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خلاصه مقاله:

Demand Dispatch (DD), as a complementary approach to Supply Dispatch (SD), is an effective operation concept for today power systems which are moving toward renewable distributed resources and Smart Grids (SGs). DD is based on the strategy of load following generation as opposed to conventional operation method, SD. In other words, DD is greatly compatible with variable distributed generations since adjusts candidate dispatchable loads according to the existing profile of produced power. On the other hand, SD is more matched with undispatchable loads and centralized power plants. Employing DD optimizes utilization of available demand side assets, which is called Asset Optimization (AO). DD is a new and emerging subject which has been focused recently in both academic and practical research due to growing of SGs. This paper is going to implement DD on a wind case study in Khorasan Province. A priority algorithm is employed by the aggregator to daily schedule residential dispatchable loads based on the available wind power. In this way, wind power resources could highly penetrate into the power grid without putting a burden on the other conventional generations. The other important results of this approach are the maximum usage of the wind power and load commitment into the grid operation

کلمات کلیدی:

demand dispatch; smart grid; wind power following; asset optimization; dispatchable loads