Electrical Engineering
IIT Bombay, Powai
Mumbai-400076
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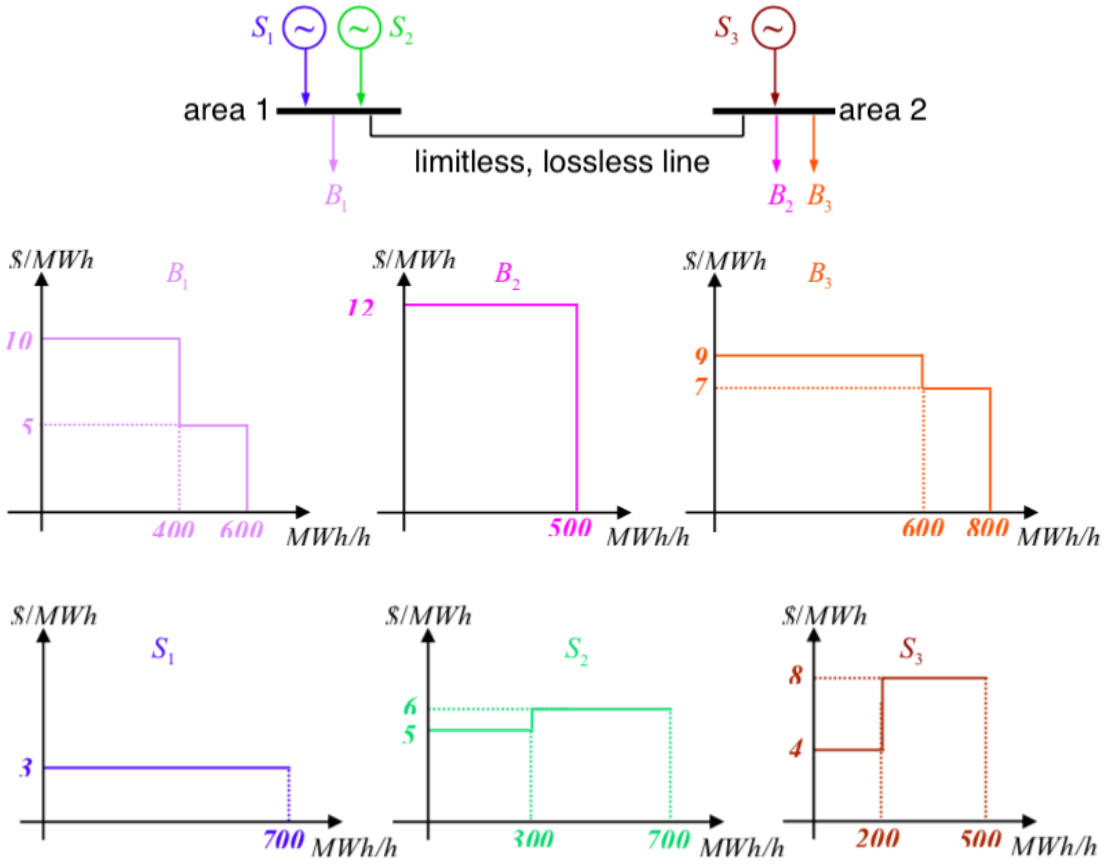
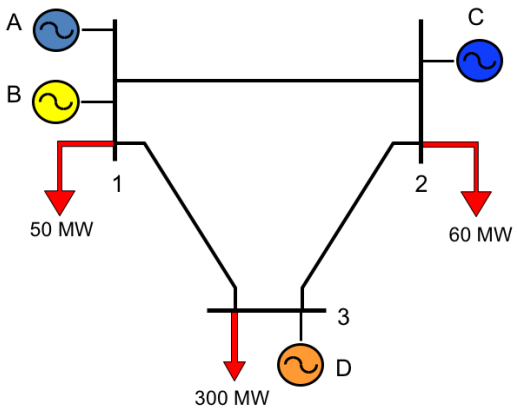
EE 722, Spring 2025
Group Assignment 1
Total Points = 10
Due: March 17

1. (5 points) Write a code to determine the outcomes of a market clearing problem (social welfare max or cost min as applicable) which explicitly mentions which players (buyers/sellers) are cleared and how much do they transact (buy/sell). Explicitly mention how the data should be fed to the problem in terms of supply and demand bids, network information and other such things. The code should be "executable" if the data is in the specified format.

2. (5 points) Verify that the code works for the two problems covered in lecture notes for the sixteenth class. Problems are repeated here for reference.



Limit on flow is 800 MW in either direction.



Branch	Reactance [p.u.]	Capacity [MW]
1-2	0.2	126
1-3	0.2	250
2-3	0.1	130

Generator	Capacity [MW]	Marginal Cost [$/MWh]
A	140	7.5
B	285	6
C	90	14
D	85	10