Oregon Energy Strategy

Jobs Analysis Overview

April 16, 2025



BW Research Background

- I. DOE's <u>United States Energy and Employment Report (USEER)</u>
- II. Employment Modeling
 - 1. CETI's Net-Zero Northwest
 - 2. NYSERDA's <u>Just Transition Working Group Jobs Study</u>

Jobs Analysis



Sector Framework

Sector Framework

I. Energy Supply

- Electricity Distributed and Utility Solar, Land-based Wind, Hydropower, Natural Gas, Nuclear, Other Fossil Generation, Other Renewable Generation, Transmission, Distribution, and Storage
- **2.** Fuels Hydrogen, Biofuels, Natural Gas, Natural Gas Distribution, Other Fossil Fuels

II. Energy Demand

- 1. Buildings Residential and Commercial HVAC, Shell, and Other
- **2. Transportation** Vehicle Maintenance, Vehicle Manufacturing, Wholesale Trade, Fueling Stations, Charging Stations

Model Framework

Determine unit inputs

From EER data – device stocks and sales, MW electric capacity, fuel demand, etc. – e.g.: MW of installed Solar PV capacity

Determine unit and total costs

From EER data where provided, additional costs may be assumed from secondary sources. – e.g.: capital and operations costs of Solar PV capacity

Split costs into industry category by technical costs data

Segment overall costs from EER into industries and based on activity using secondary data sources – e.g.: installation of solar PV, supply of panel and components, etc.

Apply jobs per \$ multipliers

Input 5-year-increment costs into IMPLAN/JEDI industry multipliers based on the above cost allocation – e.g.: construction industry multipliers for PV installation

Report

Jobs created by Industry (per 5-year increments) – e.g.: Solar PV construction, professional services, wholesale trade, etc.

Summary of Input Output Models, IMPLAN & JEDI





you can measure impacts like changes in wages, production, or jobs



purchases of goods and services



supply chain effects









WHAT IT SHOWS YOU

DIRECT EFFECTS

These are the initial changes that result from your economic activity. The IMPLAN model will display how the region will economically respond to these initial changes.

INDIRECT EFFECTS

These are the impact of local industries buying goods and services from other local industries as a result of your influence in the economy.

INDUCED EFFECTS

The response by your economy to an initial change that occurs through spending of income received by wage earners.



Model Framework

Job Numbers Include & Do Not Include

Include:

- Direct, Indirect, and Induced employment changes from the four primary sectors (Electricity, Fuels, Buildings & Transportation)
 - These four sectors represent approximately +80% of all GHG emissions.

Does not Include:

- The entire economy, this is not a general equilibrium macroeconomic model that measures all the potential changes in the economy.
 - E.g., we do not capture impacts from customer rate changes with more solar capacity