**Policies:**

· **Afforestation and reforestation:** Working as designed. Large increase in direct and indirect jobs, but a large decrease in induced jobs, because the federal government owns much of the forest land and is bearing the costs of the policies.

· **Building electrification**: Working as designed. Electrification is quite expensive and a fixed share of spending goes to construction, so we see a very large increase in construction job and then induced jobs from increased construction jobs. Note that spending on appliances and other equipment is about 75/25 materials:labor, so less of an impact on construction jobs that heating, which is about 55/45.

· **Building energy efficiency standards:** Working as designed. Large increase in construction jobs – but also large decrease in utility jobs. This makes sense, as TX uses so much electricity for cooling.

· **CCS:** Huge jobs gains. Because utilities are lumped together, the net impact to the utility industry is positive because of the additional electricity required to power CCS, which means more deployment of power plants, mitigating any impact of increased electricity prices.

· **Carbon tax:** Working as intended. A carbon tax that is a 100% household dividend has a *massive* positive increase in jobs, because it is essentially a wealth transfer. Even a modest carbon price has a large impact. Even though we now added in the pass-through effects, labor and consumers still buy less stuff (because production decreases), which results in a negative change in non-energy expenditures. The effect is pretty large with a high carbon tax. So consumers now have more money to spend, and they buy more stuff in the same categories they were already buying things based on the i-o inputs (but we know they’re not buying some of these products because production has decreased).

· **Cement clinker substitution:** The overallincrease in jobs is very small. Working as intended: Increase in direct, indirect, and induced jobs. Direct jobs are in construction and other business sector services; induced and indirect jobs very small.

· **Cogen and WHR**: Increase in jobs driven by construction for new equipment + supporting indirect jobs, only very small negative impact to utility industry.

· **Contractor training and education**: Large induced jobs benefit, but loss of direct and indirect jobs. That’s because there’s a loss of utility jobs from reduced output and no corresponding increase in construction like there is for efficiency policies. But consumers have fuel savings, which get passed on to induced jobs. The W shape is controlled by when the model avoids building new peaker plants.

· **Demand Response:** Working mostly as intended. Has a larger impact than I would expect, primarily from induced jobs - labor and consumers have a revenue stream from being compensated as DR providers. In the TX model, there is a large spike in ~2026 because the DR is enough to avoid a peaker built in the BAU case – this results in a drop in construction and utility jobs in the next year relative to BAU.

· **Distributed solar subsidy:** Working as expected – increased jobs mostly from construction; but should have UT smooth data to avoid bumps.

· **District heating CHP:** Jobs increases – mostly for utilities.

· **Early retirement of industrial facilities**: Appears to be methodologically working correctly, but I have some questions about our approach here. All efficiency policies are assigned a cost based on BTU saved. This seems problematic because the different policies should have different costs, and an early retirement policy should have very different costs than say, energy efficiency.

· **Clean electricity standard:** Large jobs gains, driven by direct and indirect construction related growth through ~2030. Over half of the jobs are induced by 2050, because electricity bills are lower.

· **Early retirement of coal power plants**. Creates net jobs in the near term from the construction costs associated with decommissioning the power plants. Job losses mostly caused by lower utility sector employment, plus losses in the mining sector. In TX, this is effectively just shifting jobs, since coal retires out anyway.

· **Material efficiency**. Working as expected. Very large job losses, with the largest from the cement industry.

· **ZEV Mandate**: Working as expected, but outputs may look counterintuitive at first depending on the implementation schedule (can follow ups and downs based on how labor and consumers’ increased upfront vehicle prices interacts with decreasing fuel expenditures). Large direct jobs gains in auto manufacturing (and later in utility and construction because of increased electricity demand), but by later years all jobs gains are outweighed by losses to vehicle repair. The 100% by 2035 timeline results in ~1M jobs by 2050 because of the induced jobs effect from consumer fuel savings has time to ramp up.

· **Electrification + Hydrogen:** Very large jobs creator. Biggest increases are in the utility industry because of the increased electricity demand. Induced jobs are the largest category, even though labor and consumers see a very negative cash flow. Adding the hydrogen electrolysis levers almost doubles jobs by adding a huge amount of direct utility jobs

· **Methane Capture and Destruction:** Increased jobs – mostly direct construction – some induced and indirect as well. This is correct now that we adjusted for captured methane savings.

· **Livestock Measures:** Increase in jobs largely driven by direct construction and machinery jobs. After taking a lot at the EPA Methodology, this policy is overwhelmingly purchasing and installing anaerobic digestors, so I think this is okay.

