



Jahresbericht 31. Dezember 2010

Implementing Agreement of the International Energy Agency (IEA): Electricity Networks Analysis Research & Development (ENARD Annex I)

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Für den Inhalt und die Schlussfolgerungen ist ausschliesslich der Autor dieses Berichts verantwortlich.

Abstract

The goal of the IEA IA ENARD Annex I (International Energy Agency Implementing Agreement on Electricity Networks Analysis, Research and Development) is to answer SmartGrids policy making questions through a cooperation of the governments of currently fourteen countries (AT, BE, DK, FI, FR, IT, NL, NO, South Africa, ES, SE, CH, UK, USA). ENARD analyses key issues related to the necessary optimal integration of all users connected to the grid.

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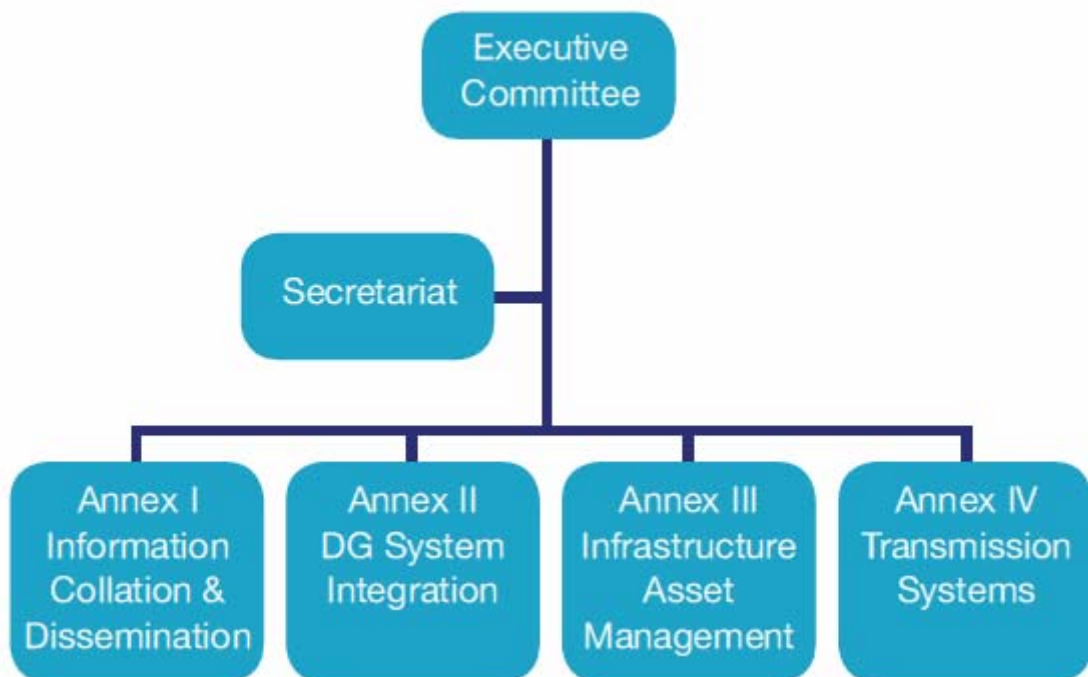
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Einführung

Die wichtige Rolle der Stromübertragung und -verteilungsnetze zur Erreichung nationaler, europäischer, weltweiter energiepolitischer Ziele wurde im Rahmen der Internationalen Energie Agentur (IEA) auch im Jahr 2010 insbesondere über das Implementing Agreement ENARD (Electricity Networks Analysis, Research and Development) wahrgenommen. Die Schweiz ist in ENARD eines von derzeit 14 Mitgliedsländern (AT, BE, DK, FI, FR, IT, NL, NO, South Africa, ES, SE, CH, UK, USA). Dieser Bericht beschreibt die Entwicklung von ENARD im Jahr 2010.

ENARD Ziel und Organisation

Die Ziele von ENARD (Electricity Networks Analysis, Research and Development) als IEA Implementing Agreement wurden im Jahresbericht 2009 des BFE schon detailliert beschrieben. ENARD wird von einem Executive Committee (ExCo) geführt. Das ExCo bearbeitet Fragen basierend auf einem gemeinsam verabschiedeten 5-Jahresplan (2007-2011). Ein dediziertes Sekretariat unterstützt die administrativen Angelegenheiten von ENARD. Das ExCo rapportiert an die IEA via die "End Use Working Party" (EUWP) und das "Committee on Energy Research and Technology" (CERT) der IEA. ENARD hat im Jahr 2010 in vier Subannexes zentrale Netz (Grid)-Themen von internationalen Expertengruppen bearbeiten lassen:



Figur 1: Organisation IEA IA ENARD

Bis Ende 2010 wurden innerhalb von ENARD die ersten Phasen der Annexes II and III beendet (Schlussberichte vorliegend, siehe www.iea-enard.org). In Annex II wurde im Jahr 2010 die "Dissemination Task 3" begonnen. Annexes III und IV werden fortgesetzt.

