عنوان فارسی مقاله:
پشتیبانی ولتاژ در سیستم های توزیع صنعتی در حضور توربین های بادی مبتنی بر زنراتور الکاپی و موتورهای بزرگ

عنوان انگلیسی مقاله:
Voltage support in industrial distribution systems in presence of induction generator-based wind turbines and large motors
6. Conclusions

This paper has analyzed the impact of large induction motors on the dynamic performance of distribution networks in the presence of a wind farm. The study is restricted to wind farms with small installed capacity compared to the local industrial plants. The results show that the technology of the wind generators and the applied control scheme have a significant influence on system stability and on the voltage recovery time.

It has been seen that even a critical wind farm technology, using squirrel cage induction generator, with the appropriate reactive power resource can improve the voltage at the power system during the starting of large motors. It has also been verified that DFIGs controlling motor terminal voltage and injecting reactive power through the grid side converter can improve system stability during the connection of large induction motors.

During grid faults, the operation of large induction motors can affect the voltage shape differently from the conventional rectangular sag phenomenon. In such events, the DFIGs terminal voltage control can be used to provide the required reactive power by the motors reacceleration period, helping the voltage recovery. Although this control mode is not yet available in modern wind turbines, it could be easily set using the actual resources available in a typical DFIG. Such control could be very useful for weak power systems.

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Tوجه!

این فایل تنها قسمتی از ترجمه میباشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انجیلی مقاله، اینجا کلیک کنید.

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