· **F-gas substitution:** Decrease in jobs with f-gas substitution (both from chemicals and from ngps). Slightly higher fuel demand, so why loss in mining jobs…

· **Other f-gas policies:** Gradual jobs increases driven by construction/machinery/wholesale trade direct and indirect jobs (we kept the same ISIC code breakdown as the rest of industry in SoPEASbRIC). I think this is justified, given that the other f-gas policies involve new equipment. Very small loss in induced jobs.

· **Grid-scale Electricity Storage:** Sharp increase in jobs followed by steady decline - can have job losses by 2050 with max settings. That’s because more jobs in the electrical equipment sector to manufacture battery storage is outweighed by lower wind capacity construction.

· **Increase Transmission:** Decrease in jobs where peaker build is avoided. Some induced jobs from consumer electricity savings.

· **Increased Retrofitting:** Sharp increase in jobs that then stays relatively flat. Mostly direct jobs, which are largely construction and machinery. Fair amount of indirect jobs as well (wholesale trade, other business sector, etc.), but this drops with time - assuming this is because of increases in labor productivity. Induced jobs start negative in the first year the policy is enacted, but this grows as fuel savings accumulate.

· **Industry Energy Efficiency Standards:** Jobs gains, more than half of which are from induced effects.

· **EV Subsidy:**  A subsidy on its own results in a huge number of jobs (depending on the setting), but almost all of these are induced. There are direct jobs gains, but those are mostly canceled out by direct job losses from lower vehicle maintenance.

· **Reduce Fossil Fuel Exports:** Huge jobs losses, with about half of the losses from induced jobs. Direct job losses mostly from mining and extraction sectors, with some from the electricity/utility sector.

· **Vehicle Fuel Economy Standards:** Large increase in total jobs. Most jobs are added in Wholesale and retail trade.

· **Transportation Demand Management – Passenger:** Large total job growth all in induced job sectors (Health care, accomodation, education, arts, etc). Direct and indirect jobs decline from BAU scenario, primarily in Construction, Motor vehicles, and Wholesale repair sectors. Job growth is likely due to cost savings associated with less fuel use/driving. Job loss is likely due to reduced demand for vehicles and vehicle maintenance. This makes sense and job lines look good!

· **Transportation Demand Management – Freight:** Significant total job loss. About 350,000 jobs lost by 2050 across multiple sectors. Most job losses are in Wholesale retail trade/motor vehicle repair because of lower vehicle maintenance costs for HDVs. Significant job losses in induced sectors (Healthcare, Accommodation, Other business sector). This policy translates to reduced fuel demand and jobs associated with fuel production/vehicles. This makes sense as there are large cash flow losses to natural gas and petroleum suppliers and government cash flows. Job lines look smooth!

· **EV Charger Deployment:** Initial bump in construction, with longer term growth driven by induced jobs. Some decrease in vehicle maintenance jobs, but this effect is small compared to the induced job gains.

· **EV Range and Charging Time:** Very similar to EV charger deployment above, but without the construction boost.

· **Forest Set Asides:** Modest job growth. Most jobs added in the Agriculture and Forestry sector and Wholesale retail trade sector. Modest job loss in the Public administration sector (less than 500 jobs). Job growth looks smooth and fairly linear. Job growth in the forestry sector makes sense and job declines in the Public sector are similar in other forestry policies.

· **Fuel Taxes:** Large total job increases – almost all induced (because of household dividend).

· **Hydrogen Electrolysis:** Increase in jobs across all categories – largely dependent on what other hydrogen policies are enabled.

· **Hydrogen Vehicle Sales Mandate:** Modest jobs gains – loss in vehicle repair, but gains in utility industry and induced jobs (from higher utility employment and government tax revenue). If you turn on electrolysis, this turns to positive direct, indirect, and induced.

· **Improved System Design:** Small total job gains, split across direct/indirect/induced. Direct jobs are split among various industries depending on their percent on energy spending by ISIC code, which is why we see increases in categories like food and beverage.

· **Low Carbon Fuel Standard:** Total jobs increase quickly and peak in 2029 at about 120,000 additional jobs. But then decrease quickly. Large cash flow increase to biomass and biofuel suppliers (and therefore increased biofuel production) and large decrease in cash flow to natural gas and petroleum suppliers. Job increases are largest in Electricity, gas, water sector and Mining support service activities.