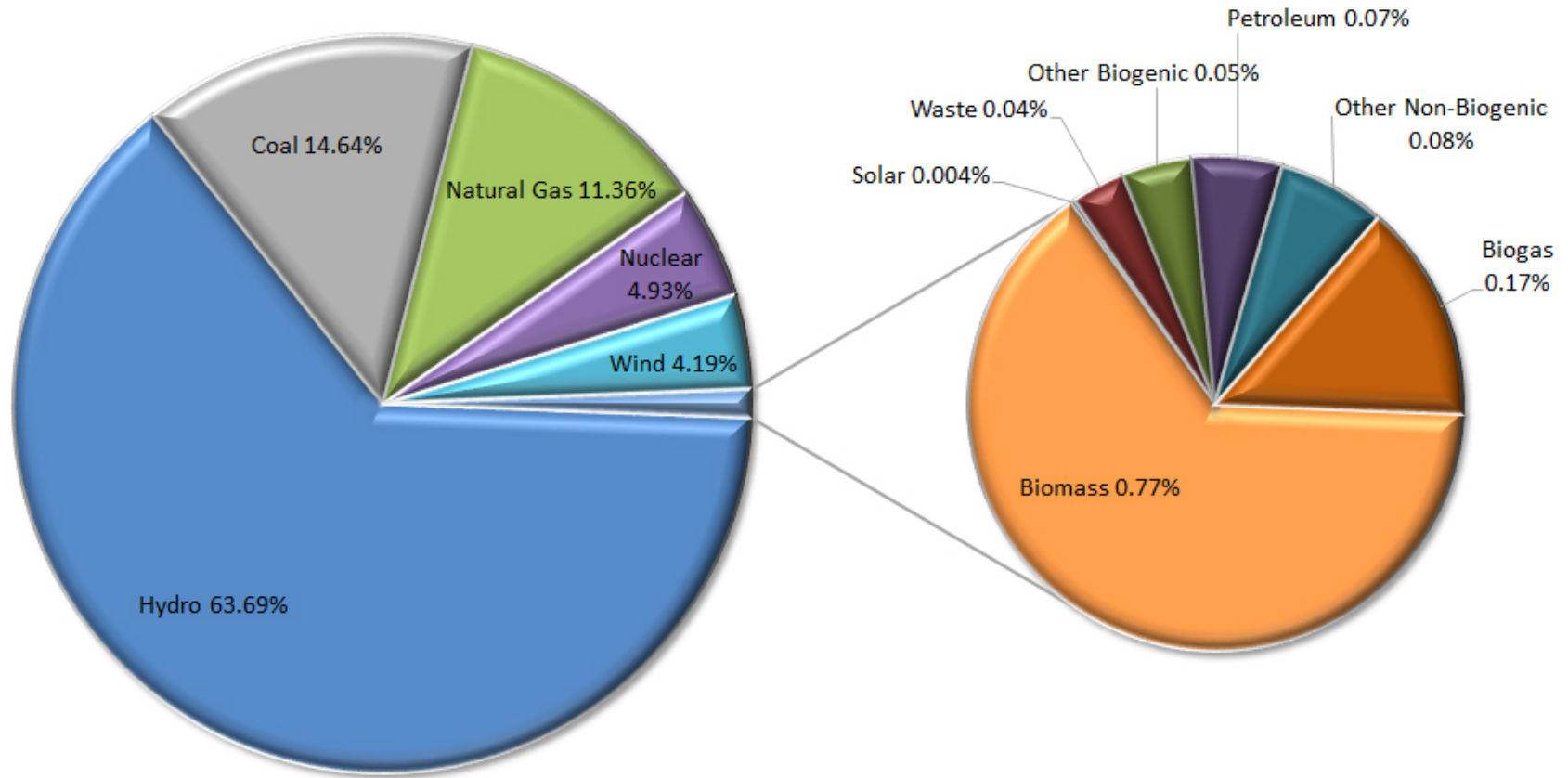


Average and Marginal Resources

- If you build a new building, what electric resources will be required to serve the load?
- What are the emissions resulting from the new building?
- “Average” considers emissions all of the existing generating resources
 - The building will be powered by new resources with the exact same emissions mix as the existing resources
- “Marginal” is the last purchased increment of capacity
 - Most studies point to the emissions of a specific generator
 - It could include a mix of resources, including conservation and demand response

