

Engineering Electricity Project: Research Option

Part 1. Research a facility that generates energy

Choose one type of energy generated and one facility. Here are some options. Preferably, all facilities will be part of PSE, but it is **not** a requirement

- Wind Energy: Wild Horse Wind Facility, Hopkins Ridge Wind Facility, Lower Snake River Wind Facility
- Hydroelectricity: Snoqualmie Falls Hydro Facility, Baker River Hydro Facility
- Solar Energy: Wild Horse Solar Facility
- Geothermal Plant: small in PSE- for example, some homes have it/Juanita High School uses it, but the Geysers GeoThermal Field in California is pretty cool
- Nuclear: Columbia Generating Station
- Coal Energy: Colstrip Power Plant in Montana
- Natural Gas: Encogen Generating Station, Fredonia Generating Station, Frederickson Generating Station, and more

For your chosen facility, research:

- Details of Facility
 - Location of Facility
 - Justification/Reasoning for location
 - Layout of Facility
 - AT LEAST TWO 'fun facts' about the facility
- Electricity Generation of Facility
 - How it generates (types of energy)
 - Overview of EM Induction/Solar Energy
 - How much energy it produces (statistics on energy generation)
 - Efficiency of Electricity Generation
- Impact of Facility
 - Human Impact
 - Community it serves
 - Impact on local community
 - Environmental Impact
 - Impact on local wildlife
 - Pollution
 - Carbon Dioxide Output
 - Scale of Impact (short term vs. long term, is it regulated, etc.)

Part 2: Creating a Flip-Grid Video Presentation

Create your presentation. Your presentation can be in any format you choose, but **must** be submitted as a Flipgrid video. I recommend creating a PowerPoint presentation- then filming through Flipgrid, which allows you to flip between recording your screen and through you camera. Your presentation must include:

1. Your face at the beginning of the video - briefly introduce yourself and your topic
2. Explain your findings from the research
 - Details of your facility
 - Electricity generation of facility
 - Impact of facility
3. Works Cited

Grading Rubric

	1- Not Yet at Standard	2- Approaching Standard	3- Meets Standards	4- Exceeds Standards
Criteria 1: Details of Facility - o Location of Facility - o Justification/Reasoning for location - o Layout of Facility - o AT LEAST TWO 'fun facts' about the facility	Attempted, but does not meet criteria	Meets all but 2-3 criteria	Meets almost all criteria	Completely meets all criteria
Criteria 2: Electricity Generation of Facility - o How it generates (types of energy) - o Overview of EM Induction/Solar Energy - o How much energy it produces (statistics on energy generation) - o Efficiency of Electricity Generation	Attempted, but does not meet criteria	Meets all but 2-3 criteria	Meets almost all criteria	Completely meets all criteria
Criteria 3: Impact of Facility - o Human Impact ▪ Community it serves ▪ Impact on local community - o Environmental Impact ▪ Impact on local wildlife ▪ Pollution	Attempted, but does not meet criteria	Meets all but 2-3 criteria	Meets almost all criteria	Completely meets all criteria

▪ Carbon Dioxide Output o Scale of Impact (short term vs. long term, is it regulated, etc.)				
Criteria 4: Presentation Skills Presentation and presenter are introduced, presentation is clear, concise, and easy to follow. Visuals and text are appropriate. Works cited is present.	Attempted, but does not meet criteria	Meets all but 2-3 criteria	Meets almost all criteria	Meets all criteria, and is engaging