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GERMAN ENERGY POLICY FOR COMPETITIVENESS AND SUSTAINABILITY – CHALLENGES AND OPPORTUNITIES

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Overview

German energy policy is crucial. It is so important not only because of the political restructuring process in Germany but especially because the German electricity production sector faces the challenge of replacing old power plants and because the gas sector needs competition. In order to achieve long-term sustainable development, a policy instrument mix that focuses on long-term goals is crucial. German energy policy must increase competition between energy companies but also aims to give substantial incentives for secure and environment-friendly energy production. To reach these goals, concrete emissions reduction targets and promotion of renewable energy are necessary. Extending the lifetime of nuclear power plants could provide the necessary time to make innovative and climate-friendly technologies competitive.

Methods

The energy sector needs concrete incentives and investment security from policy directions. In particular, concrete and severe emissions reduction targets are necessary not only to protect the climate but primarily because utilities decide today about the power plant structure of tomorrow. The future energy mix needs to be based on secure, environment-friendly and cost-efficient technologies. Within the next three decades, the technology mix for electricity production will be based on a substantial amount of fossil-fuel energy, especially gas and coal. However, coal technology needs to be made environment-friendly by CCS. Extending the lifetime of nuclear power plants could give the necessary time to develop both clean coal and renewable energy technologies.

The gas market is challenged to increase competition in Europe. As Russia is the main supplier for the European gas market, a non-diversification strategy would increase both political and market risks. Strategic behavior can raise uncertainties. However, the further extension of a world gas market, especially through the liquefaction of gas (LNG), will intensify competition. In Germany, incomplete competition between domestic suppliers has led to long-term contracts between national and local gas companies which hinder new companies entering the market. High third-party access fees restrict competition and increase gas prices. Furthermore, the gas price is still linked to the oil price. With increasing oil prices, gas prices rose drastically in 2005. As soon as the gas market is faced with more and sufficient competition, the linkage between oil and gas prices needs to be removed. With the new regulation authority in Germany, gas companies also have to publish their cost calculations. German energy policy needs to force more competition between national gas companies and to abolish the link between oil and gas prices.

Results

The energy policy that affects the electricity sector is challenged to meet three very important targets: competitiveness, climate protection and energy security. As future energy policy substantially determines the sustainability of the energy system, current political decisions are crucial. With increasing energy prices, the competitiveness of the energy system is also highly relevant.

In order to prevent dangerous climate change, emissions reduction needs to be much higher. As the European Kyoto emissions reduction target of 8 percent will most likely not be met, future negotiation will crucially depend on whether or not countries with large emissions, such as the USA and China, can be convinced to join a climate protection coalition. If the EU agreed to a severe emissions reduction target of 30 percent compared with the 1990 level, Germany would have to commit to an emissions reduction target of 40 percent. However, as climate policy is a global challenge, other world nations also need to implement drastic emissions reductions. Concrete emissions reduction targets in Germany would bring investment security to utilities. A high emissions certificate price would make both CCS technology and renewable energy competitive.

The future of the European gas market will be determined more and more by competition, if the intended measures are sufficient. German gas prices may only be de-coupled from oil price developments once the German gas market is liquid enough to provide the necessary incentives to suppliers to sell gas below a price determined by or linked to that of oil. High oil prices would encourage such a move, provided gas can be procured and the necessary regulatory framework allows efficient market entry.

Conclusion

German energy policy must achieve competition – in both the electricity and gas sectors. Increased competition will reduce electricity and gas prices. With increased competition within the gas sector, the oil-gas price link can be abolished. Germany can and must pursue a sustainable energy policy strategy characterized primarily by concrete promotion of renewable energy technologies. With such concrete promotion, Germany can increase its market share and become a world market leader. In order to provide time to make both CCS technology and renewable technologies competitive, it is important to extend the lifetime of nuclear power plants.

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