For Discussion Only

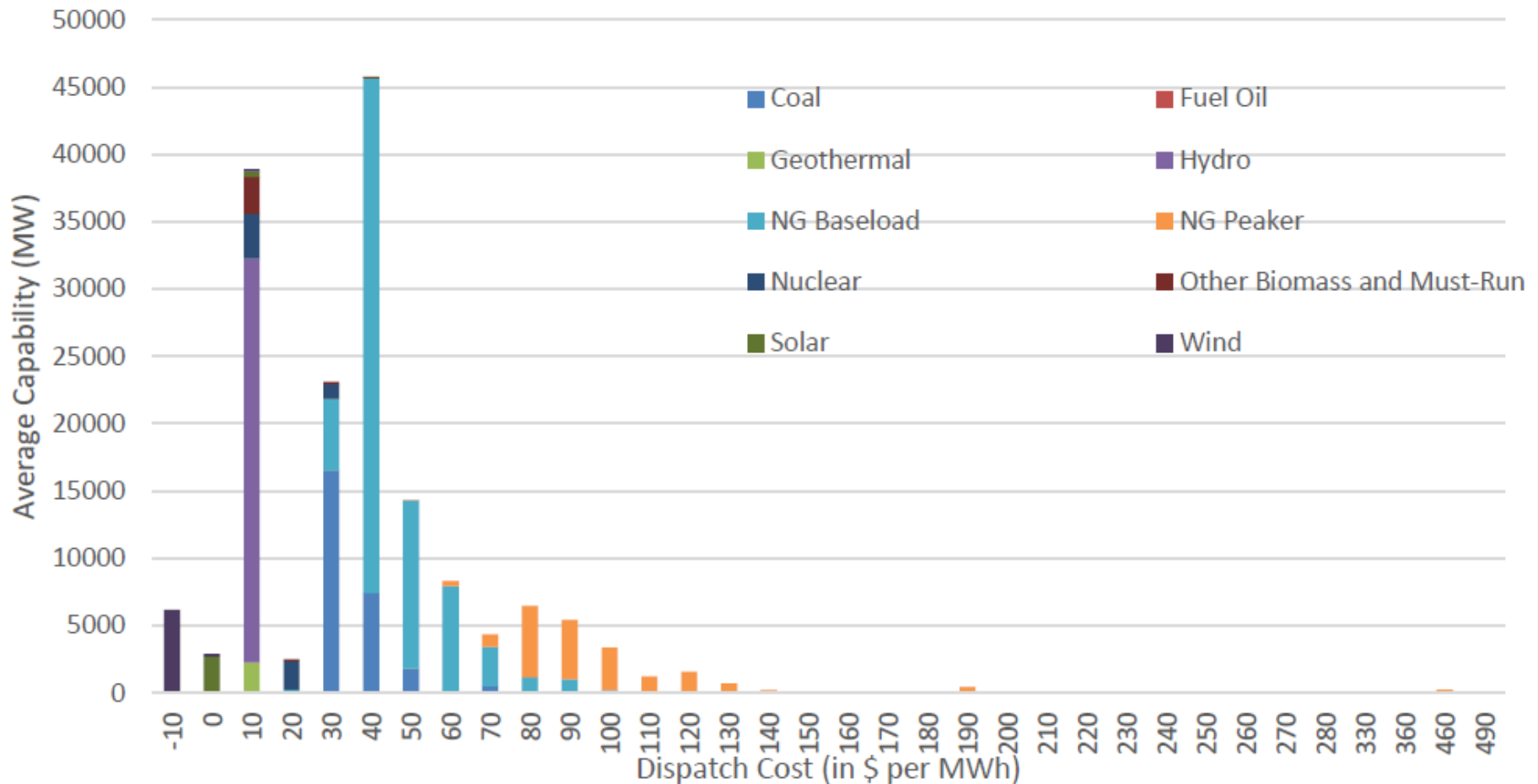
Washington State Electric Utilities Aggregate 2016 Fuel Mix (MWh)



= 0.46 lb. kWh (Average 2002-2016)

