

The potential of micro grids concept implementation in the Republic of Moldova

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Abstract—The paper draws attention on the issue of national power system modernization from inside, as a component part included in the multiple set of challenges standing before energy sector development in context of identification of the most feasible projects aimed to offer solutions to overcome problems of Moldova energy sector. When the country lack both own primary energy resources and generation capacity, being imposed to import its, and requiring for this more diversified network, having at the same time obsolete power system from the technical point of view, and not only, which was designed and constructed in the years of `60-70 of the past century, the modernization and refurbishment measures need to be implemented. To reach a high level of energy security, a serious intervention should be done in each segment of the energy chain: generation, transmission, distribution, storage, supply and consumption. The advantage of implementation of intelligent micro grids (MG) innovational concept at the level of distribution and low voltage network for consumers energy supply have been proved worldwide. In order to initiate measures of such nature, present paper emphasizes real conditions and background in the Republic of Moldova. But the decision of construction of the energy MG, like any other engineering projects depends on the results of multicriterial analysis and of the competition of pros and cons in the exercise of compromise.

Keywords—power system; modernization; analysis; microgrid.

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