



A Hybrid Optimization Model for Biomass Trigeneration Plant Location The Case of the City of Petrinja, Croatia

Dominkovic, Dominik Franjo; Ćosić, Boris; Perkovic, Luka; Ban, Marko; Duić, Neven

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Poster Submissions

A Hybrid Optimization Model for Biomass Trigenation Plant Location: The Case of the City of Petrinja, Croatia

[Dominkovic, D. F.](#),

[Cosic, B.](#), University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture

[Perkovic, L.](#),

[Ban, M.](#),

[Duic, N.](#), University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture

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In this paper, optimization of the location of biomass trigeneration power plant was considered. The system combined biomass cogeneration power plant, absorbers and the seasonal pit thermal energy storage. Several factors influence merit of potential locations, which was shown in the different case studies for the City of Petrinja, Croatia. When the biomass availability, capacity of the power plant or the number of power plants changes the optimal location also change. Furthermore, economic assessment of choosing optimal and non-optimal location was performed. Case studies have shown that significant amount of yearly spending on fuel (biomass) can be avoided, if the optimal location has been chosen for the power plant location. Moreover, it was shown that while choosing the optimal location of the power plant, economic figures such as net present value (NPV) can be satisfying for the potential investor in the trigeneration power plant even in residential area.