2	4000	4535	i	1	535		-43.80
0.00000	0 PCRF FA	CTOR								0.00
CITY	TAX									3.37
PUC	ASSESSMEN	1T								0.36
CITY	FRANCHISE	FEE								10.68
TOTAL C	URRENT BIL	L DUE 1	0/04/21							228.04
PREVIOU	JS AMOUNT I	DUE								189.86
THANK Y	OU FOR YOU	JR PAY	<b>MENT</b> 09	/01/21						-189.86
TOTAL A	MOUNT DUE									228.04
COMPARISO		Service	Total	KWH Avg	. KWH/Day	Cost Per Day	то	TAL DUE	\$	228.04
Current Billing P		35	28		80	6.10	Due Date	10/04/21	Bill is De	linguent After Due Date
Previous Billing		28	22		79	6.35	After D			•
Same Period Las	t Year	28	41	64	149	13.58	After Di	ie Date Pay:		238.72

# MEMBER 2 - HISTORY



Bill Date 🦊	📬 🕕 👬 Bill Amount	Read Date	KWH 📶 🕂	TOD KWH 1
07/15/22	278.84	07/05/22	2601	605
06/14/22	115.06	06/04/22	1600	902
05/12/22	32.25	05/02/22	1059	966
04/14/22	29.86	04/04/22	786	868
03/16/22	29.86	03/06/22	710	728
02/11/22	58.74	02/01/22	616	411
01/14/22	100.29	01/04/22	1018	212
12/14/21	71.10	12/05/21	929	457
11/11/21	73.37	11/01/21	1030	532
10/14/21	131.57	10/04/21	1604	440
09/15/21	228.04	09/07/21	2803	535
08/13/21	189.86	08/03/21	2215	384
07/15/21	221.11	07/06/21	2671	340

Bill Date 棏	📬 🕂 📶 Bill Amount	Read Date	KWH 📶 ঝ	TOD KWH 1
06/15/21	93.21	06/07/21	1675	903
05/13/21	34.36	05/02/21	1001	946
04/15/21	29.86	04/05/21	670	1045
03/16/21	147.75	03/07/21	1819	382
02/11/21	119.49	01/18/21	1276	0
01/14/21	122.10	12/17/20	1328	0
12/11/20	124.38	11/17/20	1373	0
11/12/20	195.09	10/19/20	2507	0
10/14/20	315.60	09/18/20	3198	0
09/15/20	405.62	08/18/20	4164	0
08/17/20	517.73	07/21/20	5367	0
07/16/20	372.82	06/21/20	3812	0
06/12/20	246.66	05/19/20	2458	0

Bill Date 🕂	📬 🛍 Bill Amount	Read Date	KWH 📶 ঝ	TOD KWH 1
05/14/20	170.02	04/23/20	1847	0
04/15/20	105.31	03/23/20	1115	0
03/13/20	109.49	02/21/20	1080	0
02/14/20	122.78	01/25/20	1343	0
01/16/20	103.42	12/22/19	1217	0
12/13/19	98.39	11/21/19	1091	0
11/13/19	132.96	10/23/19	1958	0
10/15/19	303.04	09/25/19	3459	0
09/16/19	429.99	08/26/19	4694	0
08/16/19	368.22	07/25/19	3991	0
07/16/19	289.67	06/24/19	3097	0
06/13/19	245.72	05/24/19	2448	0
05/15/19	162.04	04/24/19	1550	0

# SPEC PROGRAMS & SERVICES

### **Bill Pay Options**



### Download the SPEC App to pay your bill and manage your account.

First-time (APP) users enter your account number and click "forgot password" to set up new a account. Visit <u>SPEC.coop/specapp</u> to download our app or search for SPEC in your Apple or GooglePlay store.

### Paying Online

First-time users click on the "new users" button to get your online account setup and ready to go. Visit <u>SPEC.coop</u> to get started.

Pay over the Phone Call 806.775.7766 and select option #2 to pay by phone.

Sign up for Co-op Power PrePay Co-op Power PrePay allows you to fill up your electric account, like filling up your gas tank. Instead of receiving a paper or an electronic bill each month, usage is calculated daily. You put money into your PrePay account, and as you use electricity, the cost of the usage will be deducted from your PrePay account balance daily. We will alert you when your account is running low. Visit SPEC.coop/prepay to learn more.

# Make a cash payment where you shop by using SPEC CheckOut. Present your barcode to the cashier at a participating store to make a cash payment on your SPEC account.

The cashier will scan your barcode and ask how much you would like to pay on your SPEC bill. (Stores don't have account information to determine how much is actually owed on the bill.) The stores do charge a \$1.50 transaction fee for this service. You will receive a receipt showing the amount paid on your SPEC bill. The payment will automatically show up on your SPEC account within minutes. Locations include CVS Pharmacy, Dollar General and Family Dollar. Visit <u>SPEC.coop/checkout</u> to get your barcode and see the participating locations near you.

### If you would like to pay by Mail

Mail payment to:

P.O. Box 600, Spur, TX 79370-0600

### To pay in person

Visit any of our service offices listed below: 110 N. I-27. Lubbock 6506 19th St., Lubbock 2741 Farm Road 836, Spur 1900 Ave. C NW, Childress

### **Electric Service Installation**

Members can sign up for service at <u>SPEC.coop/serviceinstallation</u>. The information flows directly into UPN.

