

The role of bioenergy during the energy system transformation – whose demand should be satisfied by bioenergy?

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The transformation of the energy system - and especially the electricity system - into a renewables based system implies changes in the functions to be fulfilled by the different system components. The planned progressive decommissioning of fossil or nuclear based power plants implies that renewables' based power plants need to take over these functions. This contribution examines the role that could be taken over by bioenergy plants during the different phases of the energy system transformation. At first, it seems to be necessary to distinguish different phases of the transformation with different types of demand from a systemic point of view. This presentation presents the thesis that it currently seems to be more urgent that bioenergy covers necessary ancillary services for the electricity network and the system stability. This can be done by bioenergy with simultaneously covering the electricity and heat demand through cogeneration. Only in a latter stage of the transformation, it seems to be necessary to operate in a mainly demand-oriented mode. This evolution needs to be accompanied and directed with corresponding regulatory or market rules who are to be sketched out in the second part of this presentation.