

NUCE_2122_HW1

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Instructions:

Pick a metropolitan area in the US and identify the responsible electric utility. For that utility, summarize the following based on internet information:

- I. Number, type, MWE rating and age of power plants producing electricity for that utility
- II. Published strategy for new power plants to be added and plans for specific plants to be shutdown
- III. % of gas fired plants compared to coal, nuclear, and resource energy*

Send the completed summary to chris67ta@gmail.com

Submission

For my selection of a metropolitan area, I chose the Portland Oregon MSA.

There are two major electric utilities in Portland: Portland General Electric serves most of Portland west of the Wilamette River, while Pacific Power and Portland General Electric share the eastern side of the metro area.

Portland General Electric (PGE) will be the focus of this assignment, as they are the main supplier in Portland.

PGE has the following facility breakdown:

Active Facilities

Plant Name	Plant Type	Generation Capacity	% of Cap	Commissioned
Beaver Gen. Plnt.	Comb. Cycle Nat. Gas	511 MWe	12.9%	1976
Port Westward High Eff. Gas Pwr. Plnt.	Nat. Gas	607 MWe	15.3%	2007

Plant Name	Plant Type	Generation Capacity	% of Cap	Commissioned
Carty Gen. Plnt.	Comb. Cycle Nat. Gas	436 MWe	11.0%	2016
Coyote Springs Gen. Plnt.	Comb. Cycle Nat. Gas	257 MWe	6.5%	2003
Colstrip Pwr. Plnt. 3&4	Coal	296 MWe	7.5%	1984
Faraday	Hydro	46 MWe	1.2%	1907
North Fork	Hydro	58 MWe	1.5%	1958
Oak Grove	Hydro	43 MWe	1.1%	1956
River Mill	Hydro	25 MWe	0.6%	1911
T.W. Sullivan	Hydro	18 MWe	0.5%	1889
Pelton Dam	Hydro	57 MWe	1.4%	1958
Round Butte Dam	Hydro	187 MWe	4.7%	1964
Biglow Canyon	Wind	450 MWe (max)	11.4%	2005
Tucannon River	Wind	267 MWe (max)	6.7%	2012
Marion County	Waste-to-Energy	13 MWe	0.3%	1987
Clearwater	Wind	311 MWe (max)	7.8%	2024
Wheatridge (Wind)	Wind	300 MWe (max)	7.6%	2020
Wheatridge (Solar)	Solar	50 MWe (max)	1.3%	2022
Wheatridge (Battery)	Battery	30 MWe (max)	0.8%	2022

Percent Natural Gas: 45.7%

Percent Coal: 7.5%

Percent Hydro: 11.0%

Percent Wind: 33.5%

Percent Other: 2.3%

Decomissioned Facilities

Plant Name	Plant Type	Generation Capacity	Decomissioned
Boardman Gen. Plnt.	Coal	601 MWe	2020
Bull Run	Hydro	22 MWe	2007
Trojan Nuclear Plnt.	Nuclear	1130 MWe	1992

Plans for Future Plants

PGE's biggest plans for the future include the exit of investment from the Colstrip coal power plant, 3200 MW of Requests for Proposals for renewable sources and storage, and at least 500 MW of rooftop solar installations.