GCAM Assignment #2

ITM 20235575 안지석

Intro

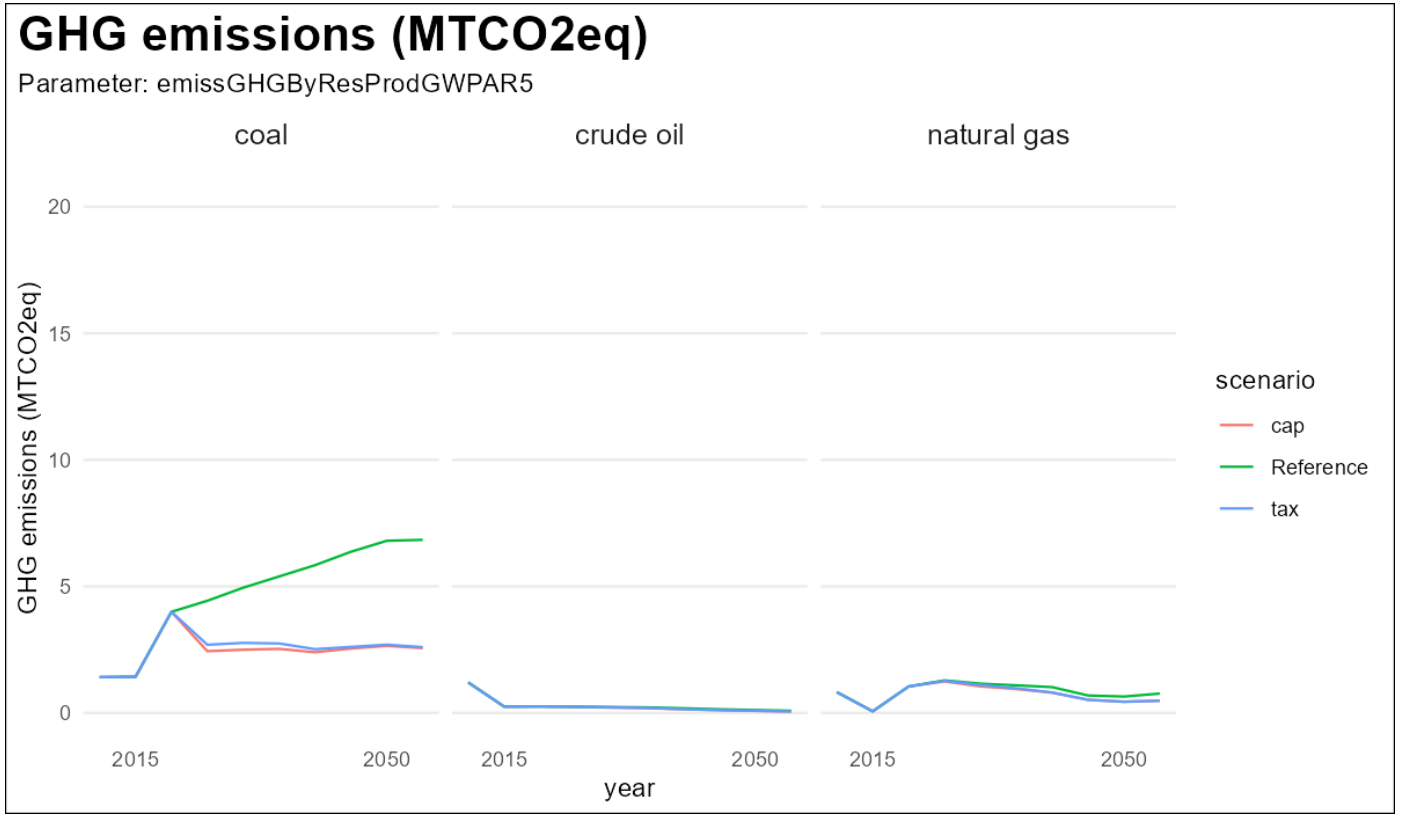
- I ran three different scenarios(Reference, cap, tax) using the given material for GCAM assignment 2.

- To plot the results, used R library called gcamextractor.

- After data is imported to R with gcamextractor, wrote a function to plot results for different parameters.

