

# Curriculum Vitae

# John Magne Skjelvik

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# Profile

John Skjelvik has almost 30 years of experience from various assignments covering energy policy and economics. His work has covered assessments of policy measures like taxes, subsidies and tariffs to improve the performance of energy markets and reduce emissions from energy production and use. Furthermore, he has contributed to flexibility studies and appraisals of various energy production and infrastructure projects, including socioeconomic analysis. Also, he has contributed to energy efficiency studies in buildings, industry and transport. These have included analysis of policy measures and appraisals of projects

Another important part of his work has been analysis of climate change policy instruments and measures. The latter has covered various studies assessing costs and amounts of emissions reductions from various sources, including CCS, decarbonization and carbon sequestration. His policy instrument analysis covers design and implementation of emissions trading and carbon taxes in several sectors, and use of the flexible mechanisms and analysis of local benefits from climate change actions. This has included contact with various international climate change institutions.

Furthermore, he has been responsible for assessments of environmental and social consequences of energy and other construction projects, including hydro power projects.

He has also been responsible for several monitoring & evaluation studies of existing policy instruments and institutional arrangements, and provided practical advice on how to improve policy design and implementation. This has comprised processes in close cooperation with authorities, industries and other stakeholders, often in larger international teams.

Major clients include the World Bank and regional development banks, Nordic donor organisations, OECD, Nordic ministries and sub-bodies and NGOs. He has work experience from the Nordic countries, East Asia (particularly China), Latin America and Africa.

# Academic Qualifications

M. Sc (Cand. Oecon. Degree), Department of Economics, University of Oslo.
 Course in investment and financing, Norwegian School of Management.
 Courses in accounting and tax law, Norwegian School of Management.

# Languages

Norwegian: Mother tongue

English: Fluent

German: Fair

French: Some

# Work Experience

2010- Vista Analyse AS, Partner

2007-2009 Pöyry AS (previous ECON Analysis AS), Principal

2001-2007 **ECON Analysis AS**, Partner

1993-2000 **ECON Analysis AS**, Senior Economist

1985-1993 Ministry of Industry, Oslo. Senior Executive Officer (adviser from 1990).

Main fields of work: Environmental, energy and industry policy analysis.

1983-1985 Ministry for Labour and Local Government, Oslo. Executive officer

Main field of work: Implementation of measures to develop the industry in rural areas.

# Selected Project Work Experience

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Ongoing Bangladesh health effects and costs of ambient PM2.5 air pollution

The World Bank

2021 Costs of global PM2.5 and lead air pollution

The World Bank

Estimates the costs of pollution and the benefits from pollution reductions.

2021 Mexico environmental health – health effects and their costs 2019

The World Bank

Estimates of health effects from outdoor ambient air pollution, household air pollution from use of solid fuels, lead (Pb) exposure among children and adults, and inadequate drinking water, sanitation and hygiene, and their estimated monetized social and

economic costs.

2021 Mexico natural resource degradation and natural disasters

The World Bank

An assessment of the economic costs of natural resource degradation and natural

disasters in the country in 2019.

2021 Cost of air pollution in the Hanoi Capital Region and the Red River Delta in Vietnam

The World Bank

2020 Potential for fossil-free agricultural machines

Møre og Romsdal fylke

Assesses the interest among farmers and the availability of such machines

2019 Costs of increased use of digestate to replace mineral fertilizer

Norwegian Agricultural Authority. Project manager

Assesses the GHG abatement costs as part of KLIMAKUR 2030

## 2019 Costs of Carbon Capture and Storage (CCS) in Norway

Norwegian Environment Agency

Estimates costs for all sources (45) with emissions larger than 300 000 tons CO<sub>2</sub>/year. In cooperation with Sintef.

# 2019 Workshop on assessing environmental impacts from energy projects in Georgia

International Centre for Hydropower/Government of Georgia. Project manager Workshop for personnel in Ministries of Environment and Energy on how to handle environmental and social consequences in the permit application process for hydro power projects.

# 2019 Localization of energy stations for alternative fuels and potential for imposing emissions requirements for taxis

Møre og Romsdal fylke

Developing a plan for where and how to facilitate production, supply chains and filling/charging stations for low/zero emission energy sources for the transport sector.

## 2018-19 Indicators for market change in the transport sector

Enova

Developing and proposing indicators to assess impacts of Enova's support schemes.

