

GEOHERMAL ENERGY INFRASTRUCTURE PLAN

Kittitas County faces a power generation capacity constraint that is limiting economic development. CWU's geothermal exploration could unlock a new source of clean, firm, baseload electricity—enough to power the entire campus with surplus to sell to local utilities—while advancing Washington's mandate for 100% clean energy by 2045.

Proven Foundation: Campus Geothermal Already Underway

In 2021, CWU discovered a large warm water aquifer directly beneath the Ellensburg campus at approximately 800 feet below ground, with year-round water temperatures in the upper 60s to lower 70s°F. With funding from the Washington State Legislature in 2023–2025, CWU excavated two geothermal wells and built infrastructure to capture the water temperature for building heating and cooling—**replacing natural gas combustion with a clean, renewable source.**

The state has already invested in this vision. Commerce Director Mike Fong toured the CWU campus geothermal project in 2025, and the Department of Commerce awarded CWU \$970,834 through the State Project Improvement (SPI) grants program for an air handler upgrade designed to integrate with the geothermal system. CWU's Strategic Capital Master Plan calls for expanding these HVAC-only geothermal modules campus-wide, converting existing buildings, and reducing reliance on the natural gas plant.

The Bigger Opportunity: Deep Geothermal for Power Generation

The shallow wells confirm that geothermal resources exist beneath the CWU campus. The critical question is whether higher-temperature water at greater depth—potentially in the Cascade Range volcanic geology that lies beneath Ellensburg—can support electricity generation.

If viable, the impact would be transformative:

- Clean, renewable, baseload electricity—available 24/7, unlike intermittent solar and wind
- Enough generation potential to power CWU's entire campus with surplus available for local utilities
- Direct relief for Kittitas County's power capacity constraints, which are currently stalling economic development projects
- Advancement of Washington's Clean Energy Transformation Act (CETA) goals for 100% clean electricity by 2045

The obstacle: deep exploratory drilling costs millions of dollars that CWU does not have. A single well of 3,000–6,000 feet runs \$3M–\$6M in drilling costs alone, plus geothermal resource company oversight, instrumentation, and analysis. The other major obstacle is the lack of comprehensive data below the Columbia River Basalt that exists throughout the region. This subsurface formation is a critical part of the proposed exploration that will benefit all stakeholders.

Why This Matters for Washington State

- Washington has no operating geothermal power plants despite significant resource potential along the Cascade Range—this project could help change that
- SB-6039 (2024) directed multiple state agencies, including Commerce, to support geothermal resource identification—
CWU's exploration directly advances that mandate
- Kittitas County's power capacity constraints are a documented barrier to economic growth—geothermal generation could unlock stalled development
- If the resource is confirmed, future phases could attract tens of millions in private and federal investment to the region