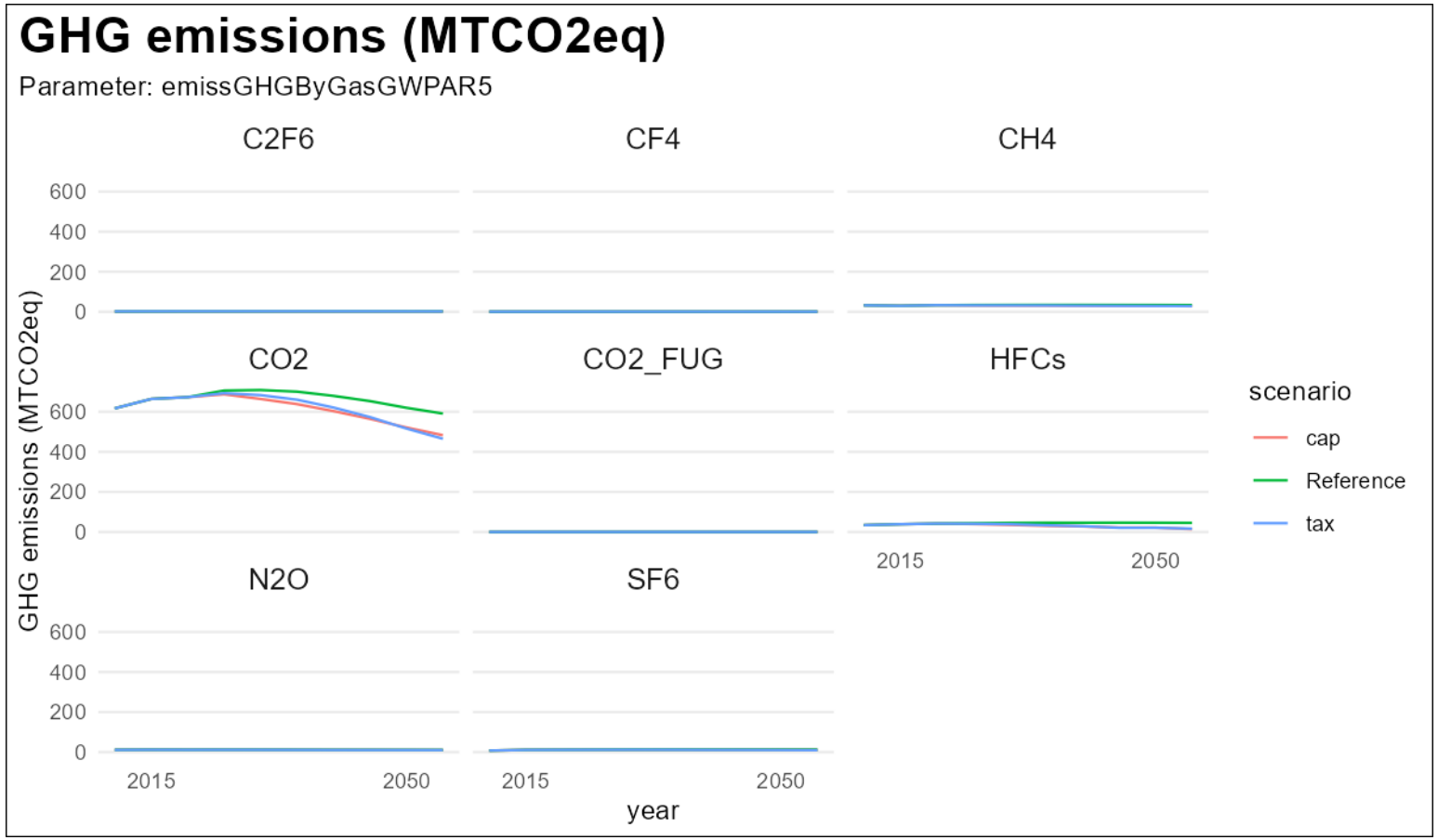
Where do CO2 emission reductions come from?

Compared to Reference scenario, cap and scenario showed that GHG emission from coal declines.



