PROJECT PROFILE

Ada County Photovoltaic System

Barber Park Rooftop PV System

Project Description

In 2011, Ada County released an RFP to solicit proposals for a rooftop photovoltaic (PV) system to be installed at Barber Park. The system is net metered by the local utility so the energy generated is first used directly by the facility and any excess electricity is then delivered to the grid and sold to Idaho Power.

The amount of energy produced each month varies greatly between summer and winter from a high of approximately 2,000 kWhs in July to a low of about 400 kWhs in December.

Project Highlights

Owner/ Operator: **Ada County**

Location: **Barber Park Administration Building**

Scope/Cost: **11.5 KW PV System / $68,451**
Interactive Educational Kiosk / $11,448

Operational: **September 2011**

Life Expectancy: **25 years minimum**

Contractor: **Intermountain Wind & Solar, Nampa, ID**

Project Benefits

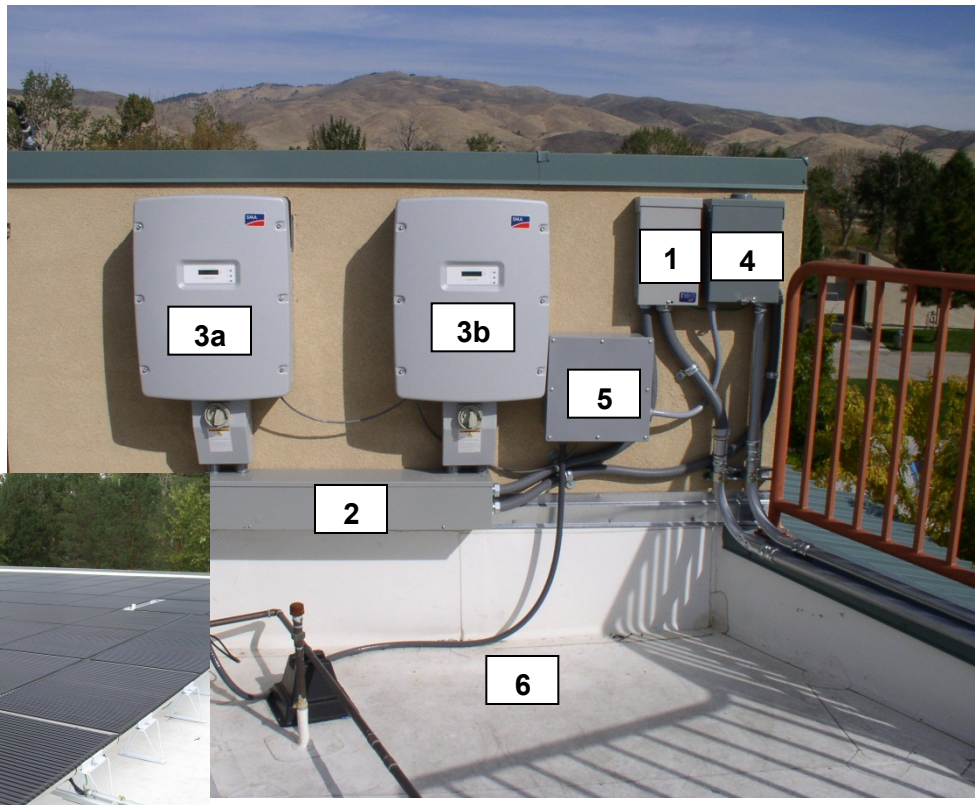
- Generates "green power" for use at Barber Park
- Excess electricity is sold to the grid for use by Idaho Power's customers
- Demonstration of technology
- Educational opportunity for children and adults
- No cost to the County, funded by Recovery Act's Energy Efficiency and Conservation Block Grant
- Saves about $1,700 in electricity each year (using 2012 rates)

Environmental Benefits

- Provides reliable "green" energy that is independent from local power grid events, such as natural disasters or inability of the utility to meet load
- On-site power generation systems reduce demand on large-scale utility electric systems
- Beneficial use of an otherwise untapped resource

For more information contact:
Selena O'Neal, CEM
Energy Specialist
Ada County Operations
208-287-7106 p
208-287-7109 f
soneal@adaweb.net

Photovoltaic Energy : How It Works



Barber Park PV System Design, Configuration, and Layout

1.The PV system is comprised of 4 sets of 15 "panels" that all feed into a single Midnight Solar Combiner Box (#1).
2.A Combiner Box sends the DC power out in 2+ (positive) and 2- (negative) feeds to a Junction Box (#2) and up to the Inverters (#3a and #3b). Each inverter gets 1 and 1-.
3.The inverters convert the POWER from DC to AC and send it back through the Junction Box and over to a Breaker Box (#4).
4.The inverters send the DATA about how much energy is produced on a cable to the Sunny WebBox (#5.
5.The Sunny WebBox sends the DATA via an ethernet cable (#6) to the data closet in the Admin Bldg and out to the internet, on the DSL service provided to the building by CenturyLink, to the SMA website.
6.A kiosk in the front foyer area pulls the data from the SMA website (using a DSL cable line from the data closet) and displays the energy information reported by the inverters.
7.The power, now converted from DC to AC, runs in conduit from the Breaker Box (#4) to the SE corner of the roof (#7), down the side of the Admin Bldg to a disconnect switch (#8).
8.The AC power runs in a trench from the disconnect switch on the Admin Bldg over to a meter and disconnect switch on the Caretaker House (#8) where it is net metered by Idaho Power.