

# Jackson Prairie Underground Natural Gas Storage Facility

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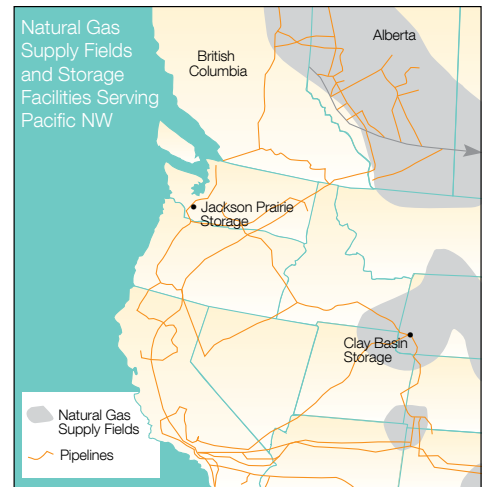
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## Stored reserves ensure reliable supplies, ease consumer prices

All the natural gas consumed by Pacific Northwest homes and businesses comes from western Canada and U.S. Rocky Mountains states. Most of this natural gas moves straight to the consumer through a network of interstate pipelines, local gas mains, and other utility infrastructure. Northwest utilities, however, also deliver a significant share of their natural gas supply—mainly in winter—from underground storage reservoirs. Puget Sound Energy, in fact, co-owns and operates the Northwest’s largest natural gas storage reservoir, the Jackson Prairie Underground Natural Gas Storage Facility. Jackson Prairie plays an important role in ensuring reliable, cost-effective natural gas service for consumers during the region’s annual wintertime peaks in natural gas demand. PSE’s share of Jackson Prairie storage allows the utility to meet more than 40 percent of its customers’ peak winter demand with the facility’s stored reserves.



### Description

Jackson Prairie is a series of deep, underground reservoirs—basically thick, porous sandstone deposits—in which large volumes of natural gas are injected and stored for later use by utility customers across the Northwest. The sand layers lie approximately 1,000 to 3,000 feet below the ground surface. Large compressors and pipelines are employed at Jackson Prairie to both inject and withdraw natural gas at 45 wells spread across the 3,200-acre facility. PSE and its two Jackson Prairie co-owners hold leases for subsurface natural gas storage. Most of the surface acreage is privately owned and used for timber production or livestock grazing.

### Benefits of storage

Natural gas held in storage supplements the interstate pipeline system to help meet the region’s energy requirements during the coldest days and weeks of winter when consumer demand spikes significantly. Jackson Prairie’s storage ensures that natural gas supplies are available during the year to meet the public’s needs. In addition, Jackson Prairie helps to stabilize utility customers’ energy costs and soften the impacts of price volatility in the wholesale natural gas market. Jackson Prairie allows PSE and other utilities to buy and store significant amounts of natural gas during the lower-priced summer months, and then tap the reserves in winter when customers’ natural gas requirements—and wholesale natural gas prices—are highest.

### Location

Jackson Prairie is located in Lewis County, Wash., about 10 miles south of Chehalis, or about 100 miles south of Seattle.

### Ownership / management

PSE co-owns Jackson Prairie’s facilities and natural gas storage rights equally with Spokane-based Avista Utilities and Salt Lake City, Utah-based Northwest Pipeline, GP. (Northwest Pipeline is the main natural gas transportation line serving the Northwest.) Predecessor businesses of these three companies developed Jackson Prairie as a natural gas storage facility in the 1960s. PSE manages the Jackson Prairie operations.

## Tax benefits for public

The property taxes levied on PSE for its Lewis County facilities, including the Jackson Prairie storage reservoir, provide significant revenues for local schools, county roads, and other public services.

## History

The facility was developed as a natural gas storage reservoir following a failed attempt by an oil and gas producer to find oil and natural gas at the site. An exploratory well drilled there in 1958 was labeled a “dry hole,” but the effort revealed several large sandstone layers favorable for storing natural gas. A 1963 state law authorized underground storage of natural gas in Washington, and the following year, PSE and its partners made the first injections of natural gas into Jackson Prairie’s underground reservoirs. The facility was certified for commercial service in 1970.

## Storage capacity

Jackson Prairie has undergone a steady increase in storage capacity over the years. In 2002, when maximum storage was approximately 18 billion cubic feet of deliverable “working” gas, Jackson Prairie’s owners launched a 10-year effort to boost capacity by 34 percent. Today, following completion of the expansion project, Jackson Prairie can store 25 billion cubic feet of working natural gas. (Note: Jackson Prairie’s total storage, including “cushion” natural gas used to provide pressure in the reservoirs, is approximately 47 billion cubic feet.)

## Withdrawal capacity

Jackson Prairie today is the 14th largest storage reservoir in the United States in terms of capacity for natural gas withdrawal and delivery to consumers. The facility is capable of delivering 1.15 billion cubic feet of natural gas per day – equal to the wintertime natural gas consumption of 1.2 million households across the Northwest, or one-fourth of the region’s demand on a cold winter day. (The addition of 10 new wells, plus additional pipe and compression at Jackson Prairie in 2007-2008, enabled a 34 percent increase in the facility’s daily natural gas-withdrawal capacity.)