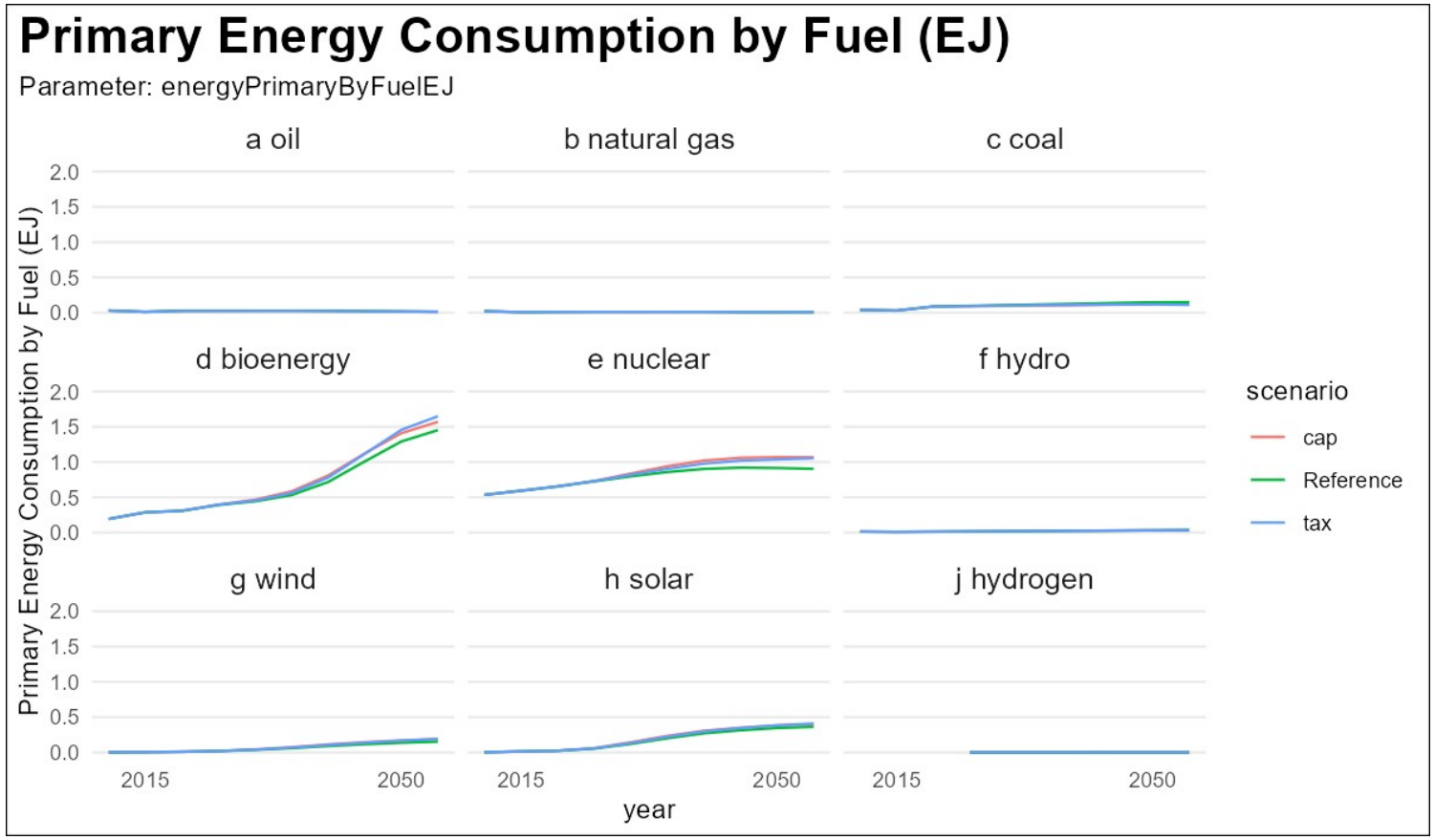
Where do CO2 emission reductions come from?

In cap and tax scenario, CO2 emission declined.