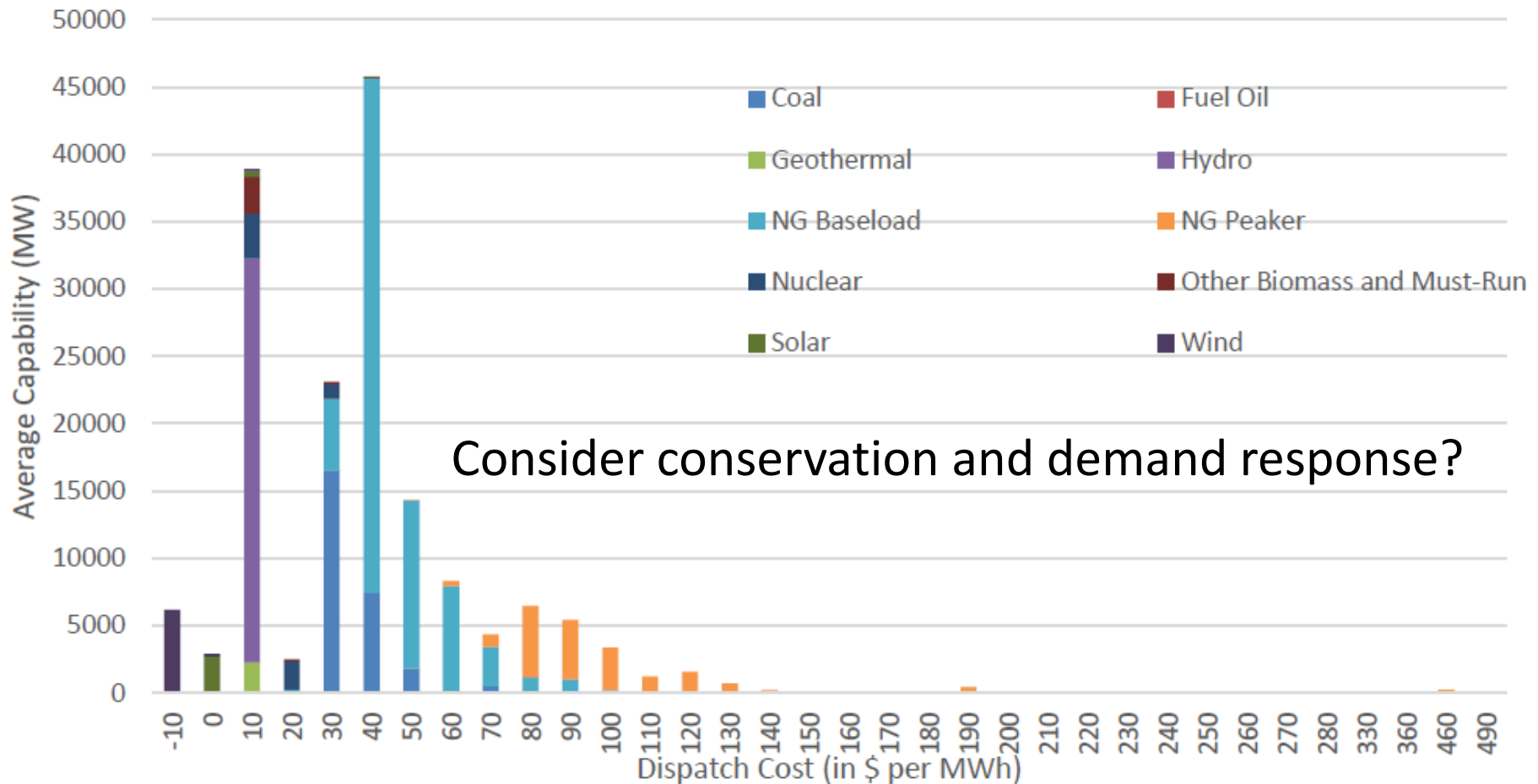
For Discussion Only

WECC Resource Portfolio - Good Hydro Conditions



For Discussion Only

WECC Resource Portfolio - Good Hydro Conditions



Range of Discussion (Electric)

As proposed 0.82 lb./kWh

- Based on a high efficiency CCT

Gary H. memo .91-.97 lb./kwh

- Based on NW Power Council study

Dave B. 0.55 lb./kwh

- Based on the 7th power plan. Assumes implementation of conservation as well as utilization of some gas plants.