

# Energy Supply Structures in Europe Have to Grow Together

Comment of the Helmholtz Energy Research Centers on the Discussion of Energy Policy

Representatives of the eight energy research centers of the Helmholtz Association commented on the discussion of energy policy in Germany and declared their willingness to constructively support the upcoming transformation process. The Helmholtz Association conducts about half of publicly funded energy research in Germany and possesses comprehensive expertise in research relating to renewable energies, energy-efficient technologies, nuclear safety, systems analysis, and technology assessment.

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With its energy concept of September 2010, the Federal Government defined clear objectives for sustainable and reliable energy supply in the future. After the reactor accident at Fukushima, the requirements made in this energy concept have turned out to be “robust” in principle. However, the energy policy landscape has changed considerably. Risk assessment of the use of nuclear energy and of all other energy technologies has to be reconsidered. Adaptations of the energy concept are required, because shorter operation times of nuclear power plants will result in considerable challenges for politics, industry, and science.

## Clear Targets

An integrated approach and a clear definition of target priorities are needed in terms of security of supply, global resources availability, environmental and climate protection, technical risks, economic efficiency, and securing of industrial locations. Occasional shifting of priorities or even playing off these factors against each other will prevent reasonable long-term planning.

## Thinking in a Technology-neutral Manner

In everyday politics, decisions on electricity, heat, and fuel supply are often made separately. However, it is aimed at linking application and generation technologies more closely and at creating new national supply structures for the generation, transportation, and storage of a mix of energies.

### **European Approach**

All types of energy, in particular electricity supply, have to be designed not only on the national, but also on the European level. Planning and operation of renewable, fossil, and nuclear electricity production as well as of grids and stores require Europe-wide coordination (e.g. for an efficient use of hydropower in Scandinavia and the Alps or border-crossing electricity exchange).

### **Recommendation**

The population has realized that sustainable energy supply is an issue, whose social and economic importance is equivalent to that of health, education, and social security. This implies a big chance for a high degree of support of the upcoming transformation process. Now, a consistent discussion of new solution paths and their consequences is required. Energy research and the planned extensive monitoring of the transformation process and in particular of the degree of reaching the target will play an important role in the establishment of new infrastructures as a technical prerequisite for an opt-out from nuclear energy and for climate-, environmentally, and resources-compatible, safe, and affordable energy supply.

The eight energy research centers of the Helmholtz Association are experienced actors and partners in this transformation process covering all major research areas of renewable, fossil, and nuclear energies as well as systems analysis and technology assessment. The Helmholtz Association is ready to successfully design and accompany a new energy future by research, education, and counseling of politics.

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Eberhard Umbach, Vice President of the Helmholtz Association,  
research field coordinator Energy

German Aerospace Center (DLR), Forschungszentrum Jülich, Helmholtz Centre Potsdam – German Research Centre for Geosciences (GFZ), Helmholtz-Zentrum Berlin für Materialien und Energie (HZB), Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Max Planck Institute for Plasma Physics (IPP), Karlsruhe Institute of Technology (KIT), and Helmholtz Centre for Environmental Research (UFZ).

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