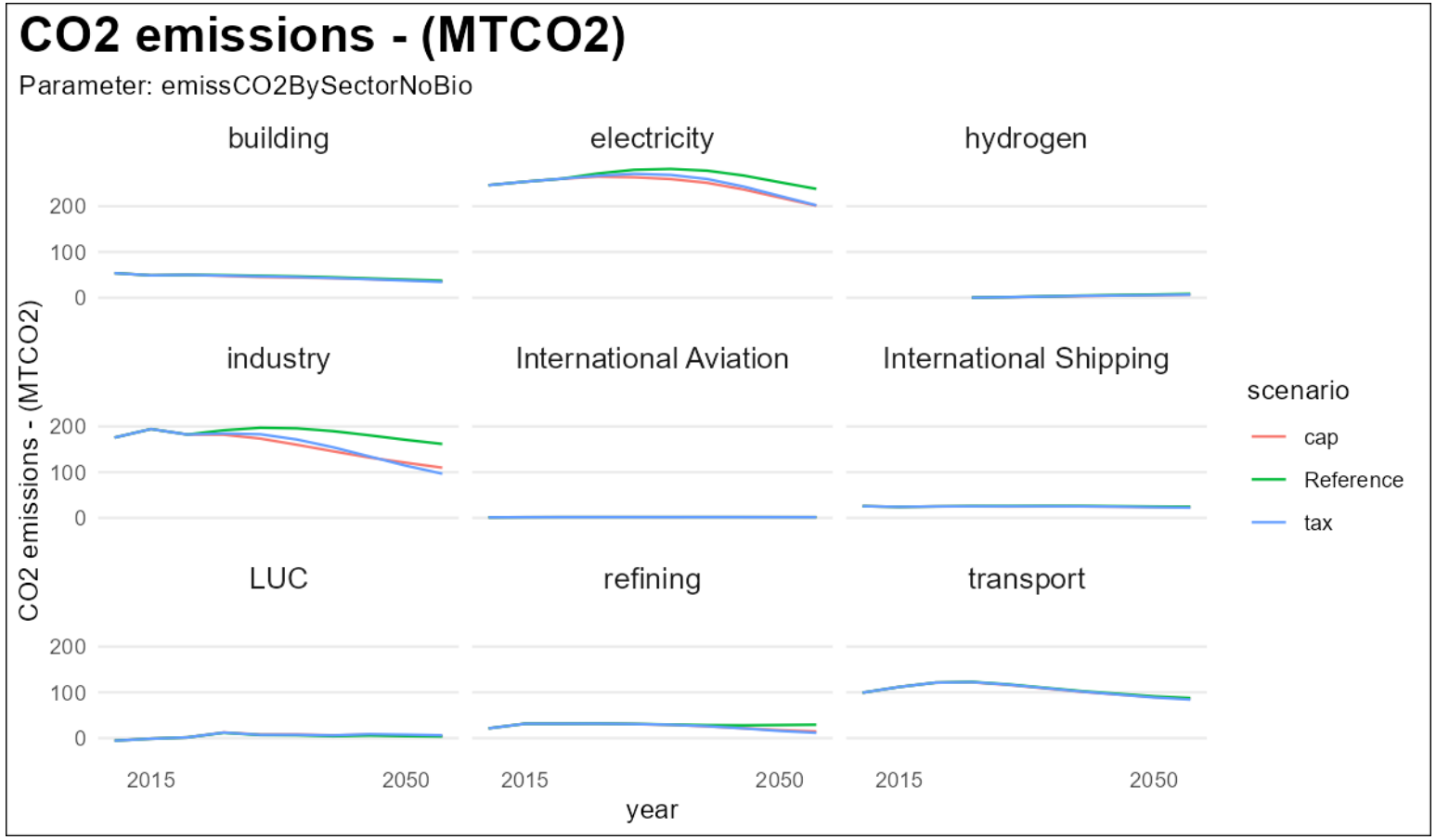
How is energy supply decarbonized?

Primary energy consumption from bioenergy and nuclear in cap and tax scenario increased.



