

BB-BC for power systems

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Kucuktezcan and Genc (2015) consider optimization of power systems.

Questions

1. Explain the optimization problem. What other optimization problems concern power systems? Which methods have been used? Describe at least two – besides BB-BC – of these methods and explain how they have been applied. Based on the results from the literature, explain the advantages and shortcomings of these methods.
2. Implement the method described by Kucuktezcan and Genc (2015) for a simplified problem. Compare the results to those obtained by another, known method. Explain the results. What are the advantages and shortcomings of the methods based on your implementation?

References

Kucuktezcan, C. F. and Genc, V. I. (2015). Preventive and corrective control applications in power systems via big bang-big crunch optimization. *Electrical Power and Energy Systems*, 67:114–124.