Flexibility from Bioenergy

The role of bioenergy in balancing the electricity grid and providing storage options

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Presentation Summary:
The role of wind and solar in electricity production will increase more rapidly compared to other renewable sources. The energy market transformation from an energy optimized to capacity-optimized system is expected when the share of intermittent or uncontrollable electricity becomes large enough. Bioenergy, in its various forms, can eventually contribute to balancing the electricity grid as an effective, low carbon and low cost grid management and energy storage option. Seasonality, i.e. energy demand fluctuations in the winter and summer seasons, is one of the key challenges for future smart energy system management, which will have various consequences for optimization in various parts of Europe and globally. This represents a clear synergy in seasonal balancing between photovoltaics and biomass, especially in connection to biomass CHP.

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