

# Goldendale Energy Storage Project

## Draft Environmental Impact Statement

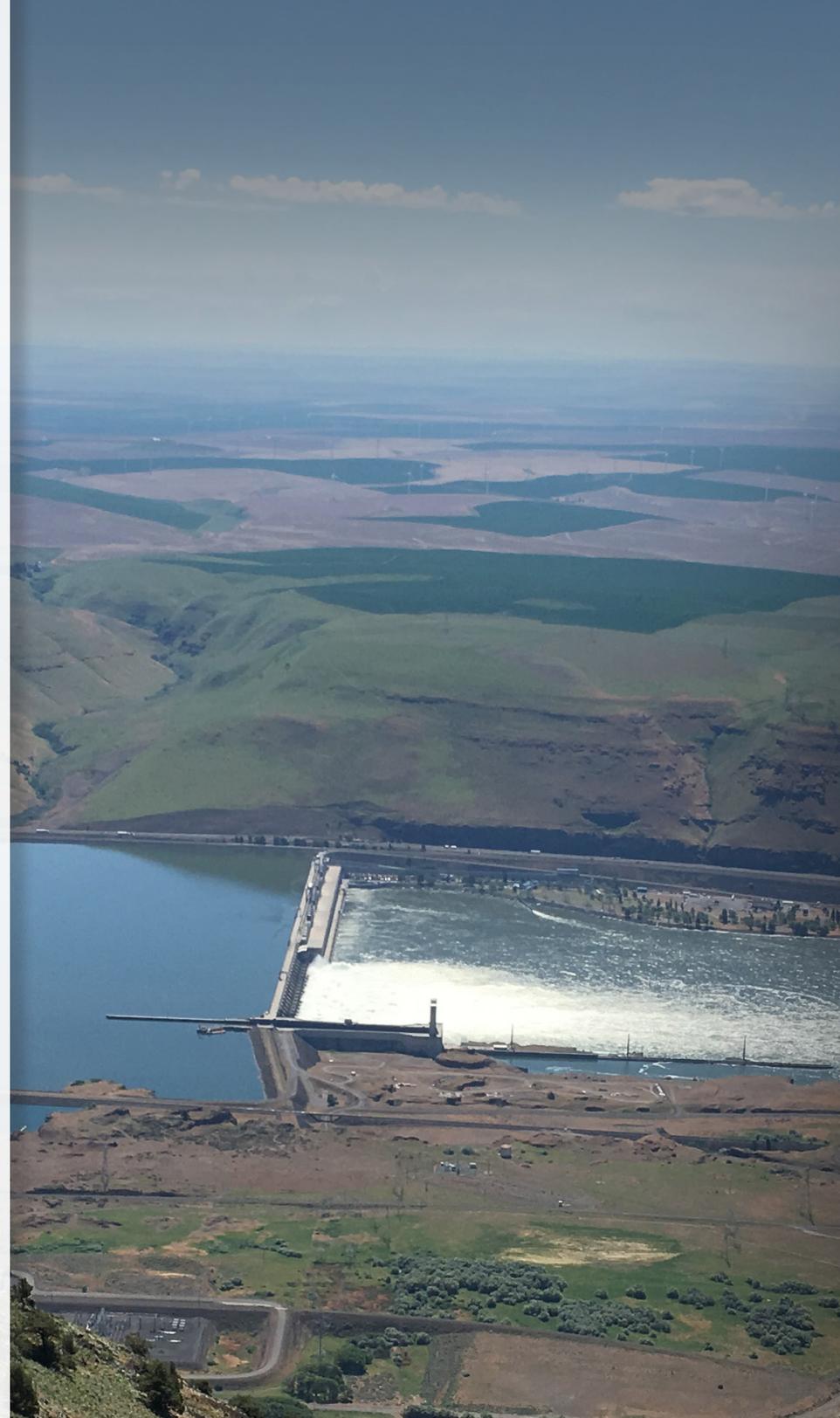
### Open House

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Welcome to our online open house! Here you will find a summary of the results of the Washington Department of Ecology's environmental review for the proposed Goldendale Energy Storage project, with links to sections of the draft Environmental Impact Statement (EIS) and technical reports.

