



Manfred Fishedick

Prof. Dr.-Ing.

Vice President and member of the Wuppertal Institute's management as Authorised Representative

Director of Research Group 1: Future Energy and Mobility Structures

Professor at Schumpeter School of Business and Economics at the University of Wuppertal

Short overview

Prof. Dr. Ing. Manfred Fishedick is the director of the Research Group 1 “Future Energy and Mobility Structures” (including more than 50 scientists from different disciplines incl. PhD students). In 2006 he was appointed Vice President of the Wuppertal Institute. From February 2008 to February 2010 he was the Acting Scientific Head of the Wuppertal Institute. Since March 2010 he is member of the Wuppertal Institute's management as Authorised Representative. In November 2008 he was, furthermore, appointed Professor at the Schumpeter School of Business and Economics at the University of Wuppertal.

Prof. Dr.-Ing. Manfred Fishedick studied chemical technology with the main focus on energy and environmental technologies at the University of Dortmund. He earned a PhD at the University of Stuttgart (integration of renewable energies into the existing power plant system).

Manfred Fishedick has more than 20 years of experience in energy system analysis, he is adviser to the EU and the German government as well as the Bundesland North Rhine-Westphalia, author of various publications and peer reviewed articles. Manfred Fishedick is coordinating lead author for the IPCC 5th Assessment Report, member of several scientific boards and amongst other things he gives lectures in the field of energy and environmental science at the Universities of Wuppertal and Kassel.

The Wuppertal Institute and Prof. Dr.-Ing. Fishedick follow a transformative scientific approach. Research is not only considered to gain a better understanding of the system behavior (including socio-economic and socio-technical interactions), but to proactively support the implementation of transformation processes, particularly - but not only - focusing on transformation processes in cities. Prof. Dr.-Ing. Fishedick is intensively working in the context of sustainable urban infrastructures. His project experience comprises among others the development of long term concepts for the German cities of Munich and Dusseldorf and the Chinese city of Wuxi. For the Innovation City Ruhr (pursuing an emission reduction by 50% between 2010 and 2020) he is heading the scientific accompaniment process.

From the very beginning, energy efficiency has been one of the main research fields of the Wuppertal Institute. Consequently, based on the energy service idea, energy efficiency potential analyses have been conducted and structures have been analyzed in order to stimulate the energy service market and to set incentives for energy service companies. Research work has been done at national level, for the EU as well as for utilities. Currently, the Wuppertal Institute is building up a knowledge platform at international level enabling an experience exchange and transfer of good practices (e.g. in the BigEE project: bridging the information gap to energy efficiency).

(Selected) Working fields

- Energy systems and energy scenario analysis
- Greenhouse Gas Mitigation Strategies (including low carbon industries, low carbon cities)
- Renewable energies and innovative energy technologies (system integration aspects)
- National and international energy and climate policy
- Market development of new technologies
- Infrastructure analysis
- Research and technology policy
- Technology assessment and forecasting
- Green Entrepreneurship
- Sustainable urban infrastructures

Project experience

From 1993 to 2014 he coordinated more than 75 national and international studies commissioned by the EU, the German government, several NRW ministries as well as by energy utilities and several industrial companies. His main working field is the investigation of energy transformation pathways where he follows a holistic perspective including the discussion of technological as well as socio-economic challenges. In the context of renewable energies he intensively studied system integration aspects and market penetration options. Moreover he worked on innovation processes and aspects with regard to new energy technologies. This includes the development of specific methods like technology forecasting and multi-criteria assessment tools being able to address future R&D needs as well as future business (entrepreneurial) opportunities.

