

Smart Grids: Enhancing a Nuclear-Renewables Future

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Abstract

Many recent studies of future power supply scenarios for Europe 2020+ describe a significantly changed generation mix to meet climate change challenges. In general European forecasts show a renaissance in Nuclear power together with very significant additions of Wind and Solar generation.

The effects of these additions result in a need for reliable back-up sources to mitigate the renewables intermittency. Most forecasts show the existing or planned gas and coal assets will provide this cover however with in a much more cyclical operation and with much greater market price volatility.

Smart Grids can be a significant technology for mitigating this increased volatility and associated cost. This paper examines how smart grids could achieve this goal.