Main activities 2010

- Organization of the IEA ENARD Grid Policy Workshop, Paris, 28. April 2010 incl. workshop publication "Electricity Grids – A key enabler in the delivery of a sustainable energy policy"
- Organization of the workshop "Markets & Regulation – financing the Smart Grid", Madrid, 28-29. Sept. 2010

A key event was the Grid Policy Workshop in Paris, 28. April 2010

Session 1: Regional Perspectives. Session Chair: John Baker, Operating Agent, ENARD Annex I	
09:45	The SmartGrid – Enabler of the New Energy Economy – Eric Lightner, US DOE
10:05	The European Technology Platform SmartGrids – Professor Ronnie Belmans, Chairman, ETP SmartGrids
10:25	Electricity Grids – facilitating sustainable economic development in emerging economies – Minnesh Bipath, SANERI, South Africa

Session 2: ENARD:- the IEA Implementing Agreement on Electricity Networks Analysis, Research & Development. Session Chair: Stig Goethe, Chair of ENARD Implementing Agreement	
11:15	Introduction to ENARD, the IEA Implementing Agreement on Electricity Networks Analysis, Research & Development – John Baker, Operating Agent, ENARD Annex I
11:30	Emerging Policy Messages from the Individual Operational Annexes
11:30	Annex I "Information Collation & Dissemination"
11:45	Annex II "DG System Integration"
12:00	Annex III "Infrastructure Asset Management"
12:15	Annex IV "Transmission Systems"
12:30	Morning Panel Session:- "Research or Reality?". Moderator – Hermann Halozan, Chairman, IEA End Use Working Party. Panel members: Morning speakers, plus Peter Versteegh, Electricity Co-ordination Group Chair and representatives from the HTS and PVPS Implementing Agreements.

Session 3: Future Challenges for Networks. Session Chair, Pierre Mallet, ERDF	
13:50	Accommodating future projected developments in the generation mix (wind, wave&tidal, supercritical coal, nuclear and microgeneration) – Bart Stoffer, Director Power Economics Europe, EAS&E, GE Energy
14:10	The Role of New Technologies – a Power Engineering Equipment Supply Base Perspective – Peter Jones, Head of Technology, ABB UK, United Kingdom
14:30	Harnessing the Potential of the North Sea Offshore Wind Resource – a Norwegian Perspective – Lars Audun Fodstad, Senior vice-President, Statkraft, Norway
14:50	Electricity Networks – the IEA Energy Technology Perspective – David Elzinga, International Energy Agency, Paris

Session 4: Regulation, Financing and Investment. Session Chair: Rainer Bacher, BACHER ENERGY LTD, Switzerland	
15:30	Developing the Regulatory Framework –Cécile George, Director of Electric Grid Access, CRE, France; member of the CEER and ERGEG Electricity Working Group
15:50	Financing and Investment – Paola Bresesti, European Investment Bank, Luxembourg
16:10	Afternoon Panel Session:- “Electricity Grids – Enabler or Bottleneck?” Moderator – Michele de Nigris, ERSE SpA. Panel members: Afternoon speakers plus representatives from the DSM and RETD (tbc) Implementing Agreements
16:40	Workshop Conclusions and Recommendations – Chair: Stig Goethe, ENARD

The workshop was attended by 85 persons from 19 countries.

- Session 1 included presentations from the US, Europe and South Africa; the latter highlighted that a fundamental step change could bring electricity to those countries which do not currently have electricity. SmartGrids stands today for a fundamental change in energy and environmental policy making recognized by policy makers; it includes strong engagement and interaction with the Demand Side; it captures the full value chain – generation to end users.
- Session 2 highlighted the main works done in the various ENARD sub annexes.
- Session 3 covered the medium and long terms challenges. Significant funding for new developments and the change towards SmartGrids is required but there are fundamental questions as who will pay for it and who will benefit. These fundamental questions still need to be addressed. A presentation said that a sustainable return is needed, i.e. there must be some clear, visible profit in the ongoing evolution of the grids based electricity system for all parties in the value chain. Clearly there must be full engagement by governments, regulators and above all the distribution system operators. Each party has currently its own interests and change towards supporting a move towards SmartGrids is a challenge.
- Session 4 covered financing and investment – setting the rules in the level playing fields to enable confident investment decision making.

Another important workshop with the IEA IA ENARD I Annex was about “Markets and Regulation – financing the SmartGrids”, 28-29 Sept. 2010 in Madrid.

The workshop was attended by 80 delegates from 16 countries; the involvement of Commissioner John Norris from the Federal Energy Regulatory Commission USA had created great interest.

