

## عنوان مقاله:

Design of a Power System Stabilizer for a Hydro-Power Based on a Nonlinear Sliding-mode Controller

## محل انتشار:

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## خلاصه مقاله:

The power plants commitment is an optimization problem for units in where the objective is to minimize the production costs and satisfy the specified power supply. In this paper, a two-stage optimization method is proposed to consider the uncertainties of the wind power plant associated with the storage of pump storage power plant. The estimation of the accurate size of output power of these power plants is more difficult due to the variable nature of wind power plants. The proposed methods optimize the network reliability to plan the partnership units using robust optimization. Provide a robust method for the circuit to put wind power with pumped storage of water in the power market. New renewable energies are increasingly coming to power system to maintain reliability in a certain way to boost confidence in renewable energy has caused challenges in the operation of the power system. One of these new energies wind energy is the fundamental problem is the wind energy is the energy of natural changes too in common with the power circuit manufacturers to put the basis of an optimization problem where the goal is to minimize cost of production units and satisfy the supply constraint is time. This paper proposes a two stage optimization method for taking into account the uncertainties of the wind power plant with storage of pumped storage power plant is provided. Because of the variable nature of wind power plants is more difficult to estimate the exact size of the output power as well. In the initial study of this paper, a six-bus network is assumed consisted of four fossil fuel generators, a wind generator and a generator of water storage pumps and this network includes 7 lines of presumed links. Then, the overall results will be simulated and studied in a six-bus network of one hundred and eighteen, and one hundred and eighty-six of connection lines and thirty-three heating plants by adding a wind generator and a water storage pump generator.

## کلمات کلیدی:

participation of units- robust optimization- Planning - Hydroelectric power unit objective function

## لینک ثابت مقاله در پایگاه سیویلیکا:

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