### **Outage Information/Resources**

South Plains Electric Cooperative works hard to keep outages to a minimum, but there are times when Mother Nature can take a turn for the worse. Thunderstorms, ice storms, tornadoes, flash floods and other natural catastrophes can not only knock out electrical service; they can also put life and property in peril. No matter how severe the storm, you can rest assured that South Plains Electric Cooperative won't leave you in the dark during these trying times. Not only are our 155 employees working hard to ensure your power is restored in a timely manner, we are committed to providing you up-to-date information during outage situations. For further information regarding outages visit <u>SPEC.coop/outage</u>

### **Report an Outage**

To call and report an outage, dial (806) 741-0111. Other resources to report an outage are through our SPEC App or sign up for outage texting at <u>SPEC.coop/textalerts</u>.

For outages of 100+ residential members or more, we will post updates to our Facebook page. (Outages are not officially reported through Facebook.)

### **Member Benefits**

#### **Capital Credits**

Capital credits is left over money that is returned to our members after all expenses are paid in a given year. If margins are available, that money is credited to your account according to the amount of electricity you purchased. Assigning capital credits to members, instead of paying dividends to distant stockholders, is just part of the accountability the Cooperative offers you. For more information about what Capital Credits are and how they benefit our members, visit <u>SPEC.coop/capitalcredits</u>.

#### **Co-op Connections Card**

Because you are a member of South Plains Electric, a Touchstone Energy Cooperative, you receive discounts on products and services from participating local and national businesses and over 60,000 pharmacies. This is just one more way you benefit from being a Cooperative member. There is no charge to you for this program. For more information, visit <u>SPEC.coop/connections</u>.

### **Renewable Information**

Solar power is energy from the sun that is converted into a clean, green source of energy. Solar is a hot topic in the electric cooperative world, and we want to provide our Members with the information they need to make an informed decision regarding this type of investment. While rooftop solar certainly works for many people, it's not the answer for all. We want our Members to fully understand the true costs, the operational reality of this form of energy and actual energy savings. Together, we can look at the total energy picture to help you determine the best options for your home. Our experience makes considering solar a simple, powerful and efficient process. If you would like to learn more, visit SPEC.coop/solar

Electric vehicles are a "hot item" in the auto world with many auto manufacturers offering at least one model. Improved versions are on the near horizon, too, for good reason. Electric vehicles provide environmental advantages and, even though they may carry a higher price tag initially, tax credits and lower operating costs often balance out the initial investment. If you would like to learn more, visit <u>SPEC.coop/electricvehicles</u>.

### Social Media

If you would like to stay up to date on all thing SPEC, check us out on Social Media.

- Facebook https://www.facebook.com/southplainselectric/
- Twitter https://twitter.com/@SouthPlainsEC
- YouTube https://www.youtube.com/channel/UCVZV57LjUvL-B2J\_dJnzAZA
- o Instagram https://www.instagram.com/south\_plains\_ec/

### **Youth Programs**

### Scholarships

South Plains Electric is proud to make scholarships available including the Operation Round Up Scholarship, Golden Spread Electric Cooperative Directors Memorial Scholarship and Texas Rural Electric Women's Association Scholarship. These organizations understand the importance of a college education and are willing to help provide the funds needed. For more information on all the different types of scholarships available, visit <u>SPEC.coop/scholarships</u>.

### Youth Tour

High school juniors and seniors compete in three local contests for a chance to win an all-expense-paid trip to Washington, D.C., in June. The students compete in a video and interview contest. The students create and submit an original video over a selected topic. Finalist are selected from the video submissions and are interviewed by a panel of judges to convincingly explain why they should represent South Plains Electric Cooperative. The Youth Tour brings more than 1,300 high school students to Washington, D.C., every year, and has since the early 1960s. More than 40,000 students from all over America have participated in this unique program. The students representing SPEC will join about 150 other Texas youth before heading out to Washington. The Texas contingency will be part of more than 1,600 young adults from across the nation participating in the annual Youth Tour. To learn more about this amazing opportunity, visit SPEC.coop/youthtour.

### 4th Grade Safety Demonstrations

Every year, area fourth graders participate in a four-part program demonstrating the dangers of electricity and the technical skills required to be a lineman, hosted by South Plains Electric Cooperative. The program is held at our North Office in Lubbock for three days as well as one day at our Childress Office and Spur Office locations. If you would like to learn more about our 4th grade safety demonstrations visit SPEC.coop/4thgradesafety.

### **Community Information and Outreach**

### **Operation Round Up**

One of the cooperative principles emphasizes our commitment to the communities we serve. Several thousand members of the Cooperative participate in an innovative program, known as Operation Round Up, to provide funding for people and projects in our local communities. To see all of the available Operation Round Up applications available, go to <u>SPEC.coop/operationroundup</u>.

### **Community Events Calender**

South Plains Electric gladly promotes community events happening throughout our service territory. Members can submit events for approval online. Events submitted by the 5th of the month and three months prior to the date of the event are eligible for inclusion in Texas Co-op Power and on our website. If you would like to see all of the events taking place this month and further on, visit <u>SPEC.coop/communityevents</u>.

### Members' Market

Advertising in the Members' Market is a free service offered to Co-op members. All ads are limited to three lines and only one ad per month per member. Contact Jill Reece by phone (806) 775-7809 or email at jreece@SPEC.coop. For more information or to see a copy of the most recent Members' Market, visit <u>SPEC.coop/membersmarket</u>.

#### **Texas Co-op Power**

Texas Co-op Power magazine offers a unique perspective on rural and suburban Texas. With its roots firmly set in the proud electric cooperative tradition and with its editorial eye on a fast-growing, rapidly changing state, Texas Co-op Power offers features on daily life in contemporary Texas, stories by some of the state's best writers, electric utility information and tips on cooking, recreation, gardening and things to do/places to go around the state. About 1 million subscribers read Texas Co-op Power magazine each month--a larger circulation than Texas Highways or Texas Monthly. To learn more, visit <u>SPEC.coop/TCP</u>.