



Avenal Power Center, LLC **Avenal Energy Project**

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Q. What is the Avenal Energy project?

Avenal Power Center is proposing the Avenal Energy project ("Avenal Energy"), a 600-MW natural gas-fueled, air-cooled electric power plant located in Avenal, California. Avenal Energy is designed to serve the ever-growing demand for electricity in the San Joaquin Valley of California with efficient, state-of-the-art technology.

Q. When is Avenal Energy expected to begin generating electricity?

The project is expected to be fully permitted by early 2011. Plans call for beginning construction in mid-2011, with commercial operation beginning mid-2013.

Q. Why is the project needed?

The Avenal Energy project will make a substantial contribution to California's energy needs, which in recent years has been characterized by outages and other problems caused by an aging electric generation and transmission system. In addition, Avenal Energy's generating capacity will provide additional reactive power capability to improve area transmission system voltage, meaning more direct local service to meet electricity demand in the San Joaquin Valley.

Because of these factors, there are no unmitigated environmental risks associated with the project. However, we are taking several actions to provide certain environmental benefits and prevent any potential risks. These actions include:

- While the project site is located on agricultural land and there is no evidence of endangered species impacts on the site, we will purchase and set aside land suitable for the preservation of local species, including the Kit Fox and Swainson's Hawk which are native to the area.
- Utilizing dry-cooling to minimize water impacts
- Constructing the project in an industrially zoned area removed from residences and businesses
- Utilizing state-of-the-art emissions control equipment

**Q. Who is building and managing Avenal Energy?**

Avenal Power Center, LLC's Avenal Energy project is being developed, built and will be managed by Macquarie Energy LLC ("Macquarie Energy"), a subsidiary of Macquarie Group Limited ("Macquarie"). Macquarie has significant experience managing energy and utility investments in the U.S. and around the world. Macquarie has a strong track record of responsible management of energy-related infrastructure and essential service assets.

Macquarie Energy is an energy development, trading and marketing company servicing North American electricity producers, mid-sized utilities, industrial users and other large wholesale energy sector participants. In particular, Macquarie Energy specializes in developing and operating state-of-the-art baseload and intermediate load-serving electric supply to meet a growing demand for reliable and economic energy. Macquarie Energy is headquartered in Houston, Texas.

Q. Where is the project located?

The Avenal Energy project will be located on 25 acres of a 148-acre parcel of land zoned for industrial use south of Avenal Cutoff Road in the northeast corner of the City of Avenal in Kings County, California, approximately 55 miles from Fresno. The project is situated about two miles east of Interstate 5, just south of the Fresno County line. Although the proposed project is within the City of Avenal city limits, it is located in an area zoned for industrial use approximately six miles from the city's residential and commercial districts. Current land use at the project site is irrigated agriculture, as is the surrounding land.

Q. What are the benefits of this type of power generating plant?

The project's combined-cycle gas turbine and steam turbine units will utilize clean-burning natural gas. With their increased generating efficiency, combustion processes and exhaust gas treatment, these types of plants improve air quality and reduce emissions per unit of power generated while providing increased output power.

Q. What are the expected economic impacts of the project?

The project is expected to have positive economic benefits for the City of Avenal and Kings County, including the following:

- Several million dollars in local property taxes will be paid each year.
- During the nearly three-year construction period, 300–400 construction workers will be employed at the peak of construction with an average of 250 per month during the three-year construction phase.
- During operation, the project will create 19–25 new well-paying jobs.
- Added economic benefit will be derived through payroll spending by local workers and ongoing purchase of related equipment and supplies to support plant operations.

Q. What is the schedule for completion?

On December 16, 2009, the California Energy Commission approved the Avenal Energy project. Appropriate documents have also been filed with the U.S. Environmental Protection Agency and San Joaquin Valley Air Pollution Control District. The project is expected to be fully permitted by early 2011.

Plans call for beginning construction in mid-2011, with commercial operation beginning mid-2013.

If you are interested in more information on the process and the status of the licensing decision, please visit www.avenalpowercenterllc.com.

Q. How will power be generated?

The proposed Avenal Energy project will be a combined-cycle generating plant consisting of two natural gas-fired General Electric 7FA Gas Turbines with Heat Recovery Steam Generators (HRSG) and one General Electric Steam Turbine.

In a combined-cycle gas turbine (CCGT) plant such as Avenal Energy, a natural gas turbine generator creates electricity while the waste heat is used to make steam to generate additional electricity via a steam turbine. This last step enhances the efficiency of electricity generation. Avenal Energy will produce 600 MW of electricity, enough to power 450,000 homes and businesses.

Q. How will the natural gas used to fuel the plant be supplied?

Natural gas fuel for the plant will be provided through approximately two miles of new pipeline that will connect with an existing PG&E natural gas pipeline that runs parallel to Interstate 5.

Q. What are the environmental risks associated with the Avenal Energy project?

Avenal Power Center, LLC has taken special measures to address the potential impact of the plant on the local environment. The first is its planned construction in an industrially zoned location near existing gas, water and electric transmission infrastructure facilities. This will allow for minimal construction-related environmental impacts to the immediate area. The project will be built away from residences and businesses, employ state-of-the-art air-cooled generating equipment fueled by clean natural gas and will recycle its process wastewater.

Q. How will water be conserved?

Avenal Energy will be air-cooled (dry cooling process) and will utilize process water recycling equipment to reduce the normal average water consumption to less than 12.4 gallons per minute.

The City of Avenal will provide raw water to the project via the city's water treatment plant adjacent to the site. Groundwater from three local wells would provide a backup water source to the project via two separate pipelines totaling less than 1.4 miles in length.

The proposed project will recycle water to the maximum extent possible through the use of a zero liquid discharge facility (ZLDF) to further minimize water consumption and eliminate wastewater discharge. The ZLDF will purify and recycle process water. This greatly minimizes water consumption and eliminates process-associated wastewater discharge.

Q. What is the anticipated contribution of this plant to the Avenal landfill?

No significant impacts associated with waste generated at the project site are expected. The California Energy Commission has evaluated waste generation and manner of recycling or disposal, including available disposal sites. Avenal Energy will contract with licensed and authorized organizations to recycle and dispose of any waste products generated at the site.

Q. Does Avenal Power Center, LLC plan to work with local residents, business, environmental and community groups and others interested in the project?

Yes. The California licensing process and the California Environmental Quality Act require that we work very closely with all project stakeholders, including local residents, environmental groups and others, to ensure that everyone's concerns are identified and addressed and that project impacts are identified and mitigated. Our outreach and participation program has included briefings, open houses, presentations and workshops. Further information about the project and the approval process can be found at the Avenal Power Center website at www.avenalpowercenterllc.com.

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www.avenalpowercenterllc.com