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【31】 The Future of the Electrical Energy System: from Rotating Masses to Power Electronic

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The electrical energy system is in a transition from traditional resources such as nuclear power, hydropower or coal-fired power plants to new resources such as PV and wind. Hence, synchronous machines which give the system a natural inertia are replaced by inverter connected resources. This raises various new challenges that go beyond the variability of the available energy. For example, the system inertia is reduced which leads to faster system dynamics. This presentation will show how the future electrical energy system in Switzerland could look like and the challenges that need to be solved to realize such a system and what role new control approaches can play.

Author: Prof. HUG, Gabriela (ETH Zürich)

Presenter: Prof. HUG, Gabriela (ETH Zürich)

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