

Contents

1	Introduction	1
2	Literature Review	7
2.1	Auctions in Electricity Markets	7
2.2	England and Wales: The Reference Market	9
2.3	The Supply-Function Approach	12
2.4	Literature Based on von der Fehr/Harbord (1993)	15
2.5	Related Literature on Auctions	18
3	Model	21
3.1	Assumptions	21
3.2	Definitions	27
3.3	Preliminaries	28
3.4	Example	32
4	Results	41
4.1	Demand Ranges	41
4.2	Costs and Efficiency	42
4.3	Discriminatory Auction	54
4.3.1	Case A: A Single Generator Serves the Demand	54
4.3.2	Case B: Both Generators Are Necessary	83
4.3.3	Case C: Full Market Capacity Utilization	106
4.4	Uniform-Price Auction	109
4.4.1	Case A: A Single Generator Serves the Demand	109
4.4.2	Case B: Both Generators Are Necessary	114
4.4.3	Case C: Full Market Capacity Utilization	154
4.5	Generalized Second-Price Auction	156
4.5.1	Case A: Competition	156
4.5.2	Case B: Full Market Capacity Utilization	181

4.6	Comparison	183
4.6.1	Case A: A Single Generator Serves the Demand	183
4.6.2	Case B: Both Generators Are Necessary	190
4.6.3	Case C: Full Market Capacity Utilization	202
5	Conclusion	205
	References	209
	Index	213

Auctions in the Electricity Market
Bidding when Production Capacity Is Constrained
Schöne, S.
2009, XVI, 218 p. 40 illus., Softcover
ISBN: 978-3-540-85364-0