# 2018 Evaluation of the Norwegian Biogas Pilot Support scheme.

Innovation Norway. Project manager

Focusing on how the scheme could be further developed to contribute to the development of the biogas market, improved biogas technologies and profitable projects.

# 2017-18 Valuation methods for environmental damages in Georgia.

International Centre for Hydropower/Government of Georgia. Project manager Assists in developing a practical framework for valuation of damages on biodiversity and water/soil contamination from hydropower and other larger projects.

#### 2016-2018 Alternatives to grid investments

Statnett

Considers cost effective supply and demand side interventions as alternatives to investments in new grid capacity.

# 2017 Evaluation of support to fish transport ("føringstilskuddet") to the fish processing industry.

Ministry of Trade, Industry and Fisheries. Project manager.

# 2017 Potentials and limits for introducing emissions-free taxis in Norway

Norwegian Environment Agency

## 2017 Environmental impacts and potential of the "sharing economy".

Nordic Council of Ministers. Project manager

An overview of the various sharing economy initiatives in the Nordic countries and their potential impacts on emissions of GHG and other harmful substances.

# 2017 Demand side flexibility – a survey.

Nordic Energy Research

A survey and analytical discussion of options for demand side flexibility in the Nordic electricity market, as well as barriers and opportunities for demand side flexibility.

#### 2017 Policy instruments to increase demand and supply of bio jetfuel in Norway

Avinor.

	An assessment of potential policy instruments to achieve a goal that 30 percent of jetfuel sales on all Avinor's airports in 2030 should be biobased. Sub-contractor to Rambøll.
2016-2017	Evaluation of county commitment to promote ecological agricultural production  Norwegian Agricultural Authority. Project manager.
	An assessment of goals, experiences and results of the county commitments.
2016	Quality assurance (KS1) of grid improvement plans in Southern Rogaland Statnett
2016	Assessment of effects and costs of a ban on the use of fossil fuels in agricultural buildings etc.
	The Norwegian Directorate for building quality (Dibk). Project manager
2015-2016	Global market prospects for biofuels.  The Norwegian Ministry of Transport
2013-2016	Planning for Cost-effective Environmental Risk Reduction in China
	Norwegian embassy Beijing/Ministry of Foreign Affairs  Phase II of Provincial five-year environmental plans project, to provide experience and recommendations for the structure of high effective environmental risk prevention system.
2015	KS1 of grid extension plan to the Haugalandet area  Statnett
2015	Evaluation of subsidies to replacement for ill farmers  Norwegian Agriculture Agency. Project manager
2015	Economic assessments of health effects in Colombia and Mexico  The World Bank. Project manager  Provided monetary estimates of health effects from outdoor and indoor air pollution, lead exposure and inadequate water supply, sanitation and hygiene.
2015	Economic assessment of ambient air pollution in Costa Rica  The World Bank. Project manager
2014-2015	Evaluations of conditions for the Norwegian bio-economy  Ministry of Trade, Industry and Fisheries
2013-2014	Economic assessments of health effects in Argentina, Perú, Hidalgo State of Mexico and Piau State of Brazil  The World Bank. Project manager  Provided estimates of health effects from outdoor and indoor air pollution, lead exposure and inadequate water supply, sanitation and hygiene.
2013	Evaluation of the Norwegian Rent Disputes Tribunal (Husleietvistutvalget, HTU)  Ministry of Local Government. Project manager.
2013	A strategy for the use of grants to investments in charging stations for electric cars.  Transnova. Project manager.
2012	Evaluation of grants to increase ecological agriculture production  Norwegian Agricultural Authority. Project manager.
2012	Evaluation of the Competence network for small-scale food production.  Innovation Norway. In cooperation with Oxford Research.

# 2010-2012 Water, Sanitation and Hygiene and Urban Environmental Health Risks

The World Bank. Project manager

Estimated environmental costs risks from inadequate water supply, sanitation and hygiene and urban environmental health risks from air pollution in Sindh (Pakistan) and Sundarbans (Bangladesh), and undertook a cost benefit analysis of interventions to improve the situation.

### 2011-2012 Evaluation of Nordic Development Fund (NDF)

NDFs Board. Project manager

Evaluation of NDFs activities during the first two years of operation under their climate mandate.

# 2011-2012 Costs and benefits from the phase-out of amalgam use in Norway

The Norwegian Climate and Pollution Agency. Project manager.

