

Project Information

Subject: Cost-Effective Strategies for the Implementation of a Hydrogen Infrastructure in North Rhine-Westphalia

Applicant: Wuppertal Institute for Climate, Environment and Energy

Project Duration: 05/2007 - 02/2008

Project Partners: Forschungszentrum Jülich GmbH, Fuel Cells (IEF-3)

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Project description / Status of work: As there already is a bulk of industrial production and usage of hydrogen, it makes sense to utilise existing hydrogen-related infrastructures for an emerging energetic demand. This allows to exploit synergies and to keep infrastructure costs low during the early phase of implementation.

The Rhine-Ruhr Area in North Rhine-Westphalia is an urban agglomeration where energetic use of hydrogen might be fruitfully demonstrated. Moreover, industries located in North Rhine-Westphalia already produce and consume hydrogen and have put in place a substantial infrastructure for this.

The Wuppertal Institute was commissioned to search for cost-effective strategies for the implementation of a hydrogen infrastructure in North Rhine-Westphalia (NRW). The main tasks are:

to determine time-related requirements of hydrogen in new fields of demand

specification of the special initial position in North Rhine-Westphalia regarding the availability of industrial sources

the distribution of hydrogen into NRW paths

quantitative description of options to establish hydrogen infrastructures with regard to the special basic position of NRW

Finally, all results of the analysis will be summarised with regard to the discussion and assessment of a cost optimised NRW-strategy and the integration into the national and European discussion.