A further industry related business field is the investigation of low carbon technologies and the analysis of sector specific transition pathways. In recent years sustainable urban infrastructure analysis have become a focus of his scientific research. Here he is engaged not only in concept studies, but also in accompanying real urban transition process on national level (e.g. Innovation City Bottrop) and international level (e.g. in China and South Korea)

Selected memberships

- Coordinating Lead Author of the IPCC 5th Assessment Report (responsible for Industry)
- Member of "The Seoul International Scientific Advisory Council (SIEAC)"
- Chair of the Virtual Scientific Institute "Non-Technical Aspects of the Energiewende in North Rhine-Westphalia"
- Member of Executive Board Clean Tech NRW (co-chair)
- Chair of the Scientific Advisory Council "Innovation City Ruhr"
- Member of the Directory Board Research Association Renewable Energy (FVEE)
- Member of the Science and Technology Advisory Board Desertec University Network
- Member of the Advisory Board Urban Planning of the city of Munich
- Member of the Coordination Committee "Climate Plan in North Rhine-Westphalia"
- Member of the Expert Panel European Green Capital Award
- Member of the Steering Committee of the Competence Network "Kraftwerkstechnik" (Power Plant Technology) of the government of the Land North Rhine-Westphalia
- Chair of the competition "Innovation City Ruhr"
- Member of the Advisory Board of the German Biomass Centrum (co-chair)
- Member of the Scientific Advisory Board EON-RWTH Aachen Research Center
- Member of the Scientific Advisory Board Energiewirtschaftliches Institut (EWI) University Cologne
- Member of the ACATECH-BMBF-Initiative "Energy system of the future"
- Member of the Scientific Board „Renewable Energy“ (peer-reviewed Journal)

- Member of the Advisory Board “Energy and Climate” of the capital of North Rhine- Westphalia Düsseldorf

Selected former activities

- Coordinating Lead Author of the IPCC Special Report Renewable Energies (responsible for Mitigation potential and costs) (2009 - 2011)
- Member of the Enquête Commission "The effects of long-term increasing prices for oil and gas on economy and consumers in North Rhine-Westphalia", installed by the State Parliament of North Rhine-Westphalia (2006 – 2009)
- Advisory board of the Immission panel of the German Bundesland Brandenburg (2005 – 2008)
- Delegation of the Federal Government „Renewables 2004“
- Roster of Experts of the STAP/Global Environmental Facility
- Scientific Committee „International German Hydrogen Conference“ in 2006 and 2008
- International Steering Committee „World Renewable Energy Congress 2008“

Academic Work (university lecturer)

Ongoing activities:

- University of Wuppertal, Schumpeter School of Business and Economics „Dynamic development of markets“ (since winter term 2007/08)
- University of Koblenz-Landau „European Energy Policy“ (since summer term 2005)

Former activities:

- University of Kassel, Master program Renewable Energies "Energy Economy“ (2006 to 2010)
- University of Hagen, Master program INFERNUM “System analysis” (2004)
- Witten/Herdecke University “Ökologisches Wirtschaften” (Ecological Management) (1996)
- University of Applied Sciences Wiesbaden “Energie und Umwelt” (Energy and Environment) (1997 to 2002)

Book Publications

Frey, A., Jäger, T., Messner, D., Fishedick, M., Hartmann-Wendels, T., Globalisierungsgestaltung und internationale Abkommen, Springer Verlag, Wiesbaden, 2014

Fishedick, M., Hennicke, P.: Erneuerbare Energien, Beck Verlag, München, 2007

Krewitt, W., Pehnt, M. Fishedick, M., Temming, H. (Hrsg.) (2004): Brennstoffzellen in der Kraft-Wärme-Kopplung – Ökobilanzen, Szenarien, Marktpotenziale. Erich Schmidt Verlag, Berlin, 2004

Fishedick, M., Nitsch, J., Langniß, O.: Nach dem Ausstieg: Zukunftskurs Erneuerbare Energien, Hirzel Verlag, Stuttgart, 2000

Fishedick, M.: Erneuerbare Energien und Blockheizkraftwerke im Kraftwerksverbund - Technische Effekte, Kosten, Emissionen, Dissertation, Universität Stuttgart, Stuttgart, 1996

Fishedick, M.; Kaltschmitt, M.: Wind- und Solarstrom im Kraftwerksverbund - Möglichkeiten und Grenzen, C. F. Müller Verlag, Karlsruhe, 1995

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