

UNDERSTANDING BOULDER CITY'S ELECTRIC SOURCES

It is well known that Boulder City leases much of its City land for solar development, but it is less well known why the City cannot provide solar energy to its residents at a free or reduced rate. The answer is complex. To help you understand, it is important to understand State and Federal requirements for small utilities, where the city gets its power, and how our power demands change with the weather.

Boulder City Electric Utility's Current Power Sources

Boulder City gets most of its power from renewable hydroelectric sources (Hoover Dam and Glen Canyon Dam on Lake Powell) at the average low rate of \$30.36 per megawatt hour (mwh). These two sources provide approximately 22 megawatts (MW) of power. During cooler months, 22 MW is generally enough power to meet the needs of our customers. On a peak summer day, the City generally will use about 50 MW. The City is a member of the Silver State Energy Association. Silver State schedules power purchases and delivery for Boulder City as well as for other agencies in Southern Nevada. The Association monitors demands to ensure that Boulder City always has power when needed, including when a spot power purchase is necessary. Some contracts cover the eight-month period, others shorter periods to cover the warmer months when power demands are higher.

These sources qualify as *firm power*.

Why Not Solar?

Federal regulations for small municipal utilities (such as Boulder City) require that the utility must be able to provide all power that is needed by all customers at all times, regardless of weather conditions or environmental factors. This is called a *firm power source*.

Traditional solar power is considered an *intermittent power source*. Production only occurs when sunshine is optimal. No power is produced at night, and cloudy skies, rain, wind or snow can impact to minimal or nonexistent levels. Solar power can only be used when a *firm power source* is also available.

Federal regulations would require the City hold a contract for a *firm power source* to provide power immediately when solar power is no longer being generated. This type of power supply is called *spinning reserve*. It would require the City to pay a power generation plant to produce power continuously and deliver it immediately when the intermittent power source (solar) stops generating power, like at night or on cloudy days. The plant must keep power available at all times, whether the City uses it or not, and the City cannot sell the power to another source. Due to the regulations, the City would be paying for power twice – once for the solar power and once for the *spinning reserve* power. *Spinning reserves* often cost more than traditional power contracts.

How is Boulder City's Electric Utility Different from Public Utilities

Publicly traded utilities own land and assets that generate revenues, which can offset charges to ratepayers. They build substations and other power delivery facilities to minimize delivery costs and sell excess generated power to other utilities. Publicly traded utilities often use land they don't own for installation of power poles, water pipes, gas pipes, etc. Municipalities can charge a franchise fee to these companies for use of the rights-of-way.

The Boulder City Electric Utility does not own any lands at all and uses plots of City-owned land free of charge for substations. No franchise fee is charged for use of city-owned rights-of-way to deliver power to its ratepayers. This is one reason the City's electricity rates are among the lowest in Nevada.

Can the Boulder City Electric Utility Use Solar Lease Revenue to Lower our Rates?

No. Under Nevada Revised Statutes (NRS), a city must operate a municipal utility as an enterprise fund: it must be self-sustaining and a separate entity from the city government. Funds cannot commingle with other taxpayer funds. The City (and not the Utility Enterprise Funds) owns the land that is leased to solar companies. Solar lease revenues by Charter must go to the City's General Fund and Capital Improvement Fund. . All revenues collected must come from services provided (i.e. for electric utilities, the utility revenue would come from selling electricity to ratepayers). All costs associated with running the enterprise fund come from the revenues generated by the ratepayers, including the purchase of electricity, water, etc.

Will it always be like this?

Time will tell. Solar energy producers are working with energy storage research companies to develop battery storage for solar power. More solar plants are utilizing battery storage as part of their portfolio, but it is still in early stages. Power provided by a solar plant with battery storage is classified in federal regulations as a *firm power* source. This is welcome news to Boulder City, because if we obtain power from such a facility, we would not be required to pay for *spinning reserve power* from elsewhere.