Click on the various study area icons to learn about the potential significant impacts associated with the project, and if there are ways to reduce or eliminate these impacts through mitigation.

Send us your comments using the link at the bottom of each page. Your feedback is important as we finalize our environmental review. We look forward to hearing from you.



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# Project description

Free Flow Power Project 101, LLC proposes to build a pumped-water storage system capable of generating up to 1,200 megawatts of electricity next to the Columbia River near Goldendale. It proposes constructing two reservoirs to produce power by releasing water from an upper reservoir downhill to a lower reservoir. Power would be provided to the electrical grid at the nearby John Day Substation, in Oregon, when other renewable sources, like wind and solar, are unavailable.



## Accommodation requests

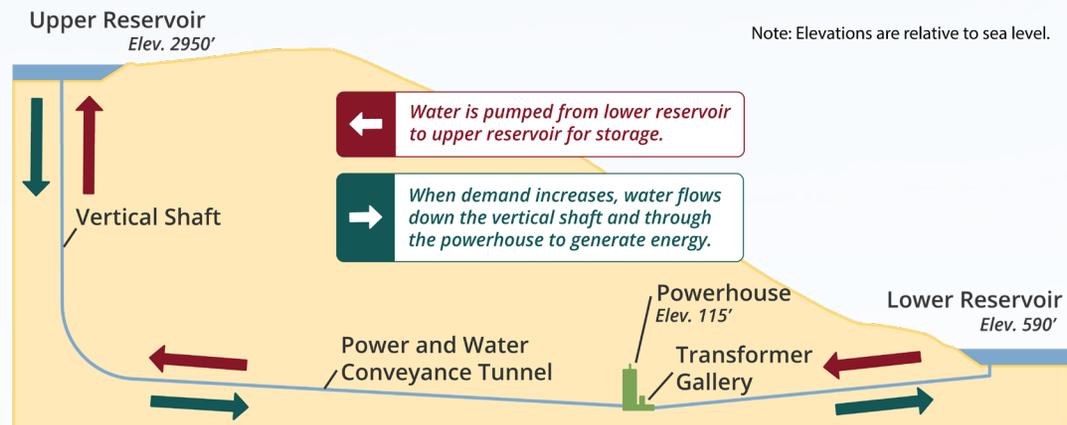
To request an ADA accommodation, contact Ecology at 360-407-7668 or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY, call 711 or 877-833-6241.

Comment



# Project alternatives

Washington's State Environmental Policy Act (SEPA) requires lead agencies to evaluate reasonable alternatives to the proposed project. Ecology considered two alternatives for this proposal: taking no action, and building and operating the proposed project.



