

Jorgen Boldt References

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Theme: Energy planning

Overview

Energy planning at regional, national and municipal level: Integrated resource planning; analyses of historic trends; demand forecasting; scenarios; utility expansion plans; regional trade and infrastructure development, national action plans for technological development; technical, economic, environmental and social assessments of new energy installations; sector programmes for donor institutions' assistance to developing countries.

Focus areas: Electricity sector; renewable energy; energy, economic and environmental performance of energy supply technologies.

Countries of experience: Denmark, Ghana, Indonesia, Malaysia, Namibia, Nigeria, Poland, Swaziland, Thailand

Regions of experience: Baltic Sea Region, OECD countries, Nile Equatorial Basin, South-East Asia (ASEAN)

Employments

ASEAN Centre for Energy, then ASEAN-EC Energy Management Training and Research Centre	
Location	Indonesia, Jakarta
Period	February 1996 – January 1999
Employer	European Commission, Directorate General for External Relations
Position	EC Senior Adviser (30 manmonths, resident)
Description	The ASEAN-EC Energy Management Training and Research Centre (AEEMTRC) was primarily financed by the European Commission and had 12-15 academic staff members. It was managed by an ASEAN Director, supported by the EC Senior Adviser. This included oversight and delegation of the AEEMTRC budget in compliance with the European Commission project management procedures and financial regulations. A major task was to transform AEEMTRC (relying on grant funding) into the ASEAN Centre for Energy (ACE) by January 1999, as an autonomous, financially self-sustainable entity. AEEMTRC was supporting the energy co-operation between the EU and the ASEAN and among the ASEAN Member Countries by collecting, collating and disseminating energy information (e.g. by publishing the ASEAN Energy Bulletin); by conducting seminar-workshops and training courses; and by facilitating regional projects, in particular the regional gas transmission system, the regional power grid, and the ASEAN Energy Outlook (ASEAN 2020). AEEMTRC seconded European experts to events and project activities. AEEMTRC assisted the ASEAN Secretariat in preparing the ASEAN Senior Officials Meeting on Energy (SOME) and facilitating the activities of ASEAN collegial bodies, such as the Sub-Sector Networks for Renewable Energy (RE-SSN) and for Energy Efficiency and Conservation (EE&C-SSN) and the ASEAN Forum on Coal (AFOC). AEEMTRC's activities were much alike the activities of today's ASEAN Centre for Energy, cf. www.aseanenergy.org AEEMTRC was funded almost entirely by EC DG 1 (external relations) and DG 17 (energy). These two DG's also funded projects, which were identified and developed by AEEMTRC.

Danish Energy Agency (DEA), Ministry of Environment and Energy	
Location	Denmark
Period	November 1991 – January 1996
Employer	Danish Energy Agency
Position	Head of Bio-energy Section, Renewable Energy Division
Description	Managed a section, manned by five academics, which was the executive and administrative body of the Action Programme for Bioenergy in Denmark, as part of the Member State energy policy. In charge of the disbursement of a national grant programme of EUR 6-8 million per year for technology development and EUR 7 million per year for demonstration, incl. budget disbursement and financial accounting. The section was active in several international projects and programmes. DEA was the energy wing of the ministry, preparing and executing political decisions.

Danish Energy Agency (DEA), Ministry of Energy	
Location	Denmark
Period	December 1986 – January 1990
Employer	Danish Energy Agency
Position	Head of the Unit for Combined Heat and Power Production
Description	Responsible for the planning, as well as the economical and technical evaluations within a national programme to install approx. 100 small-scale power plants based on natural gas and biomass. Also responsible for the legal approval of each new plant above 25 MW.

Selected projects

Regional integrated energy mapping and analysis	
Location	Vancouver Island, Canada
Period	May – October 2011
Client	Ea Energy Analyses, commissioned by the Cowichan Valley Regional District (CVRD)
Position	Energy planning and energy technology expert
Description	The objective is to complete a series of thematic GIS maps and associated databases of potential renewable energy resources and energy consumption in the CVRD (77,000 inhabitants). This shall lead to an analysis of opportunity costs and issues related to regional energy resilience.

National plan to dismiss fossil fuels	
Location	Copenhagen, Denmark
Period	January – September 2010
Client	Danish Commission on Climate Change Policy (www.klimakommissionen.dk)
Position	Internal consultant in the Secretariat (5 manmonths)
Description	It is the Government's vision that Denmark in the future shall be completely independent of the use of fossil fuels. For this reason, the Government appointed a Commission on Climate Change Policy in March 2008. The Commission presented its findings in September 2010.

