Problem 4-13

Analyze the basic economics and show an I/O diagram for producing hydrogen from water, coal, and natural gas. What production mode should be utilized to obtain production rates of 3×10^7 and 1×10^8 kg/yr?

Cost data:	Electricity:	$ 0.05/kWh (Cost & Eval. Worksheet)
	H_2:	$ 0.67/kg (Kirk-Othmer)
	O_2:	$ 0.04/kg (Kirk-Othmer)
	Bituminous Coal:	$ 0.0675/kg (eia.gov, 2023)
	Anthracite Coal:	$ 0.1180/kg (eia.gov, 2023)
	Generic Coal:	$ 0.055/kg (Cost & Eval. worksheet)
	Steam:	$ 0.008/kg (Cost & Eval. Worksheet)
	Natural gas:	$ 1.214/kg (Henry Hub Spot, 22 November 2023)
	Natural Gas:	$ 1.289/kg (Cost & Eval. Worksheet)