

Commonly asked Question about Green Power, and Kit Carson Renewable Energy Program.

**What is Green Power/Renewable Energy?**

- Some examples of green power are energy that is produced by wind, solar, biomass (trash, forest wood) and hydro (water, dams)

**Why does KCEC sell green power?**

- KCEC feels it is the right thing to do. Kit Carson wants to be socially responsible and contribute to the reduction of the green house effect and coal emissions by contributing to green power initiatives. Also, to meet the request of its members to get involved in renewable initiatives. By being part of the green power program you are making a contribution to the environment, and you also help to reduce pollution. By contributing you also start to impress that we should not be so dependent on foreign oils and fossil fuels. It's part of being socially responsible.

**Why is green power more expensive?**

- While the "fuel" for wind turbines is free, the cost of energy is determined by the expense of buying, constructing the infrastructure and maintaining wind turbines. Other costs include the transmission and distribution paths required to bring the energy to the point of use. Moving the power to where it is needed can be expensive since most wind sites are in remote areas. Although the cost of renewable generation is still somewhat higher than conventional resources such as coal-based generation, green power is significantly less expensive than it was just 10 years ago. Advancements in wind technologies and more widespread use have reduced wind energy costs by nearly 80 percent since its introduction. As this trend continues, we hope to offer renewable resources at the same cost as other fuels in the future.

Economies of scale. Currently the technology utilized to produce wind energy is more expensive, and renewable energy has to be supplemented by coal, natural gas or other consistent means. However, the more that renewables are used, the less the price will be.

**Where does Kit Carson Electric get its green power from?**

- Kit Carson Electric gets its green power from Tri State Cooperative which is our G&T (Generation and Transmission). Currently the cooperative has an all power requirements purchase agreement with Tri-State and any power purchased by KCEC needs to be purchased from Tri State G&T.

**Where does Tri-state get its wind energy from?**

- The association has secured several different sources of "green power." As a Class A member of Basin Electric Power Cooperative, another consumer-owned generation and transmission cooperative based in Bismarck, N.D., a portion of the energy Tri-State purchases from Basin is derived from that cooperative's 80 megawatts of wind generation capacity. Tri-State also receives wind energy from

Fort Collins, Colo.-based Platte River Power Authority's wind farm in Medicine Bow, Wyo. Other sources include small hydroelectric projects, biomass generation from animal waste and a system of purchasing renewable credits on the open power market known as "green tagging." The association continues to explore opportunities to purchase more sources of renewable energy as consumer interest in purchasing green power grows.

**Why doesn't my power supplier build more wind turbines so that we can get all our electricity from the wind?**

- While it is theoretically possible to produce enough energy from wind turbines to supply all of our needs, it's not technically feasible. This is because the wind is an intermittent resource, meaning that it isn't available all the time. Since electricity cannot be stored in large quantities, Tri-State still needs other resources to ensure that energy is available when people need it. Solar and bio-mass are options that are more applicable to Taos and its surrounding areas. We feel that some of those options will be more applicable in the near future.

**Do wind turbines harm birds?**

- The first generation of wind turbines did cause an increase in avian deaths. However, newer wind machines are sited to avoid bird migration routes as much as possible, and they are designed with tubular towers to discourage perching and nesting sites for birds.

**How much of my green power is produced by wind generation due to contractual obligations?**

- By far, the majority of renewable energy that Tri-State's member co-op consumers' purchase is produced at various wind sites. But, the association also has contractual arrangements for the purchase of energy at several, small hydroelectric sites around the region. In addition, there is an exciting new form of energy that utilizes methane produced from animal waste as a fuel for power production at several agricultural facilities in Colorado and Wyoming. Tri-State continues to conduct research into new technologies that offer opportunities for the G&T to increase its portfolio of renewable energy resources.

**What are some of the other challenges of wind energy?**

- As mentioned earlier, wind energy cannot be relied upon to be available at all times. In fact, today's most advanced wind sites only produce wind power about 35 percent of the time, yet customers demand electricity 100 percent of the time. Another technical problem associated with wind energy is that it tends to fluctuate by as much as 50 percent over a period of minutes. Meeting this rapidly changing power output requires that alternate generation be on-line and ready to respond quickly to the changes. Natural gas or oil-fueled combustion turbines are ideally suited to this requirement since they have the ability to change their power output very rapidly. But, because the fuel (oil or natural gas) needed to operate these turbines is very expensive, the turbines are usually reserved for peaking or emergency situations, rather than as a supplement to wind generation.

Research continues on the effect of wind generation on electric system reliability. A recent study of wind farms found that wind could make up as much as 10 percent of the electricity capacity without significantly impacting the reliability of the electric grid, but at a very high cost.

**How do I participate in the green power program?**

- You may participate in the green power program by contacting your local electric cooperative. Each consumer who chooses to participate in the program is committing to purchase at least one 100-kilowatt-hour block of electricity per month from renewable resources. Of course, you can choose to purchase more green power – up to your total monthly consumption. Basically you just sign an agreement with KCEC that you want to purchase green power from our green power program.

**Am I tied to any contracts?**

- No, there are no contracts, the application you sign is sufficient documentation.

