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Impact of the Energy Transition on Security of Supply - A Case Study of Vietnam Power System in 2030

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Abstract : Along with the global ongoing energy transition, Vietnam has indicated a strong commitment in the last COP events on the zero-carbon emission target. However, it is a real challenge for the nation to replace fossil-fired power plants by a significant amount of renewable energy sources (RES) while maintaining security of supply. The unpredictability and variability of RES would cause technical issues for supply-demand balancing, network congestions, system balancing, among others. It is crucial to take these into account while planning the future grid infrastructure. This study will address both generation and transmission adequacy and reveal a comprehensive analysis about the impact of ongoing energy transition on the development of Vietnam power system in 2030. This will provide insight for creating an secure, stable, and affordable pathway for the country in upcoming years.

Keywords : generation adequacy, transmission adequacy, security of supply, energy transition
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