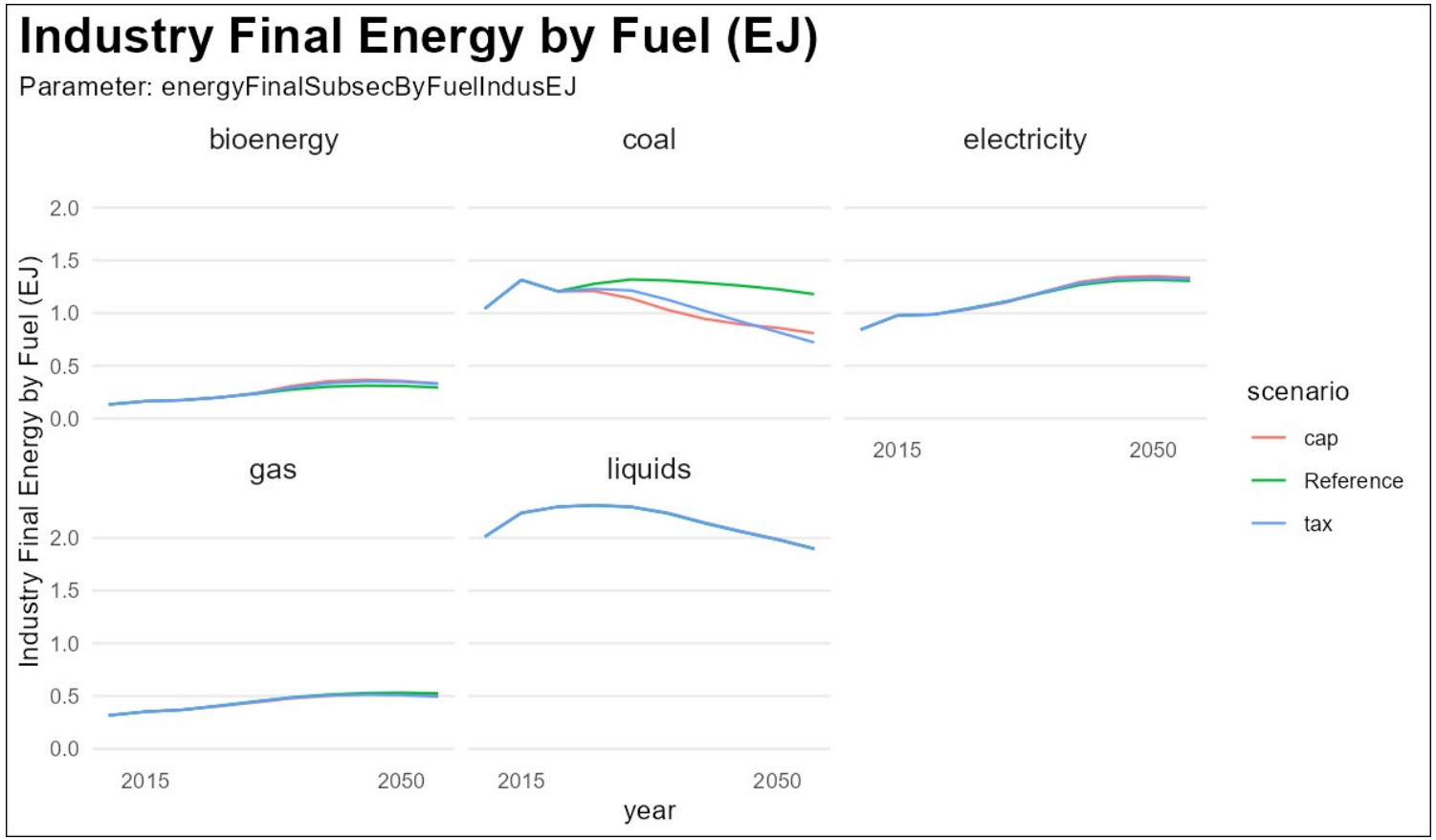
How are the end-use sectors decarbonized?

Major CO2 emission sectors like electricity and industry showed emission decline. But transport sector has no differences.



How does total energy consumption in each sector change?

Final energy consumption by coal declined.



Are the decarbonization strategies different between the two regions?

Comparison between South Korea and Japan. In tax scenario, Japan shows negative CO2 emission from hydrogen and refining. From what technology???