Performance Analysis of MATLAB Solvers in the Case of a Quadratic Programming Generation Scheduling Optimization Problem

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Abstract : In the case of the proposed method, the problem is parallelized by considering multiple possible mode of operation profiles, which determine the range in which the generators operate in each period. For each of these profiles, the optimization is carried out independently, and the best resulting dispatch is chosen. For each such profile, the resulting problem is a quadratic programming (QP) problem with a potentially negative definite Q quadratic term, and constraints depending on the actual operation profile. In this paper we analyze the performance of available MATLAB optimization methods and solvers for the corresponding QP.