

Patagonia Energy Review Committee Goals

Utilize more renewable sources of energy

Let's review current progress and what is already on our reservation list.

From our records of PV in Patagonia at zip 85624

Commercial:

- 3 projects for 150kW of grid connected
- 1 project for 11kW off grid
- \$19K in incentives paid to members
- Over \$600K in SSVEC provided solar to schools.

Residential

- 10 completed projects that totaled 23.6kW installed
- Over \$130K in incentives paid.

There are 9 pending projects with over \$100,000 in reserved incentives

SSVEC owned 250kW of PV connected to the new Alamo substation by the end of the year.

Improve reliability of energy supply

Feeder Configuration – Prior to energizing the new 69kV line and the new Alamo substation, Patagonia service was supplied from a single feeder extending from the Huachuca West substation located at Mustang Corners. If a pole failed anywhere along this route Patagonia was affected. With the new substation in place, the people of Patagonia are only impacted by events on the distribution line between Papago Springs Road and Patagonia. The area once served by only one feeder is now served by five feeders.

Relay and Protection – The Patagonia feeder has a total of 6 line reclosers to automatically reclose the line after temporary faults occur. Faults (short circuits) that are cleared in this manner may be seen to the member as a “blink” on the line. Although annoying, these blinks are caused by the reclosing device actually “turning your power back on” very quickly after the fault occurs. Such faults may be caused by two wires slapping together due to wind, or a car striking a pole, or a tree branch falling onto a line and then falling clear. None of these faults that occur anywhere else in the Sonoita/Elgin/Canelo area will impact Patagonia at all.

Voltage Stability – The new Alamo substation will provide much stronger voltage to the Patagonia area without extensive use of line regulators to boost the voltage flowing all the way from the Huachuca West substation.

Distribution Automation – As part of SSVEC's Smart Grid project, residents of the Patagonia area will benefit from technology advances built into new Alamo substation. For example, SSVEC's SCADA control center in Willcox will be able to remotely detect a problem on any of the Alamo substation feeders and remotely switch the affected feeder to another one of the feeders. Many other reliability improvements are also built into this state-of-the-art substation.

Pole change-outs – SSVEC has changed out over 180 poles on the line from Sonoita to Patagonia since 2009. Many of these old poles were replaced with fiberglass poles to avoid future damage from woodpeckers.

Fiberglass Crossarms - You will also notice an increased use of fiberglass crossarms in the Patagonia area. Fiberglass products not only last longer but are resistant to damage from woodpeckers in the area.

Bird Proofing – SSVEC has adopted a standard policy of bird-proofing our lines beyond the required minimums. Connections are covered with a bird guard and some open wires are covered with an insulating shield to prevent birds from coming into contact with energized parts. This not only protects our wildlife but also increases your system reliability and eliminates outages and blinks.

Influence cost of present and future energy supply

Our energy forecasters show that there are two major potential impacts to our cost of energy. Since the bulk of our power is produced by coal, legislation that creates higher cost for a coal plant such as even higher clean air standards that we currently have or a carbon tax could have the effect of doubling your electric bill. SSVEC is supportive of clean air but not at the expense of its members.

Other challenges we face are the transmission paths to SSVEC are reaching maximum capacity and new line projects are facing resistance from land owners and out of state groups to the detriment of the local consumers.

Reduce energy usage

SSVEC has a long history for encouraging energy conservation. Our current Demand Side Management (or Energy Efficiency) program is designed to help our members lower their energy bills.

- Touchstone Energy Efficient Home Program
- High Efficiency Heat Pump Rebates
- Free Energy Audits
- Zero Interest loans for thermal upgrades (insulation, windows, and doors)
- High Efficiency Water Heater Rebates
- Commercial Audits
- Programs pending approval
 - Heat Pump Water Heater Rebate
 - On Demand Water circulating pump incentive
 - C&I lighting upgrade incentive
 - Refrigerator Recycling Program.