An evaluation of the ban on amalgam use to reduce mercury release to the environment.

#### 2010-2011 Emissions reductions in aviation?

Norwegian Ministry of Transport

Assessed various policy options beyond those considered in KLIMAKUR.

#### 2010-2011 Costs and benefits from increased afforestation in Norwegian coastal areas

Det norske Skogselskap. Project manager

# 2009-2011 Provincial five-year environmental plans

Norwegian embassy Beijing/Ministry of Foreign Affairs

Together with Chinese Academy of Environmental Planning we analyzed and advise on the effectiveness of current provincial five-year environmental plans and provided policy recommendations for improving the plans.

## 2010 Assessing the demand for electric and hybrid cars in Norway

The Norwegian Public Roads Administration. Project manager

# Evaluation of the experiences with the use of KVU for early stage project appraisals in the transportation sector.

Norwegian Ministry of Transport and Communication.

Assessment of the use of the tool KVU ("Konseptvalgutredning") for larger investment projects in the sector.

# 2010 Cost benefit analysis of allowing petroleum activities in the Lofoten and Barents sea area.

Norwegian Ministry of Environment. Project manager

# 2009 KLIMAKUR – actions to reduce GHG emissions.

Norwegian Pollution Control Authority. Project manager

Helped the Government KLIMAKUR group analyzing cost efficient policy measures to fulfill the Norwegian goal for emission reductions.

# 2009 Impacts of renewable energy investments.

Energy Norway. Project manager.

A study of the social, environmental and economical impacts of investments in renewable electricity production, focusing on developing countries.

#### 2009 Subsidies to low emission vehicles.

Norwegian Petroleum Institute. Project manager.

Calculated the various subsidies for purchase and use of electric and hybrid vehicles.

# 2007-2009 Attracting private sector investment to Greenfield hydropower facilities in Georgia.

Norwegian Ministry of Foreign Affairs.

Responsible for the assessment of the environmental impacts of potential new facilities.

#### 2008-2009 Industrial use of natural gas in Norway.

The Norwegian Research Council. Project manager.

Assessed the potential for increased, profitable processing of natural gas in Norway in various industries.

# 2007-2009 Reducing mercury pollution in China.

Chinese State Environmental Protection Agency (SEPA) and Guizhou Environmental Protection Bureau.

Assessment of mercury emission sources and their local, regional and global impacts, and cost benefit analysis of abatement options. In cooperation with NILU.

# 2008 ICT and climate change.

Ministry of Government Administration and Reform. Project manager.

Considered various ways new information and communication technologies (ICT) could contribute to reducing greenhouse gas emissions.

### 2008 Barriers for production of 2. generation biofuels in Norway.

Norwegian Pollution Control Authority.

Assessed barriers and potential policy measures to promote production.

# 2008 Climate effects of high speed trains in Norway.

Norwegian Ministry of Transport and Communications. Project manager.

Assesses the impacts on greenhouse gas emissions from investing in high speed train lines between Oslo - Trondheim, and Oslo – Bergen.

# 2007-2008 Hubei transport SEA.

World Bank. Project manager.

Advised Hubei Provincial Communication Department, China, on how to carry of a Strategic Environmental Assessment for a long term highway and inland waterway plan.

# 2007-2008 Evaluation of the Norwegian tax system for waste oil.

Norwegian State Pollution Control Authority. Project manager.

Evaluated the current tax system on lubricating oil and refund for delivery of waste oil for treatment.

# 2007-2008 Environmental degradation and conflict – can environmental initiatives create peace?

Norwegian Ministry of Foreign Affairs. Project manager.

Explored the link between environmental degradation and conflict. Case studies in Burkina Faso, China, Nepal and Sudan.

# 2007 Evaluation of the Regional Air Pollution in Developing Countries Programme (RAPIDC).

Sida. Project manager.

An assessment of the extent to which the objectives and results of RAPIDC in Southern Asia and Africa have been achieved in an effective and efficient manner, and provide recommendations for change.

#### 2007 Evaluation of Geological Survey of Norway.

Norwegian Ministry of Industry and Trade.

# 2007 CEA Senegal.

The World Bank. Project Manager.

Provide the WB with inputs on urban pollution issues to their work on a CEA.

## 2007 Biofuels – status and prospects.

Norwegian Ministry of Foreign Affairs. Project Manager.

