

ECN 275/375 Environmental and natural resource economics

Exercise set 9

Exercise 9.1: Discrete price and uniform price procurement auctions

The table below shows the costs of the management contract (first row)

Costs of management contract	0	1	2	3	4	5	6	7	8
Uniform price auction bid	0	1	2	3	4	5	6	7	8
Discriminatory price auction bid small strategic bid adjustments	1	2	3	4	5	6	7	8	9
Discriminatory price auction bid large strategic bid adjustments	5	5	6	6	7	8	9	10	10

5 contracts are to be awarded in a procurement (reverse price) auction.

- (a) What is the contract price under a uniform procurement auction? Explain
- (b) Compare the costs to the regulator of a uniform price procurement auction and a discriminatory price auction with (i) small and (ii) large strategic bid adjustments.
- (c) Suppose you are the head of the Ministry of the Environment and you are asked what is the size of the rents (extra profits) given under (i) a uniform price auction, and (ii) a discriminatory price auction. What is your answer, and why?
- (d) Suppose that the bidder with costs = 3 adjusts his/her bid upward to 6.5 (the darker shaded column). What happens under the two auction formats?