Deutsches Biomasseforschungszentrum

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Press release

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Position paper: DBFZ experts see no advantages for converting coal-fired power plants to biomass

With the move away from fossil fuels, operators of coal-fired power plants are looking for new business models. In particular, the use of biomass is being discussed. In a position paper now published by the DBFZ, the possible use of biomass in coal-fired power plants is examined with regard to the benefits for the energy system, the availability of suitable biomass potential and sustainability effects. The experts' conclusion: Not least because of the risks to the climate and biodiversity, no state support for the conversion of coal-fired power plants should be provided.

With a share of more than 50% of renewable energy production, bioenergy makes a significant contribution to the energy transition. In the course of the expansion of other renewable energies, this contribution will in future be increasingly limited to closing gaps in the energy system. In the electricity and heat sector, this means above all flexible energy provision through biomass. With the coal phaseout, this role is gaining in importance, as the share of volatile renewables in electricity and heat supply is increasing with the shutdown of coal-fired power plants. In addition, there is increasing discussion about whether coal-fired power plants should continue to be operated with low emissions using biomass. Countries such as Great Britain and Denmark, where several former coal-fired power plants have already been converted to burn biomass, serve as models here.

In their position paper "Conversion of coal-fired power plants to biomass", which has now been published, the DBFZ scientists point out that the use of biomass for energy is comparatively costintensive and limited in terms of potential, and should only be carried out in compliance with strict sustainability criteria. Against this backdrop, the DBFZ experts point out that there is no evidence for the economic advantages of coal-fired power plants converted to biomass. Furthermore, they emphasise that sustainable national biomass potentials are largely in use, which is why additional demand from coal-fired power plants would likely lead to increasing imports and/or domestic competition for existing uses. A sharp increase in demand for forest biomass would also jeopardise the achievement of existing climate and biodiversity targets, the scientists say. Should the conversion nevertheless be supported by the state, it must be linked to strict criteria in order to minimise economic and ecological risks. "In order to ensure efficient biomass use, effective heat utilisation and flexible operation should be a prerequisite. In addition, precautions should be taken to limit the energetic use of biomass that can be used for material purposes, and to adjust it if economically and ecologically critical threshold values are exceeded," says the co-author of the position paper, Dr. Harry Schindler of the DBFZ.

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Download: The position paper "Conversion of coal-fired power plants to biomass" is available free of charge as a download at www.dbfz.de/en/press-media-library/more-publishments/statements-studies



DBFZ experts do not see any energy-economic advantages for converting coal-fired power plants to biomass (© Photo-Rabe / Pixabay)

Smart Bioenergy – innovations for a sustainable future

The DBFZ works as a central and independent thinker in the field of energy and material use of biomass on the question of how the limited available biomass resources can contribute to the existing and future energy system with sustainability and high efficiency. As part of the research the DBFZ identifies, develops, accompanies, evaluates and demonstrates the most promising fields of application for bioenergy and the especially positively outstanding examples together with partners from research, industry and public. With the scientific work of the DBFZ, the knowledge of the possibilities and limitations of energy and integrated material use of renewable raw materials in a biobased economy as a whole should be expanded and the outstanding position of the industrial location Germany in this sector permanently secured – www.dbfz.de/en.

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