

ENCOGEN GENERATING STATION

Ensuring reliable electric service

PSE

PUGET SOUND ENERGY

The Energy To Do Great Things

Puget Sound Energy strives to ensure reliable electric service at a reasonable cost by acquiring power supplies from a variety of different sources, both PSE-generated and purchased from other suppliers. These sources primarily are hydropower, wind power, natural gas-fired generation, and coal-fired power from Montana. This diversified-portfolio strategy minimizes risk – and costs – in the event that an unforeseen circumstance (a drought, for example) causes regional shortages in one form of power and, in turn, drives up wholesale power prices. While hydroelectricity comprises the single largest share of PSE's total power-supply mix, electricity from clean-burning natural gas-fired facilities also makes up a significant share – about one-fifth of PSE's total.

PSE today owns eight natural gas-fired plants, all located in Washington state. One of these is the Encogen Generating Station in Whatcom County.

Power Output

The Encogen Generating Station can produce 167 megawatts of electricity when running at full capacity. That is enough power to meet the peak electricity needs of about 125,000 households.

Location

The plant is located in Bellingham, Wash., about 90 miles north of Seattle. Encogen is situated just south of the former Georgia-Pacific paper mill, which (until it closed in June 2008) used steam and heated water from the PSE power plant for its paper-manufacturing operation.

Facility Profile

The Encogen facility came online in 1993, and was acquired by PSE in 1999. The plant employs modern, "combustion-turbine, combined-cycle" technology that allows it to generate electricity using both a natural gas cycle and, from the exhaust heat of its power-generating turbines, a steam cycle. The two-stage process boosts operating efficiency, lowers fuel costs, and cuts air emissions. Combined-cycle plants like Encogen operate much more efficiently than single-cycle gas-fired plants. The latter typically run only to help meet daily or seasonal peaks in customers' power usage, while combined-cycle plants often operate to help meet utility customers' base power requirements. They also complement hydro and wind-powered generation because gas-fired plants can operate on a firm schedule, while power generation from hydro and wind-generating facilities is dependent upon Mother Nature.

Personnel

Sixteen full-time PSE employees operate and maintain the Encogen Generating Station.

Tax Benefits to Public

Property taxes levied on PSE's Whatcom County facilities, including the Encogen Generating Station, provide significant revenues for local schools, county roads, and other public services. PSE property taxes in Whatcom County totaled nearly \$3 million in 2008.



Encogen Generating Station