Overview of international agricultural, climate, local environment and trade issues related to production of biofuels.

#### 2006-2007 Income, Environment and Health in Rural Egypt.

The World Bank. Project Manager.

A cost benefit analysis of actions to reduce land degradation in Damietta and improve water supply, sanitation and personal hygiene practices in Qena.

# 2006 Design of a Feed-in system for renewable electricity.

The Norwegian Ministry of Petroleum and Energy.

Analysed how a public support system to promote renewable electricity capacity in Norway could be designed.

# 2006 Environmental policy towards small and medium enterprises (SMEs) in the light of EU

accession.

The World Bank and Government of Turkey. Project Manager.

Assessed challenges for Turkey's SME environmental policy and proposed ways forward to comply with EU policy.

# 2006 Implementation of EU industrial pollution control Directives in Turkey – the case of

lignite-fired power plants.

The World Bank. Project Manager.

Assessed how Turkey could implement the IPPC, LCP and NEC Directives, eventually by using economic instruments. Presented potential cost savings from using such instruments.

# 2005-2006 Ghana Country Environmental Analysis (CEA).

The World Bank. Project Manager.

Responsible for urban water, sanitation and waste management.

#### 2005-2006 Urban Air Pollution Control in Peru.

The World Bank. Project Manager.

A cost benefit analysis of measures to reduce emissions of particulate matter (PM) from urban transport sources, as an input to the WB Country Environmental Analysis.

#### The political economy of the Norwegian aviation fuel tax.

The OECD. Project Manager.

Described the circumstances surrounding the introduction of the CO2 aviation fuel tax in 1999, the opposition it faced and how this was overcome.

# Financial guarantee for future waste electrical and electronic equipment (WEEE).

Nordic Council of Ministers. Project Manager.

Proposed a model to cover producers' future liabilities for the proper treatment of WEEE.

# 2005 **Developing Norwegian natural gas distribution**.

Enova.

Presented how efficient ship based distribution chains for Liquified natural gas (LNG) and Compressed natural gas (CNG) could be developed to supply various users. In cooperation with Marintek.

#### 2005 Climate friendly technology – case studies.

Norwegian State Pollution Control Authority.

# 2001-2005 Master Plan Against Air Pollution in Shanxi Province, China.

Shanxi Environmental Protection Bureau.

Assistance in developing a cost-efficient plan to reduce air pollution in the Province. Cooperation with the Norwegian Institute for Air Research (NILU) and other institutions.

#### 2002-2005 Technical Guidelines for Environmental Impact Assessments (EIA).

The Chinese State Environmental Protection Administration (SEPA).

Assisted SEPA in developing new guidelines for EIAs for construction projects, including how to estimate environmental costs of emissions. In cooperation with Renmin University.

# 2003-2004 IT industry in China and India.

International Finance Corporation (IFC).

Assessed drivers of the relative growth performance of the IT industry in China and India to determine different growth trends for the IT hardware manufacturing and IT services in the countries.

# 2004 CO2 injection in petroleum reservoirs at the Norwegian Continental Shelf.

Petoro

Analysed the economic viability of CO2 injection at Gullfaks and other oil fields.

# How are Norwegian development assistance partner countries affected by a high price on oil?

The Norwegian Ministry of Foreign Affairs.

Analysed impacts of a price on oil of 30 and 50 USD respectively on these countries.

#### 2003-2004 Costs of transporting natural gas to the Norwegian domestic market.

The Norwegian Water Resources and Energy Directorate. Project Manager.

Analysed the market potential for natural gas in various regions and the distribution costs.

#### 2003 Natural gas to Grenland.

Vekst i Grenland. Project manager.

A cost-benefit analysis of building a gas pipeline from Kårstø at the Norwegian west coast to the Grenland area in the eastern part of Norway.

#### 2003 Alternative design of the Norwegian electricity tax.

The Norwegian District Heating Association. Project Manager.

Analysed alternative designs of the electricity tax, their effects in the power market etc.

#### 2002-2003 GHG emissions from international shipping and aviation.

Swedish Environmental Protection Agency. Project Manager.

Assessed how GHG emissions from international shipping and aviation could be curbed by various policy instruments.

#### 2001-2003 Financial mechanisms for natural disaster risk management in Latin America (LAC).

The Inter-American Development Bank.

Analyzed how to use financial instruments to reduce natural disaster risk in Chile, Peru and El Salvador.

