



FREESTATE ELECTRIC COOPERATIVE, INC.

The Outlet

FREESTATE ELECTRIC COOPERATIVE, INC.

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OFFICE HOURS

Monday-Thursday

7 a.m.-5:30 p.m.

FREESTATE FORUM

Offices will be **CLOSED ON THURSDAY, JULY 4**, for the Independence Day holiday. We wish all our members a safe holiday weekend!

FROM THE CEO

Sunshine Provides Savings for All

FreeState's Board of Trustees and staff have a member-centric outlook and consistently look for opportunities that benefit our members. That's why we joined 11 other Kansas cooperatives in 2021 as part of the Kansas Sun Power Program. That program partnered with Today's Power, Inc. to build solar farms at our Oskaloosa and Stranger substations — powering those members directly.

But, we didn't stop there.

The success of that program prompted us to partner with Eversource Energy Partners in our West District to build three additional solar sites at our Crooked Post, Kiro and Stull substations.

These local renewable projects provide FreeState a unique opportunity to set an example for working together for the greater good. Cooperative projects like our five solar sites provide members with a local energy source purchased directly from our partners through a power purchase agreement (PPA). The PPA allows us to supplement wholesale power purchased at a competitive rate, and allows us to pass on those savings to every member.

It's how ample sunshine provides FreeState with savings, and powers our members every day. Each solar site is tied into the adjacent substation, so if you get your electricity from one of these substations you are also getting

the advantage of local, renewable energy without investing in solar yourself.

However, all FreeState members benefit from solar production, not just members who are on those substations or those who choose to invest in their own solar. As a distribution cooperative, FreeState purchases the power used by our members, and now we can add solar into our energy purchases — and that means everyone benefits!

FreeState's solar farms help the co-op manage peak demand on the hottest summer days — when solar production is high by allowing us to purchase low-cost, renewable energy and reduce our needs.

When solar farms are constructed, infrastructure upgrades are necessary and that means improved system performance and reliability.

More information about FreeState's renewable portfolio, solar power and member-generated distribution follow in this issue. We are proud to harvest local, renewable and economical energy, which is vital to serving our members.



Chris Parr

“Solar farms help control or manage peak demand set on the hottest summer days — allowing us to purchase low-cost, renewable energy and reduce our needs.”

Sun POWERED Savings

STORY AND PHOTOS BY
ALEXANDRA GREENBERG,
COMMUNICATIONS
INTERN

FreeState strives for equity among members. Our distribution-level solar projects benefit all co-op members. The savings generated from our solar projects equitably affect each member's energy bill, ultimately saving each and every member money.

Much of FreeState's power costs are driven by the highest electric demand on peak days. Solar energy helps curb the demand, saving on the amount of power the co-op must purchase from our suppliers, Evergy and Kansas Electric Power Cooperative (KEPCo). On summer days, when members are running their air conditioners, the co-op energy use hits its highest usage or "peak." To keep up with this peak and level of demand during the hot summer months, FreeState must buy more power from our wholesale energy providers.

By harnessing solar power generated on the hottest days of the year, we can lower the

cooperative's peak demand-charge from our power providers. The kilowatt-hours (kWh) of solar energy produced offsets the additional energy we would need to purchase from Evergy and KEPCo. We instead purchase kWhs of renewable energy affordably through our solar agreements with Today's Power and Evergy.

FreeState's solar fields help members save on their electric bills in two ways, through kWh and demand savings. Using solar energy to offset the amount of electricity purchased from our providers means savings on each member's energy bill.



Energy Use Coordinator Matt Lambert inspects the mechanism under a solar panel. Lambert is FreeState's main point of contact for solar or renewable information. He works directly with members on solar projects and is heavily involved with the cooperative's five solar sites, providing insight and education about project benefits.



4 Common Myths About Solar Energy

1 SOLAR ENERGY CAN POWER OUR MEMBERS' HOMES EVEN WHEN THERE IS A POWER OUTAGE.

TRUTH: FreeState's solar energy only works when the grid is operational. The solar energy must be carried by power lines from the solar site to substations, and then across distribution lines to transformers and homes. FreeState's solar energy will not power your home if there is an outage at the substation, along transmission lines or distribution power lines.

2 FREESTATE'S SOLAR PROJECTS ONLY BENEFIT THE MEMBERS LIVING NEAR THE SOLAR SITE SUBSTATION.

TRUTH: FreeState's distribution-level solar projects save ALL FreeState members money on their power bills. Our solar projects provide a less-expensive, renewable power resource, saving the cooperative money — and we pass on those savings to members. Buying solar energy from our power contracts is cheaper than energy purchased from other power suppliers. The money we save equitably affects the cost of each member's energy bill through the power cost adjustment.

