POLUTION EMISSIONS OPTIMIZATION OF HYDRO-THERMAL SYSTEMS

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Abstract:

This paper examines the applicability of the Ritz method to the optimal environmental dispatching of hydro-thermal systems. The algorithm proposed is aimed to reduce the production of atmospheric emissions such as NO_x and SO_2 caused by the operation of fossil-fueled thermal generation. Such a reduction is achieved by including the emissions as a function in the objective of the dispatching problem. The technique may also be applied to the study of other types of emissions or to a combination of objectives. The generic minimization algorithm, which is not difficult to construct on the basis of the Ritz method, has certain advantages in comperison with the conventional methods.

Key Words:

Environmental Dispatch, NO_x and SO_2 control, Emission control, Ritz Method.