



Fact Sheet | Genesee Generating Station Units 3

Facility Details

Location: Alberta, Canada

Year Commissioned: 2005

Owned/Operated: 100/100

Located west of Edmonton near Warburg, AB, the Genesee Generating Station consists of Units 1, 2 and 3 which provide over 1,300 MW of baseload generation. Genesee Units 1 & 2 and Genesee Unit 3 are undergoing repowering and coal-to-gas transformations respectively to move off-coal in 2023 and provide responsible energy for tomorrow.

The 516 MW Genesee 3 is one of the most advanced, fuel-efficient, and environmentally progressive coal-fired facilities in Canada and one of the lowest variable-cost, baseload generators in Alberta. This unit dispatches a minimum (net) 176 MW of power to the grid. Above that minimum, Capital Power dispatches power to sell on Alberta's wholesale electricity market.

In support of our efforts to move off-coal in 2023, Genesee Unit 3 will continue with dual-fuel upgrades to maximize fuel flexibility and expand the use of natural gas before moving to 100% natural gas in 2023.

Community Investment and Involvement

At Capital Power, we contribute to the communities in which we operate with the aim of building a sustainable future for all. We engage our neighbours, consider their interests and build real relationships. We aim to source supplies and services locally for our operations, as well as hire from the community. At the Genesee Generating Station:

- We employ more than 200 permanent employees.
- We pay approximately \$5,986,000 in property and linear tax each year, contributing annually to community tax bases, supporting the improvement of infrastructure, roadways, and community services.

We give back where we live and work by supporting local organizations and our employees' community participation through our corporate giving programs.

Fuel Type(s)



Natural Gas



Coal

Owned Capacity

516 MW

Recent community giving:

- Pioneer Agricultural Society Heritage Day
- Community Easter Egg Hunt
- Family and Community Support Services (FCSS) – Volunteer appreciation; Seniors Week; Summer Programs
- Light Up Warburg
- Thorsby Jr / Sr High School Rodeo
- Leduc County's Genesee Park
- Warburg School

Quick Facts

- Genesee 3 is Canada's first power generation facility to use supercritical-combustion technology for greater fuel efficiency and lower emissions
- CO₂ emissions are approximately 24% lower than emissions from recently retired coal-fired generators in Alberta
- Environmental performance is enhanced by supercritical combustion and clean air technologies, which achieve greater efficiency and lower CO₂, NO_x and SO₂ emissions per MW compared to older technologies
- Genesee 3's clean air technology includes:
 - Fabric filters that stop 99.8% of particulate matter from reaching the atmosphere
 - A flue gas desulphurization unit that brings sulphur dioxide (SO₂) emissions well below the provincial emission standard, and less than half the emissions produced by vintage facilities
 - Low nitrous oxide (NO_x) burners that reduce NO_x emissions by 70%
- We're maximizing the flexibility of the units to utilize both natural gas and coal as fuel, which reduces emissions and increases flexibility to respond to market conditions.