Forecasting prices on biomass resources for energy use	
Location	Denmark
Period	October 2007 – January 2008 (1 st edition), November 2008 – January 2009 (2 nd edition) and November 2010 – February 2011 (3 rd edition)
Client	Danish Energy Agency
Position	Project manager (6 manmonths)
Description	Forecasting prices of dry biomass resources for major consumer segments for a 20-year period, through literature studies and interviews with key Danish market players supplying and using biomass for energy. The forecast are available in Danish only.

Technology data for energy plants	
Location	Denmark
Period	July 2009 – May 2010 (plus previous edition March 2003 – November 2004)
Clients	Danish Energy Agency and Energinet.dk (the Danish electricity system operator).
Position	Project Manager (5 + 6 manmonths)
Description	The project produced a catalogue ('Technology for energy plants', June 2010; in English), which comprises technology descriptions, and technology and economic data of various energy technologies, including forecasts until 2050. The aim was to establish: 1) A uniform, commonly accepted and up-to-date basis for energy planning activities such as future outlooks, evaluations of security of supply and environmental impacts; 2) A reference for evaluations of the development perspectives for technologies available for energy generation in relation to the programming of funding schemes for research, development and demonstration of emerging technologies. Boldt's task was, in close cooperation with the beneficiaries, to gather all information from literature and key stakeholders, to draft the catalogue and to conduct a public hearing for quality assurance.

Advanced waste-to-energy technologies	
Location	Denmark
Period	January 2009 – April 2010
Clients	Vestforbrænding I/S (the largest waste management company in Denmark).
Position	Technical Expert on biogas (anaerobic digestion) and thermal gasification (4 manmonths).
Description	The client had decided to establish a new large waste treatment plant, which shall include the most environmentally benign and feasible technologies in an integrated 'environmental park'. This may include anaerobic digestion of wet waste fractions and thermal gasification (or pyrolysis) of dry fractions for combined heat and power production and production of biofuels for vehicles. The project was a pre-decision study, providing technical options, feasibility analyses and investment advice as inputs to the subsequent detailed engineering.

Long-term district heating plan for Greater Copenhagen	
Location	Denmark
Period	January 2008 – June 2009
Client	EA Energy Analysis, Commissioned by the regional district heating companies of Greater Copenhagen (CTR, VEKS and KE).
Position	Energy Technology Expert (3 manmonths).
Description	The objective was to assess how low-carbon district heating can be developed, while sustaining affordable heat prices; medium-term (2020-2025) and long-term (2050). Boldt's task was to produce a catalogue (in Danish) describing technical and performance data of all existing combined heat and power units in the metropolitan area and equivalent information on all relevant technologies for potential future investments in heat supply.

Renewable energy costs and benefits to society	
Location	OECD Countries
Period	January 2007 – October 2007
Client	EA Energy Analyses Ltd, commissioned by the International Energy Agency
Position	Energy Technology Expert (3 manmonths)
Description	Costs and benefits of renewable energy compared to traditional energy sources, including costs of externalities. A web-based interactive calculation tool and energy technology catalogue. A project under the International Energy Agency's Implementing Agreement for Renewable Energy Technology Deployment (www.recabs.org). Boldt's task was to collect and collate all relevant data, describe the technologies and provide guidance to a sub-contractor designing the website.

Energy efficiency in Indonesia	
Location	Indonesia
Host	Ministry of Energy and Mineral Resources
Period	February 2007 – April 2007
Client	Danish Ministry of Foreign Affairs (Danida)
Position	Energy specialist (2 manmonths)
Description	Manager and key author, assisted by local consultants, of component 'Energy conservation in industries and large buildings' (in English) of the design document for a bilateral cooperation programme (2008-2012). The project, carried out by a multi-disciplinary team, involved communication with high level officials and other key stakeholders, and coordination with other donor agencies supporting similar activities.

Strategic/sectoral, social and environmental assessment of power development options in the Nile Equatorial Basin	
Location	Burundi, D.R. Congo, Kenya, Rwanda, Tanzania, Uganda
Period	February 2004 – September 2005
Client	World Bank, Nile Basin Coordination Unit
Position	Independent Reviewer (4 manmonths)
Description	The study, undertaken by the Nile Basin Initiative and the World Bank, examined the economic and engineering feasibility of a large number of power options, as well as their environmental and social impacts, to allow for informed and transparent decision-making in the selection of future power investments (project website: www.ssea.snclavalin.com). The tasks of the two Independent Reviewers were to undertake periodic, comprehensive and independent reviews of the project and to provide advice, expertise and strategic guidance to the Project Steering Committee throughout the development of the study.