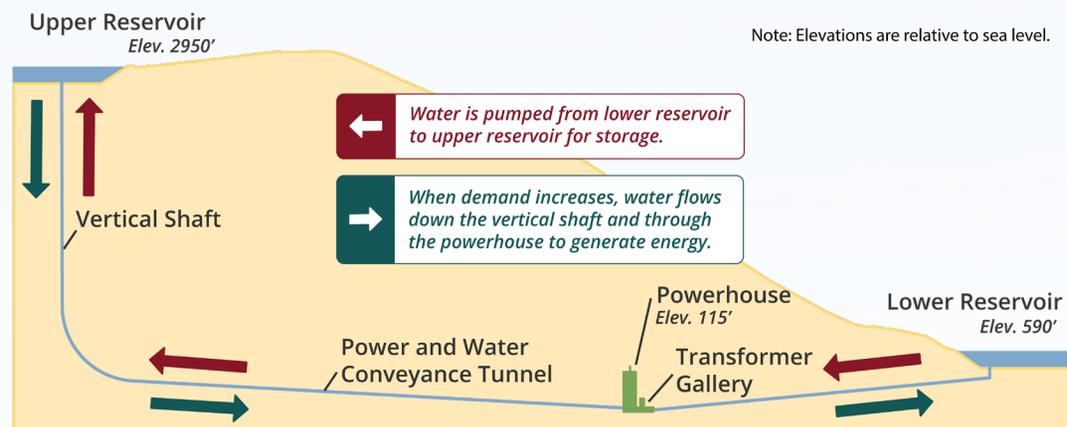
## Build alternative

Free Flow Power Project 101, LLC proposes to build a pumped-water storage system that is capable of generating energy through release of water from an upper reservoir downhill to a lower reservoir. The proposed project is primarily located in Klickitat County, Washington.

🌐 Learn more in [EIS Section 2.3](#)<sup>1</sup>

# Project alternatives

Washington's State Environmental Policy Act (SEPA) requires lead agencies to evaluate reasonable alternatives to the proposed project. Ecology considered two alternatives for this proposal: taking no action, and building and operating the proposed project.



## No build alternative

The No Action Alternative represents the most likely future conditions if none of the proposed project facilities are constructed.

🌐 Learn more in [EIS Section 2.4<sup>2</sup>](#)

# Environmental impacts

As part of the State Environmental Policy Act (SEPA), Ecology is evaluating the likely adverse environmental impacts from the proposed Goldendale Energy Storage Project.

The study is an unbiased and scientific analysis of project impacts, alternatives, and mitigation measures to avoid or minimize impacts. It looks at impacts to the natural environment, nearby communities, and Tribal and cultural resources. We also included an analysis of climate change and cumulative impacts.

The EIS does not approve or deny a proposed project. State and local agencies will use the EIS to help inform permit and other decisions. The project is also undergoing review through the Federal Energy Regulatory Commission.

To learn more, click the buttons associated with the different study areas, probable project impacts, and possible mitigation measures.

Comment



# Soils and Geology

We studied potential project impacts related to geology, soils, topography, unique physical features, erosion and associated processes, and geological and seismic hazards.

## Key findings:

- Approximately 280 acres of soil would be permanently removed and replaced with the project reservoirs, tunnels, and other project areas.
- Possibly some impacts on slope stability, but there is uncertainty related to geologic conditions.
- Removal of vegetation and exposure of soils would increase the potential for erosion.

**The analysis found that the project would not have significant adverse impacts related to geology and soils. Mitigation would reduce some project impacts.**

## More information:

 [EIS Section 4.1<sup>3</sup>](#)

Comment



# Water Resources

We studied potential project impacts to surface water, groundwater, and wetlands. This included analysis of water rights, water supplies, water quantity (flows and levels), water quality, and protected waters.

## Key findings:

- Construction would impact wetlands and streams - 0.09 acre permanently, 0.06 acre temporarily, and their buffers.
- An initial withdrawal of 7,640 acres of water from the Columbia River would fill the pumped storage system. Around 360 acre-feet of make-up water would be required each year.
- Water would be supplied through Klickitat County PUD, and would not affect water supplies or water rights.

**The proposed project would not have significant adverse impacts on water resources or water rights. However, there are impacts that will be mitigated through permit requirements.**

## More information:

 [EIS Section 4.2<sup>4</sup>](#)

 [Surface and Groundwater Hydrology Resource Analysis Report<sup>5</sup>](#)

 [Wetlands and Regulated Waters Resource Analysis Report<sup>6</sup>](#)

Comment



# Air Quality and GHGs

We studied project emissions of air pollutants and greenhouse gases (which contribute to climate change). We considered emissions during construction and operation.

## Key findings:

- During the five years of construction, 87,919 metric tons of CO<sub>2</sub>e (carbon dioxide equivalent) would be emitted.
- Once in operation, annual CO<sub>2</sub>e emissions estimates are 1,614 metric tons.
- Emissions of some toxic air pollutants would likely require an air permit from Ecology.

**The proposed project would not result in any significant adverse impacts related to air quality or greenhouse gas (GHG) emissions.** Mitigation is not required to reduce project impacts.

