

Curriculum Vitae of Aviel Verbruggen

1. Personal

Name: Aviel VERBRUGGEN (Male)
Born: Belgium, Kalken, December 26, 1949
Marital status: Married to Gabriella JENNES (former director of Hoger Instituut voor Gezinswetenschappen, adult education on family sciences)
Father of three children (Willem°1979, Thomas°1981, Mattias °1982)
Home Address: Veerlepad 54, B-2230 Herselt (Belgium)
tel.: +32 14 750 112
mobile: +32 496 888 239
website: www.avielverbruggen.be
Office address: University of Antwerp, Prinsstraat 13, 2000 Antwerp, Belgium
e-mail: aviel.verbruggen@uantwerpen.be

2. Academic training

My interest was and is multi-disciplinary in the fields of engineering, economics and political sciences. This is reflected by my versatile educational path.

Sophomore civil engineering (University of Louvain), June 1970

Master applied economics (University of Antwerp - UFSIA), June 1974

Fellow engineering-economic systems (Stanford University), 1978-1979

Ph.D. trainee and research associate on housing, transport, energy economics, 1974-1978.

Ph.D. applied economics (University of Antwerp - UFSIA) – 1979; a summary of the thesis 'Planning of District Heating in Belgium' obtained the Gulf Energy Award (1979).

3. Positions

Next to a predominantly academic career, I have been actively engaged in societal processes and organisations as an advisor, initiator and chairperson. However, my main direction was and is science, and also when in politics I tried to stay a scientific analyst and decision-maker.

3.1 Professional:

- 1980 onwards: research associate at the University of Antwerp on energy and environmental issues with an applied technical and economic approach.
- Full professor at the University of Antwerp (1993-2015); emeritus since Oct. 1, 2015
- Director Study Centre for Economic and Social Research (1985-1989)
- Chairman Study Centre for Technology, Energy, Environment (1990-1999; 2001-2007)
- Project leader and editor of the State-of-the-Environment Reports of Flanders, VMM Flemish Administration (1993-1998)
- Chief of Cabinet, Flemish Minister of the Environment, Flemish Government (1999-2001)
- Chairman Institute Environment and Sustainable Development, UA (2004-2008)
- Chairman Dpt Environment, Technology and Technology Management, UA (2006-2011)

3.2 Teaching:

Since 1985 lecturer and since 1993 full professor at the University of Antwerp. Courses and seminars on Industrial economics, Business economics (investment analysis), Environmental economics, Energy economics & management, Decision Analysis and Risk Analysis, Energy & Climate (still committed in this post-academic training program).

3.3 Additional and honorary positions:

- President of Labour and Environment (1988-1991)
- First President of the statutory Council for Environment and Nature in Flanders (1991-1995)
- Member of the Board of Directors of the Environmental Institute, UA (1988-2008)
- Member of the programme committee Powergen Europe (1993-1995)
- Member of the Committee Science Management of VRWB (1995-1996)
- Member of the Scientific Board of Advise on Energy of VITO (1990-1994)

- Member of the panel headed by prof. J. Surrey on the economics of power supply in Ukraine when closing Chernobyl. The EBRD, European Commission and US State Department had installed the panel (1996-1997)
- Reviewer of the Finnish energy research programme (1998)
- Spokesman of the Flemish Government for the OECD Environmental Performance Review of Belgium (1997-1998)
- Expert advisor to the OECD for the Flemish ministry of the Environment (1998-1999)
- IPCC TAR Working Group III, Chapter 5, Lead author (1998-2001)
- IPCC AR4 Working Group III, Editor Glossary, Chapter 11, Review editor (2004-2007)
- IPCC Special Report on Renewable Energy (SRREN): Contributing Author Chapter 1, Editor Glossary (Annex I), Lead Author: Summary for Policy Makers, Technical Summary, Chapter 11, Annex II and III on Methodologies and Costs (2008-2011)
- IPCC AR5 Working Group III, Chapter 6, Review editor (2012-2014)
- Reviewer of the Dutch climate change research programme (2001; 2007)
- Reviewer of the SADC (Southern African Development Community) Regional Energy Planning Network (1989-2002)
- Member of the Scientific Council supervising the Dutch Climate Change Research Programme (2002-2007)
- Member Steering Group of Realise Forum (Freie Universität Berlin) on energy policies (2004-2007)
- Member Steering Group network on White certificates (Politecnico Milano) on energy efficiency policies (2005-2007)
- Reviewer of research programmes or results: UK Energy Research Council, NL SENSE Research School, NL NWO programmes, EU FP6 (the ADAM programme), EU FP7, H2020, etc.
- Editorial board member: Energy Policy (until 2015, Elsevier); Energy Efficiency (Springer).