# Joint Implementation – country analysis.

The Swedish Energy Authorities (STEM). Project manager.

Analysed the environment for implementing JJI projects in countries in Eastern Europe.

#### 2001 Strategy for promoting JI/CDM projects.

Norwegian Ministry of Foreign Affairs. Project Manager.

Developed a strategy to promote investments in JI/CDM projects from Norwegian industry

# 2001-2002 Evaluation of the KOSTRAT programme for competence building in the food processing

industry.

Norwegian Industrial and Regional Development Fund (SND).

#### 2000 Evaluation of grants for ecological agriculture production.

Norwegian Agricultural Authority. Project manager

#### 2001 Environmental taxes on heating oil and electricity.

Norwegian Petroleum Institute. Project Manager.

Assessment of the rationale for current taxes, and proposes rate changes.

#### 2000 HiOx – Market and Greenhouse Gas Emission Potential.

Aker Maritime.

Assessment of the market potential of the HiOx emissions-free technology in Europe as a source of power generation and for carbon dioxide mitigation.

# 2000 Climate Change Policy Scenarios.

Norwegian State Pollution Control Authority.

Prepared GHG emissions scenarios for Norway, what policy measures to use to curb emissions and what role the SFT could play in policy shaping.

#### 1999-2000 Greenhouse Gas Emissions from Ships.

International Maritime Organization,

Analyzed how GHG emissions reductions could be implemented through different market-based and other approaches. in co-operation with MARINTEK, Det Norske Veritas and Carnegie Mellon University.

#### 1999 The effect of fiscal changes for the oil industry.

The Norwegian Oil Industry Association. Project Manager.

Analyzed the effects of selected fiscal changes in different petroleum regions in the world, focusing on US and UK.

# 1999 Baseline Methodology.

Norwegian Ministry of the Environment. Project Manager.

An overview of the status of different approaches for baseline calculations for projects under JI and CDM under the Kyoto Protocol.

### 1999 Emission trading in the Nordic electricity market.

Nordic Council of Ministers.

Analyzed whether and how a system for greenhouse gas emission trading can be integrated with the open Nordic electricity market.

# 1999 Evaluation of the KLIMATEK-program.

Norwegian Research Council. Project Manager.

Evaluation of the research program promoting increased use of new technology to reduce GHG emissions after about 2 years in operation.

# 1998 Shipping and climate change policy.

Norwegian Shipowner's Association. Project Manager.

Analyzed how the Norwegian coastal fleet could be included in a Norwegian emissions trading system.

# 1998 Abatement cost for Norwegian greenhouse gas emissions.

Confederation of Norwegian Business and Industry.

#### 1997-1999 A climate strategy for Norway.

Norsk Hydro and Statoil. Project Manager.

Analysis of different designs of domestic and international policy measures. Offering professional advice on the priorities of the two companies' engagement in relation to climate change.

#### 1997 Evaluation of the deposit-refund system for car wrecks.

Norwegian Pollution Control Authority (SFT). Project manager.

# 1996 Evaluation of support to the food processing industry.

Norwegian Industrial and Regional Development Fund (SND).

#### 1995 Integration of environmental concerns in bilateral aid programs.

Ministry of Foreign Affairs.

Evaluation of how the environmental goals in development aid programs have been followed up by NORAD.

#### 1995-1996 Voluntary agreements to reduce CO2 emissions.

Ministry of Environment/Federation of Norwegian Process and Manufacturing Industries (PIL). Project Manager.

Survey of the systems of voluntary agreements between industry and governments in various countries.

# 1995 Use of natural gas in the Norwegian transport sector.

Ministry of Transport. Secretary to the working group (Naturgassutvalget).

# 1995 Biomass as carbon sink.

Norwegian Forest Owners Federation. Project Manager.

Clarification of the role of biomass as carbon sink, especially net growth in forests and temporary storage in buildings and paper products.

# 1995 Carbon taxes in emission intensive industries.

Ministry of Finance. Project Manager.

#### 1994 Joint implementation (JI).

Nordic Council of Ministers. Project manager.

The concept and possibilities of JI for the Nordic countries are explored.

#### 1993 **GEF ILUMEX project**.

Norwegian Ministry of Foreign Affairs.

Contributions to an appraisal study of a Global Environmental Facility (GEF) joint implementation pilot project promoting installation of compact fluorescent lamps in Mexico.