3 THE SOLAR ENERGY FREESTATE PRODUCES IS EXPORTED AND EXCESS ENERGY IS RESOLD.

TRUTH: FreeState's solar projects are distribution-level solar farms, which means the power generated stays local and is used by communities near the solar sites. There are three main kinds of solar projects.

First, is behind-the-meter solar where solar panels installed by members at their houses, businesses or properties, are used to offset their own electrical usage. When behind-the-meter

solar panels gather more energy than the member can use, energy is not sold to outside entities or stored for future use. FreeState is a distributor of energy, not an electric supplier or for-profit entity.

Second, is transmission-level solar, which pushes energy onto the larger grid for use in a larger region, often a for-profit entity (often called utility-scale commercial solar). The approved Kansas Sky Energy Center in Douglas County is an example of transmission-level solar. FreeState does not have transmission-level solar projects.

Third, is distribution-level solar, which generates energy directly to distribution substations and lines. All five FreeState solar sites are tied to a specific substation, which distributes the energy produced to FreeState's members in real time. The energy stays local, serves our communities directly, and provides FreeState with savings on the wholesale power bill — which are passed along to members electric bills.

4 FREESTATE LIMITS RESIDENTIAL SOLAR PROJECTS, BUT PRODUCES UNLIMITED POWER USING DISTRIBUTION-LEVEL SOLAR.

TRUTH: Limits on residential solar ensure FreeState maintains equitable costs across all rate classes and grid reliability. FreeState cannot produce unlimited amounts of solar energy through our five distribution-level solar sites. Our power contracts with our providers limit the solar energy our sites can produce.

Limits on behind-the-meter, residential solar are set by the FreeState Board of Trustees, all of whom are FreeState members. Allowing unlimited solar would affect FreeState's ability to provide equitable rates across all classes and negatively affect electrical grid reliability.

FreeState Electric Cooperative Presents

FAMILY FUNDAY

at Gary's Farm Fest!

SAVE THE DATE!
SUNDAY, SEPT. 29, 2024

Sippin' All Summer Challenge

Collect pop tabs and join the Sippin' All Summer Challenge!

Visit www.freestate.coop/sip for more information.


BE A SUMMER SIPPERHERO!



ENERGY EFFICIENCY

Tip of the Month

Electricity used to operate major appliances accounts for a significant portion of your home energy use. To save energy when using your clothes dryer, add a clean, dry towel to damp clothing before starting the cycle. The towel will absorb excess water, reducing drying time. Remove the towel after 15 minutes. If your dryer lacks an autosense drying feature, reduce the timer to about half a normal cycle.



SOURCE: WWW.HOMESANDGARDENS.COM

5 THINGS YOU MAY NOT KNOW ABOUT SOLAR ENERGY

1 INVERTERS HUM AS THEY PROCESS ENERGY AND GET LOUDER WHEN IT IS BRIGHTER OUTSIDE. WHEN CLOUDY, THE INVERTERS QUIET DOWN.

Inverters at solar sites transform direct current power from solar panels to alternating current power, which can be used to power homes and businesses. Energy is collected by solar panels, travels through inverters and then to substations before it is distributed to local communities.

2 SOLAR SITES ARE SIZED TO PRODUCE THE ENERGY AREA MEMBERS USE ON A PEAK DAY.

For example, our Oskaloosa solar site is a one-megawatt solar farm, meaning it produces one megawatt-hour of energy every hour — the amount of energy the Oskaloosa Substation needs. FreeState cannot produce more power in the solar field than our members use in the surrounding area.

3 SOLAR PANELS ARE ALWAYS LEVELED BY CHANGING THE SUPPORT BEAM HEIGHT.

Yes, even on unlevel ground our panels are level. Each half of a solar panel can be a different height off the ground, but by adjusting the support beam under each section we can make the whole panel level! By adjusting panels this way, we can avoid leveling the ground and use conservation practices to keep the land's soil and natural patterns.

4 FREESTATE'S SOLAR SITES HOST A MIX OF NATIVE GRASSES THAT PROVIDE HABITATS FOR INSECTS AND BUTTERFLIES — HELPING TO PRESERVE KANSAS' NATURAL BEAUTY.

There are around 180 species of native grasses in Kansas prairies and a mix of these are planted around each FreeState solar site. Did you know Kansas has a state grass, just like we have a state motto? Kansas designated Little Bluestem Grass as our official state grass in 2010.

5 FREESTATE'S FIVE SOLAR SITES REQUIRE LITTLE MAINTENANCE AND ARE MAINTAINED THROUGH PARTNERSHIPS WITH EVERGY ENERGY PARTNERS AND TODAY'S POWER, INC.

FreeState's engineering team monitors the solar fields' energy production closely, however, we do not have staff dedicated to maintaining solar fields. Since rain clears the panels of dust or debris, and the sun clears the panels of snow minimal maintenance is required. When required, maintenance is performed by our energy partners.

