

Sacramento Regional Wastewater Treatment Plant's Investigation of a Wind Power Potential Project

Overview

The Sacramento Regional County Sanitation District (SRCS D) owns and operates the Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove, CA. SRCS D is investigating the possibility of partnering with a wind power developer to construct and operate one or more wind turbines at the SRWTP. Under such a scenario, SRCS D would enter into a "Power Purchase Agreement" with a wind power developer who would assume all costs for planning, design, construction and operation of the wind turbine units, and who would sell the power generated exclusively to SRCS D at a reduced cost over what is currently spent for traditional electricity.



SRWTP Energy Usage

Operating the SRWTP around the clock requires a significant amount of energy. The SRWTP is SMUD's largest energy customer. Since energy is a large percentage of the Plant's operationing costs (about \$10 million annually), plant operators and engineers work diligently to monitor and optimize energy usage to keep those costs as low as possible.



◀ SRWTP's Electrical Substation

Alternative Energy Sources at the SRWTP

As alternative energy technologies evolve and improve, SRCS D investigates them to determine if they have financial and operational benefits to SRCS D. Technologies investigated to date include wind, solar, algae biofuel and fuel cell. Many of these technologies have been found to not have financial benefit to SRCS D currently; however, they continue to be monitored.

Sacramento Regional Wastewater Treatment Plant and the Bufferlands

The SRWTP is located in Elk Grove on about 3,400 acres of land east I-5, west of Franklin Blvd. and north of Laguna Blvd. About 900 of those acres contain treatment plant process areas and buildings. The SRWTP provides wastewater treatment for the Sacramento region and West Sacramento – about 1.3 million people. It operates 24 hours per day, 7 days per week.

Surrounding SRWTP's process area is approximately 2,600 acres of open space, managed wetlands and habitat for hundreds of species of wildlife. This area is referred to as "The Bufferlands."



Wind Power and "Power Purchase Agreements"

At this time, due to special incentives available to fund wind power projects, wind power may provide a financial benefit to SRCS D, so it is being examined more closely.

What is wind power? The terms "wind energy" or "wind power" describe the process by which wind is used to generate mechanical power or electricity. Wind turbines convert the kinetic energy in the wind into mechanical power. This mechanical power can be converted into electricity to power homes or businesses, for example.

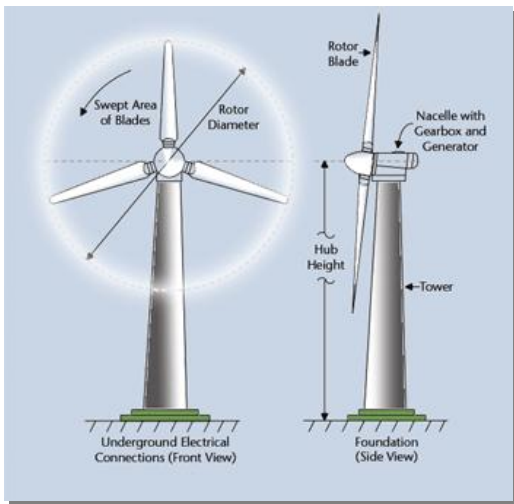
What is a Power Purchase Agreement (PPA)? PPAs are contracts between two parties: one who generates electricity for the purpose of sale (the seller) and one who purchases electricity (the buyer). Contractual terms may last anywhere between 15 and 20 years, and during this time the power purchaser buys the energy produced at an agreed upon price.

What Would Wind Power at the SRWTP Look Like?

Preliminary analysis of wind power and current PPAs indicate that a wind power project of a specific size could have financial benefits to SRCSD.

A scenario being investigated involves the following:

- Establish a 20-year PPA with a private wind power developer to install and operate two turbines on SRWTP property
- Installation two 1.6 megawatt wind turbines
- Turbines would be placed at two locations on Bufferlands property
- Each turbine would be a monopole style structure with 3 rotor blades at the top
 - Monopole hub height: 262 ft
 - Height to tip of top blade: 426 ft
 - Blade diameter: 328 ft



Typical components of a wind turbine



Example of a similar type of wind turbine structure

Next Steps and Report to SRCSD Board of Directors

SRCSD is in the investigation phase only at this time. This includes studying the financial, environmental and community issues related to such a project.

After initial investigation and public feedback, SRCSD staff will present preliminary findings to the SRCSD Board of Directors (Board) in January 2012. The Board will assess if this potential project warrants further evaluation. The Board may decide at that time to either discontinue further investigation into this potential project, or they may direct staff to take additional steps such as soliciting formal proposals from wind power developers and conducting additional public outreach and environmental analyses.

Board Meeting Date

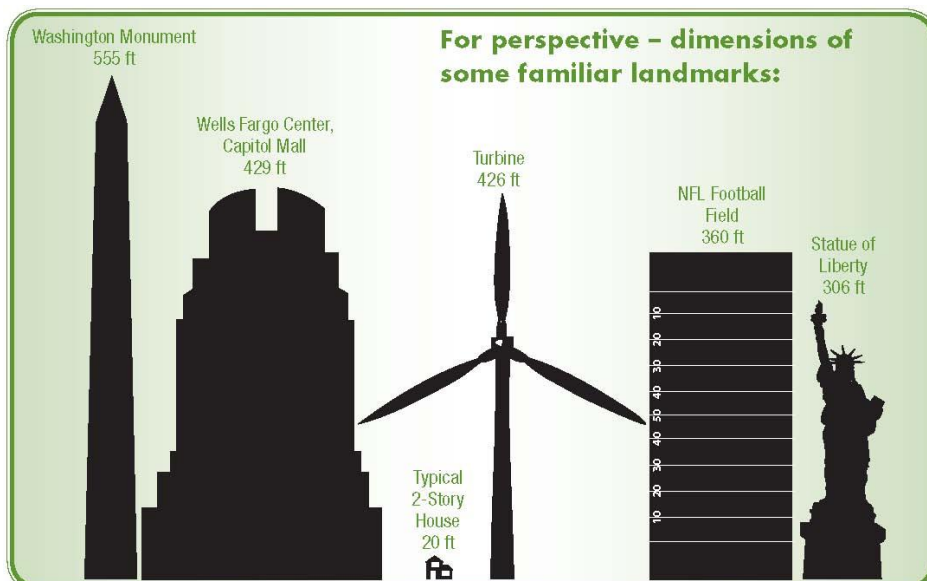
Wednesday, January 25, 2012

9:30 a.m.

700 H Street

Sacramento, CA 95814

Members of the public are welcome to attend and provide verbal comments about the wind power concept.



Learn more about SRCSD at www.srcsd.com

To submit comments about this wind power concept electronically, please visit www.srcsd.com/windpower