



Encogen Generating Station

Ensuring reliable electric service

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.

Power output

The Encogen Generating Station can produce 165 megawatts of electricity when running at full capacity. That is enough power to meet the electricity needs of about 120,000 households.

Location

Encogen is located in Bellingham, Wash., about 90 miles north of Seattle. The plant is situated east of the Port of Bellingham's waterfront redevelopment site.

Facility profile

The facility came online in 1993, and was acquired by PSE in 1999. PSE became the plant operator in 2005. Encogen has four generators: three gas turbines and one steam turbine. The plant employs modern "combined-cycle, combustion-turbine" 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. While single-cycle plants typically run only to help meet daily or seasonal peaks in power usage, combined-cycle plants often operate to help meet utility customers' base power requirements. They also complement hydro and wind powered generation because they can operate on a firm schedule, while power generation from hydro and wind generating facilities is dependent upon Mother Nature.

Personnel

Approximately 17 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.