Strategic National Energy Plan 2000-2020	
Location	Ghana
Period	April 2002 – August 2002
Client	Danida, as employee of Ramboll Denmark
Position	Expert on integrated resource planning in the electricity sector (2 manmonths)
Description	Technical assistance to improve institutional capacity on integrated resource planning in the electricity sector

Integrated Ressource Planning	
Location	Malaysia
Host	Ministry of Energy, Communications and Multimedia
Period	January 2001 – November 2001
Client	Danida, as employee of Ramboll Denmark
Position	Energy supply expert (2 manmonths)
Description	The objective of this technical assistance was - through partnerships with high level officials - to define and detail the means (e.g. on-the-job and workshop trainings) for improving the institutional capacity on integrated resource planning in government and related agencies, like the Malaysian Energy Centre (PTM).

Swaziland national energy policy	
Location	Swaziland
Period	February 2001 – August 2002
Client	Danida, as employee of Ramboll Denmark
Position	Electricity sector advisor (1 manmonth)
Description	In this technical assistance project Boldt was manager of the component 'Renewable energy independent power production in Swaziland', in English.

Integrated gas and electricity study in the Baltic Sea Region	
Location	Baltic Sea Region
Period	May 2000 – April 2001
Client	Baltrel and Baltic Gas (co-funded by the European Commission's Trans European Networks (TEN) programme), as employee of Ramboll Denmark
Position	Electricity expert
Description	This project, which was partly European Commission funded, aimed at enhancing regional integration of the energy infrastructure around the Baltic Sea. Boldt managed the electricity component. RAMBOLL was the lead consultant, for 31 gas and power companies under Baltic Gas and BALTREL. The main objective of the study was to "identify ways to improve conditions for a balanced development of gas and electricity infrastructure in the region, focusing on the needs and expectations of gas and electricity companies in the gas-power interface". The work included the impact of liberalisation in the energy sectors by comparing both products and tariff structures in the power and gas sectors.

Renewable Energy and Energy Efficiency in Namibia	
Location	Namibia
Host	National Planning Commission
Period	November 2000 – January 2001
Client	Danida, as employee of Ramboll Denmark.
Position	Project Manager and Team Leader (1 manmonth) of a team of international and Namibian experts
Description	The objective of this technical assistance project was to design an energy sector cooperation programme (in English) for the Danish Government's assistance to Namibia for the period 2001-2002, including a strategy and an action plan for concrete projects to be implemented. The project involved communication with high level officials and other key stakeholders, and coordination with other donor agencies' previous and on-going activities.

National strategy for renewable energy	
Location	Denmark
Period	February 2000 – August 2000
Client	Danish Energy Authority, as employee of Ramboll Denmark.
Position	Project Manager (1.5 manmonths)
Description	A 3-year strategy for the Danish Committee for Clean Generation of Electricity and Heat. The Committee advised the Danish Energy Agency in its RD&D support programmes on renewable energy, primarily biomass energy. The objective of the project was to identify the barriers for further development of renewable energy, and in that framework to suggest the most appropriate RD&D

Renewable Energy and Energy Efficiency in Thailand	
Location	Thailand
Host	National Energy Policy Office
Period	September 1999
Client	Danida, as employee of Ramboll Denmark
Position	Renewable energy expert (2 manmonths). Team of two European experts, the other on project management and energy efficiency, plus local experts.
Description	Manager and lead author of components 'Increased harnessing of renewable energy resources' and 'Improved policy development capacity' of the design document for a 5-year bilateral cooperation programme (in English), including a strategy and an action plan for concrete projects to be implemented. The technical assistance project involved communication with high level officials and other key stakeholders, and coordination with other donor agencies supporting similar activities.

Baltic Sustainable Energy Cities (BASEC)	
Location	Baltic Sea Region
Period	April 1999 – June 2000
Client	Client: Danish Energy Agency
Position	Manager of secretariat
Description	A number of capital and other cities around the Baltic Sea had joined efforts to counter the threats facing district heating and combined heat and power production in the region. The aim of the project was to strengthen the position of district heating by setting up twinning arrangements between city administrations and between district heating companies, and by forming a regional political platform for cities and district heating companies.

Renewable Energy and Energy Efficiency in Malaysia	
Location	Malaysia
Host	Ministry of Energy, Communications and Multimedia
Period	March 1999 –May 1999
Client	Danida, as employee of Ramboll Denmark
Position	Team Leader and Renewable energy expert (2 manmonths). Team of two European experts, the other on energy efficiency, plus local experts.
Description	Team Leader and lead author of component ‘Renewable energy’ (in English) of the design document for a 5-year bilateral cooperation programme, including a strategy and an action plan for concrete projects to be implemented. The technical assistance project involved communication with high level officials and other key stakeholders, and coordination with other donor agencies’ previous and on-going activities.

Municipal energy planning in Poland	
Location	Poland. Gliwice, Katowice region
Period	1990-1991
Client	Danish Ministry of Environment and Energy, as employee of Ramboll Denmark.
Position	Project manager
Description	Application of Danish experiences with energy planning in the municipality of Gliwice, Katowice region.