3.4 Non-academic activities:

During two academic years 1999-2001, I interrupted my academic career and served as the principal advisor (chief of cabinet) of the Flemish Minister of the Environment. In 1988 I established the consulting company REGASA nv, and created with colleagues spin-off companies that supply energy efficiency services, e.g. CENERGIE cvba www.cenergie.be. Because I prefer academic work, I ended my participation in the companies in October 2017.

4. Research

Most research has been applied in the interdisciplinary field of engineering, economics and management or policy. Some research is analytical, detailed and by occasions quite technical, for example my study of cogeneration technology (1979) and the EU Directive on promoting CHP (2002-2016). Other research is primarily strategic and policy oriented, for example my studies on structuring the environmental policy planning process in Flanders (1989), a new strategy for the water sanitation sector (2000), a beyond Kyoto plan B (2009, 2011), a critical analysis of the Paris Climate Agreement (2015).

4.1 Topics covered:

- Combined heat and power generation (technology, economics, policies)
- District heating (planning and economics)
- Power generation expansion planning (dynamic simulation models; costs of nuclear power)
- Electricity tariffs (marginal cost pricing; grid access for distributed resources)
- Energy markets and deregulation
- Renewable energy investment appraisals, also in developing countries (windpower, small-hydro, solar)
- Renewable electricity support systems (tradable certificates)
- Environmental policy planning
- Environment and economics
- Energy efficiency and government policy (option investment theory applied on buildings efficiency)
- Waste incineration with heat recovery
- Energy technological research and development programmes
- Environmental indicators and indicators for Sustainable Development
- Water treatment planning and organisation

- Emissions Trading
- Climate policy architectures

4.2 Project sponsors were among others:

- Minister of Economic Affairs
- Federal Minister of the Environment
- Federal Minister of Economics, Small Enterprises and Energy
- Minister and administration of Development Cooperation
- OVAM (Public Waste Authorities of the Flemish Region)
- King Baudouin Foundation
- Control Committee for Electricity and Gas
- Commission for the Regulation of Electricity and Gas
- National Committee for Energy
- SCK-CEN (Research Institute on Nuclear Energy)
- OECD, IEA (International Energy Agency)
- European Commission, DG for Energy and Transport (former DGXVII – Energy)
- Electrabel; Fluxys; chemical companies
- VMM (Flemish Environmental Agency).

5. Publications and outreach

The results of my research are made accessible in more than 450 publications. Most of my research results are published in research project reports that were ordered by a variety of public and private authorities. When permitted and when time was available journal articles were extracted from the research and published in scientific journals (see list 5.1). Thanks to the internet, I could hook up to international research flows after 2000. Since then, my Google scholar profile improved [scholar.google.be/citations?user=v1SyStoAAAAJ&hl=en].

5.1 Journals that published one or more of my or our (co-authors) articles: Fernwärme International; Economisch en Sociaal Tijdschrift; Energy Research; Energy Economics; Resources and Energy; Energy Policy; Journal of Electrical Power and Energy Systems; International Journal of Research in Marketing; International Journal of Global Energy Issues; Journal of Environmental Management; Lucht en Omgeving; Streven; Economische en Statistische Berichten; Tijdschrift voor Politieke Economie; Energie+; Ecodecision; European Environment; Utilities Policy; Energy & Environment; International Journal of Energy Technology and Policy; The Electricity Journal; International Journal of Environmental Technology and Management; Ecological Economics; Energy and Buildings; Sustainability; Energy Efficiency; Environmental Science & Policy; Futures; Renewable and Sustainable Energy Reviews; Renewable Energy; International Environmental Agreements; Foreign Affairs; IAEE Forum; ASME Journal of Energy Resources Technology; Energy Procedia

5.2 Recent academic publications:

see: www.avielverbruggen.be or Google Scholar

5.3 Presentations and news media:

Because of agenda constraints the number of times I present research work on conferences and for broader audiences is limited to about fifteen per year. On occasions there is also a high demand by the media for interviews and opinion statements on energy and environmental issues of societal interest (mainly on nuclear power, support for renewable power, rent allocation in the electricity sector; climate policy, and in 2014-2015 on the probability of an electricity black-out in Belgium). Most of the recent lectures and opinions are available via www.avielverbruggen.be