## More information:

 [EIS Section 4.3<sup>7</sup>](#)

 [Air Quality and Greenhouse Gases Resource Analysis Report<sup>8</sup>](#)

Comment



# Energy Resources

We studied potential project impacts on energy sources and availability of energy resources. We also looked at the amount of energy required to operate the proposed project, and the rate and efficiency of that energy use.

## Key findings:

- Local energy resources would not be constrained by construction and operation of the proposed project.
- Energy use would be consistent with local and regional energy plans, and not affect adjacent uses of energy.

**The proposed project would have no significant adverse impacts related to energy resources.**

Mitigation is not required to reduce any significant impacts.

## More information:

-  [EIS Section 4.4<sup>9</sup>](#)
-  [Energy Resource Analysis Report<sup>10</sup>](#)

Comment



# Public Services and Utilities

We studied project impacts to public services and utilities, including basic services and facilities that support development and protect public health and safety in the project area. This included fire and emergency management and response, law enforcement, schools, hospitals, electrical power, water supply, wastewater, natural gas, solid waste services, and telecommunications.

## Key findings:

- Demand for services and utilities will increase, but will not affect the capacity of public service and utility providers.
- Road detours during construction may temporarily cause disruptions to public services and traffic.
- There is no impact expected to existing utility infrastructure during construction.

**The analysis found the proposed project would have no significant adverse impacts related to public services and utilities.** Mitigation is not required to reduce any significant impacts.

## More information:

 [EIS Section 4.5<sup>11</sup>](#)

Comment



# Aquatic Species and Habitats

We studied potential project impacts to aquatic species and their habitats. Aquatic species—like fish, amphibians, and some turtles—are those that require water for some or all of their life cycle.

## Key findings:

- There may be disturbance, injury or death to amphibians and turtles during construction. Construction would result in the permanent loss of 0.09 acre and the temporary disturbance of 0.06 acre of aquatic habitat, primarily in the Swale Creek watershed.
- There are no anticipated impacts to aquatic habitat and species in the Columbia River.
- In the Swale Creek watershed, there would be a reduction in ecological function that would affect habitat and fish.

**The proposed project would have no significant adverse impacts related to aquatic species and habitats. Mitigation would reduce some project impacts.**

## More information:

 [EIS Section 4.6<sup>12</sup>](#)

 [Aquatic Species and Habitats Resource Analysis Report<sup>13</sup>](#)

Comment



# Terrestrial Species and Habitats

We studied potential project impacts on terrestrial (land) species and their habitats. Terrestrial species are plants or animals that live on and use land habitats for the majority of their life.

## Key findings:

- There may be disturbance, injury or death of plants, mammals, birds, reptiles, and invertebrates but the species themselves would not experience a decline.
- Construction would result in a permanent loss of 193.6 acres of habitat and a temporary loss of 54.3 acres of habitat.
- There will be impacts on special status species—including golden eagle, smooth desert parsley, and other rare plants.
- Project operations could reduce habitat function and quality for some species.

**The proposed project would have significant adverse impacts on terrestrial species and habitats. Mitigation would reduce impacts below the level of significance.**

## More information:

 [EIS Section 4.7<sup>14</sup>](#)

 [Terrestrial Species and Habitats Resource Analysis Report<sup>15</sup>](#)

Comment



# Aesthetics/ Visual Quality

We studied how the proposed project would impact the visual quality in the study area and surrounding landscape.

## Key findings:

- Visual changes from construction would be disruptive to the natural harmony of the landscape.
- During operation, the reservoirs would be a dominant structure from some viewpoints, and viewers may be aware of the visual changes.
- For many viewpoints, changes to the landscape would only be seen from a distance.

