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## Possibility to Increase the Wind Power Penetration Limit in Mongolian Central Power System

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**Abstract** Mongolia has abundant resources of renewable energy. Also Mongolia has renewable energy law that favors foreign investors. Therefore, large-scale solar and wind power plants have been built in recent years. On the other hand, electrical system provides the electric energy with high quality, reliability, and efficiency to the consumer. If the large scale wind farm is connected to electrical system, the system reliability and power quality can be decreased due to uncertainty and variability in the characteristic nature of wind. Therefore, the power system has limitation of accepting wind power penetration limit (WPPL) and when the production of wind power plant exceeds, system operators may be reject supplied power of wind power plant. First the evaluation of wind power penetration limit of the central power system was defined in 2012. This rate was around 18 percent at that time. An analysis of possibility way to increase the wind power penetration limit in Mongolian central power system is presented in this paper.

### Keyword(s)

Wind power penetration limit, Wind energy, System reliability, Power quality, Electrical system

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