**How do I know that the green power that I am contributing to is actually the power that comes into my home?**

- All power that is generated goes directly into the grid, (transmission lines) of the utility company that is supplying power to everyone. That power is then mixed with all different types of electrical generation on the same grid and flows to different areas where the energy is needed. There is technically no way to isolate and track energy that is transmitted once it is connected to the main grid
  - Example: If you have water rights in northern New Mexico and you transfer those rights to your property in southern New Mexico, your water rights are flowing down the Rio Grande river from northern New Mexico together with the rest of the water that flows into that river and through the Rio Grande river you are using that water in southern New Mexico.

**How do I know that my contribution is going to wind energy?**

- Tri State is governed by a 44 member Board of Directors, one from each cooperative that is served by them. These members have a fiduciary duty to make sure that contracts are carried out and that there is accountability for all transactions.

**What are blocks of energy?**

- A block is a measurement that is used in selling renewable energy. One block of green power is = to or the same as 100 kW of electricity

**What is the price for one block of Green Power?**

- The cost is \$2.50 per block for all KCEC members.

**I have heard that Tri-State sells the green blocks for \$1.25 since January 1, 2007, why is KCEC still selling its blocks at \$2.50?**

- Tri-State is not regulated and therefore can change the rates at any time. KCEC and all New Mexico Cooperatives are regulated by the PRC and any rate changes need to be published and approved by the PRC. We are currently working on that now.

**Does everybody pay the same for a block of green power?**

- All Cooperatives in the state of New Mexico that have had Green Power Tariffs approved by the PRC prior to 2007 all pay the same for green blocks. Therefore, all members pay the same for their blocks of Green Power.

**How many blocks should I buy if I want to contribute as much as I can to renewable energy?**

- The member should look at the average kWh usage on their account over a period of one year, and buy as many blocks to near the minimum yearly usage.
  - Example: if the member's minimum usage for the year is 430 kWh and that member wanted to contribute on a monthly basis, where all of his contribution would be utilized as green energy usage, I would recommend he/she purchase 4-blocks.

**What will the difference be on my bill with Green Power Blocks?**

- You will be charged \$2.50 for every block that you purchase and you will also pay tax on that contribution.

**Is Kit Carson Electric going to produce Renewable Energy?**

- KCEC through its CREBS (Clean Renewable Energy Bonds) grant is involved with, the Village of Questa and other stakeholders to create solar panels locally and also to install some of these arrays in various large commercial applications in our service area. Some of which might include, UNM, Village of Questa, Taos Ski Valley, Angel Fire Ski Valley, Town of Taos, Moly Corp.

**What are Green Tags?**

- Under this program the association's power marketers purchase credits known as green tags for wind power and other energy produced by green power facilities that are owned by other utilities and independent power producers across the United States. While it doesn't guarantee that all of the electrons that flow from outlets of the green power subscriber are derived from renewable sources, it does ensure that the \$2.50 premium per 100 kilowatt-hours that each customer pays for renewable energy flows back to the small hydro, photovoltaic, biomass, wind farm or other green power operation selling power on the grid. Technically Green tags are that portion of the energy that is attributed to savings of emissions produced by fossil fuels such as natural gas, and coal from the generation of energy, that you otherwise don't have by generating power from renewable resources.
  - Example: Every unit of energy =s one green tag =s the attributable benefit  
Every 100 kWh = 1 attributable green tag

Therefore, one part is the energy portion and the other part the social portion of the green energy that is produced.

Renewable energy credits and one green tag is differentiated between wind and coal. The premium on the green tag is used to pay for the social and environmental cost of the benefit.

#### **What is Carbon Tax?**

- It is a tax that is applied to the use of carbon because it emits Green House gases, such as CO<sub>2</sub>, SO<sub>2</sub>, and Mercury, to the environmental community. Therefore, let's tax coal to help clean up or reduce gases by investing in renewable energy.

#### **What is Net Metering?**

- Net metering is when a consumer produces his/her own electrical energy by utilizing as an example, solar, wind, or some other means of producing energy that is off the grid. The consumer with high tech equipment that is safety approved by the Electric Cooperative and the Public Power Association is able to utilize that generated energy and can mitigate the usage coming from the cooperative as well as sell back any excess energy that he/she does not use. Therefore the customers are supplying part or all of that energy back into the cooperative grid system for either a credit or to offset their usage.

#### **I understand there is more then one type of Net Metering methods?**

- There are two types of ways to net metering. One is referred to as (True Net Metering and the other as Net Metering). True net metering looks at power received and power delivered. (Needs to be explained by Public Relations Mgr or Engineer).

#### **Does the cooperative pay me for generating my own energy and do they pay me the same amount that they sell it to me for?**

- In some cases yes the cooperative will pay the consumer for what they generate, but the cooperative will not pay what we sell it for. Currently there is no one generating enough energy to sustain their home and sell back the excess to the cooperative; the technology is not there. However, the consumers have two choices. 1<sup>st</sup> we will pay you the avoided cost which is the cost we would pay for the next cheapest fuel source for us.
  - Example. We pay less for hydro, then coal then natural gas. The cooperative would not pay you what we pay for hydro; we would pay you what we pay for natural gas, because that is our avoided cost. Needs to be explained by Public Relations Manager or Engineer.