**The proposed project would have no significant adverse impacts related to aesthetics and visual quality. Mitigation would reduce some project impacts.**

**However, visual changes to the landscape would result in significant adverse and unavoidable impacts to Tribes. These impacts are described in Section 4.9 and the Tribal Resources Analysis Report (Appendix H).**

## More information:



[EIS Section 4.8](#)<sup>16</sup>



[Tribal Resources Analysis Report](#)<sup>17</sup>

Comment



# Cultural and Tribal Resources

We worked with Tribes to study potential project impacts to Tribal and cultural resources. We considered the Tribes' powerful connection to and reliance on cultural and natural resources, their collective rights and access to traditional gathering areas, and archaeological or historic sites.

## Key findings:

- Disturbance and destruction of multiple Traditional Cultural Properties and archaeological sites.
- Destruction of culturally important plants and Tribal food and medicine gathering areas.
- Restrictions to access, visual changes, and removal of areas used for cultural practices.
- Reduced presence of wildlife and reduction of habitat for culturally important species.

**To date, no mitigation has been identified that would reduce impacts to Tribal and cultural resources. Therefore, the proposed project would result in significant and unavoidable adverse impacts.**

## More information:



[EIS Section 4.9](#)<sup>18</sup>



[Tribal Resources Analysis Report](#)<sup>19</sup>

Comment



# Environmental Health

We studied potential health concerns (including hazardous materials and contaminants) that could affect the health of people and the environment.

## Key findings:

- The proposed project could cause possible spills, discharge, or disturbance of hazardous or contaminated materials but required cleanup actions, permits, and plans would reduce these risks.
- Temporary impacts include noise and vibration from construction and equipment, but there would be few people in the affected area.
- There would be an extremely low probability for failure of a reservoir. Design, construction, planning, and monitoring requirements would further reduce associated risks.

**The analysis found the proposed project would have no significant adverse impacts related to environmental health.** Mitigation is not required to reduce any significant impacts.

## More information:

 [EIS Section 4.10](#)<sup>20</sup>

 [Environmental Health Resource Analysis Report](#)<sup>21</sup>

 [Learn more about cleanup activities](#)<sup>22</sup>

Comment



# Land Use

We studied potential project impacts on land uses, including potential effects on the local jurisdiction's existing uses and consistency with local zoning.

## Key findings:

- Construction would temporarily change an existing land use, but would not require a modification or amendment to an existing zoning, planning, or policy document.
- The area would permanently convert undeveloped space and previously used industrial operations to a utility-scale pumped hydropower facility.
- This change would not be consistent with existing zoning because applicable zoning districts do not permit utility operations. A conditional use permit would be required.

**The analysis found the proposed project would have no significant adverse impacts related to land use.**

Mitigation is not required to reduce any significant impacts.

## More information:

 [EIS Section 4.11](#)<sup>23</sup>

Comment



# Recreation

We studied potential project impacts to existing recreational resources in Washington that are within 10 miles of the proposed project.

## Key findings:

- There are no recreational facilities within the project footprint. Construction impacts would only consist of temporary and intermittent traffic and access changes to facilities within 10 miles.
- The proposed project features would not permanently change any existing recreational facilities or access.

**The proposed project would have no significant adverse impacts related to recreation. Mitigation would reduce some project impacts.**

## More information:

 [EIS Section 4.12](#)<sup>24</sup>

Comment



# Transportation

We studied potential project impacts to transportation facilities and resources, including existing infrastructure and the movement of people and goods.

## Key findings:

- Construction traffic, road closures, and detours would temporarily increase traffic and congestion on regional and local roads and highways.
- The project would require no road construction or improvements, nor would any transportation infrastructure be impacted.

**The proposed project would have no significant adverse impacts related transportation. Mitigation would reduce some project impacts.**

## More information:

 [EIS Section 4.13<sup>25</sup>](#)

Comment



# Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. We studied population demographics within 2 miles of the project area (in Washington) to determine if low-income residents or people of color would experience disproportionate impacts from the project.

## Key findings:

**The analysis of the project did not identify disproportionate impacts to communities of color or low-income populations.**

**The analysis found there would be no significant adverse impacts related to environmental justice.** Mitigation is not required.

Analysis of impacts to Tribes, Tribal resources and cultural resources did identify significant adverse impacts in Section 4.9 and the Tribal Resources Analysis Report.