The key messages from the Workshop included the need for

- smart policy and smart regulation
- clear customer engagement and effective communication
- Innovation in technology, financing and management techniques

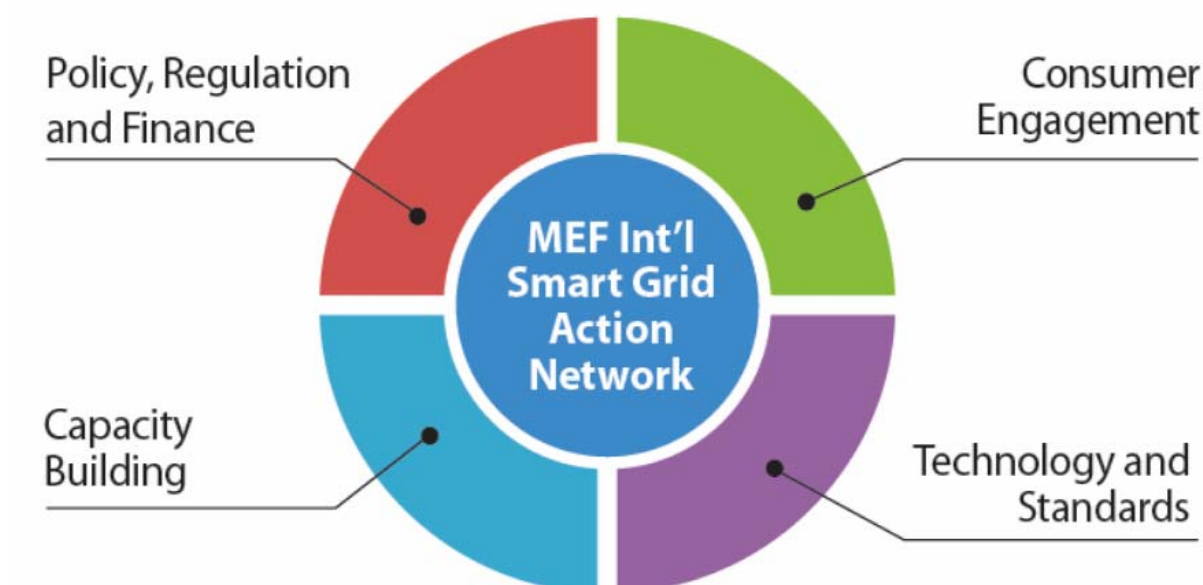
Session 1: Opportunities and Challenges	
10:45	The Smart Grid – enabling a new market dynamic – Christian Feisst, MD Business Development Smart Grids – Cisco (Germany)
11:10	The Smart Grids Challenge – a Worldwide Perspective – Taco de Vries, Accenture (UK)
11:35	European Legal Realities and Opportunities for Smart Grids – Simone Pront van Bommel – University of Amsterdam (The Netherlands)
12:00	Session 2: Morning Panel Session
12:00	Panel Discussion – Chair – Stig Goethe, Chair of the ENARD Implementing Agreement Opening contribution from John Scott, Director Network Innovation, KEMA Consulting Ltd, UK – Is There Enough Innovation in Management Thinking?

Session 3: Economic, Financing and Distribution Level Considerations	
14:00	Financing the Smart Grid: Revenues, Allocations and Regulatory Options – Richard Cowart, Director, European Programs, Regulatory Assistance Project (USA)
14:25	The Economics of the Smart Grid:- interim results from studies at the IEA Secretariat – David Elzinga, IEA Secretariat
14:50	Enabling the Uptake of Distributed Generation – Tomas Gomez San Roman – Distribution Team Leader – Instituto de Investigacion Tecnologica, Universidad Pontificia Comillas (Spain)

15:45	Session 4: Afternoon Panel Session
15:45	Afternoon Panel Session – Chair, Michele de Nigris, ENARD vice-Chair

Future of ENARD

The ExCo discussed about the future of ENARD whose term officially ends in 2011. Switzerland is actively involved in shaping the future of ENARD. Currently, ISGAN (International Smart Grid Action Network), is a proposal for a Worldwide partnership as possible follow-up for ENARD. The ISGAN concept has been developed from the MEF TAP (Major Economies Forum Technology Action Plan) Smart Grids work, on which Italy and Korea have assumed leadership. Italy and South Korea are also cooperating with the US DOE (Department of Energy) in the development of the ISGAN concept; the key concept is based on the following four action network areas:



A key recommendation from the MEF TAP work was for the establishment of a Smart Grid global partnership-viz ISGAN. More information: <http://www.majoreconomiesforum.org/the-global-partnership/smart-grids.html>.

In order to optimize the processes for the future decisions related to ENARD in the context of ISGAN, the ExCO applied at the IEA CERT for an extension of ENARD's present five year term to 29th February 2012. This was approved by the IEA CERT. The ENARD ExCo will decide about the second term (2012-2016) during the year 2011. An integration of ENARD into ISGAN is an option.

ENARD on the Internet

<http://www.iea-enard.org>