

Problem 1 (70%)

Electricity is expensive in the South of Norway, but cheap in the North.

a) Why are electricity prices different in the South than the North? Discuss the potential role of transmission capacity and mark-ups in explaining the differences.

b) Imagine that policymakers decide to increase transmission capacity between the two regions. What will happen to prices of electricity in the South and the North?

c) What will happen to production and consumption of electricity in the South? What will happen to consumer welfare? To answer this and the following questions, you can assume that there are two goods (electricity and other) and use tools from the standard trade model.

d) What will happen to production and consumption of electricity in the North? What will happen to consumer welfare?

e) Some policymakers claim that increasing transmission capacity is a bad choice, because consumers in the North will be hurt. What would you say to them?

f) The new transmission capacity changed prices in the South and North, and as a consequence the business sector had to re-evaluate which new green electricity production projects are profitable. Discuss what would likely happen to investment in new green electricity production.

For all questions, you should apply theory and explain your reasoning using figures and/or math. You should explain the economic mechanisms and intuition.

Problem 2 (30%)

Some economists are concerned that market power is on the rise; e.g. that mark-ups and market concentration are increasing. Other economists claim that this is occurring because the costs of research and development is much

higher today compared to two or three decades ago. Analyze this claim in the context of a monopolistic competition model.

a) What happens to mark-ups, average costs and the number of firms in the industry when R&D costs are higher?

b) In the context of the model, is there anything policymakers can do to reduce market power?