## More information:

 [EIS Section 4.14](#)<sup>26</sup>

 [Environmental Justice Report](#)<sup>27</sup>

 [Tribal Resources Analysis Report](#)<sup>28</sup>

Comment

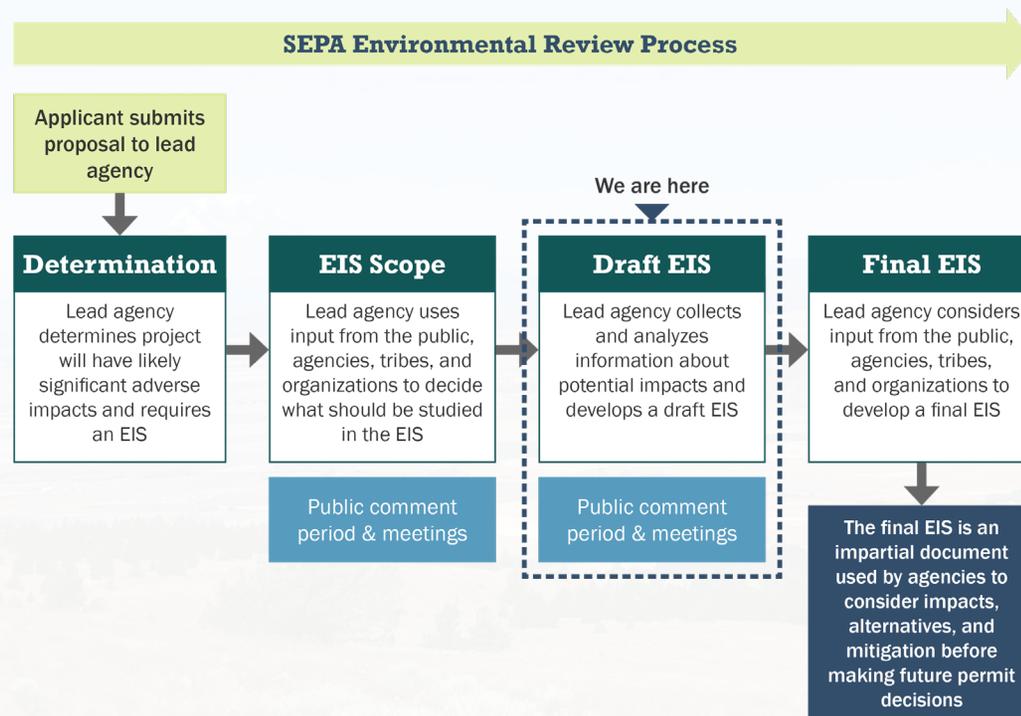


# Next steps

After the comment period ends, Ecology will consider all comments when finalizing the EIS. We expect to release the final EIS at the end of 2022.

The Final EIS will provide information for agencies to support permit and other decision-making for the proposed project. All primary local, regional, state, and federal permits must be issued before the proposed project may begin.

🌐 Visit the [project webpage](#)<sup>29</sup> for more information.



# Endnotes

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- 1 <https://apps.ecology.wa.gov/publications/documents/2206006.pdf#page=37>
- 2 <https://apps.ecology.wa.gov/publications/documents/2206006.pdf#page=44>
- 3 <https://apps.ecology.wa.gov/publications/documents/2206006.pdf#page=53>
- 4 <https://apps.ecology.wa.gov/publications/documents/2206006.pdf#page=72>
- 5 <https://apps.ecology.wa.gov/publications/parts/2206006part3.pdf>
- 6 <https://apps.ecology.wa.gov/publications/parts/2206006part4.pdf>
- 7 <https://apps.ecology.wa.gov/publications/documents/2206006.pdf#page=112>
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- 27 <https://apps.ecology.wa.gov/publications/parts/2206006part11.pdf>
- 28 <https://apps.ecology.wa.gov/publications/parts/2206006part9.pdf>
- 29 <https://ecology.wa.gov/Goldendale-Energy>