



ENARD:- IEA Implementing Agreement on Electricity Networks Analysis, Research and Development

Newsletter No 3 - November 2007

ENARD's First Anniversary

ENARD celebrated its first anniversary in September, with an extensive round of meetings, hosted by SINTEF Energy Research in Trondheim, Norway.

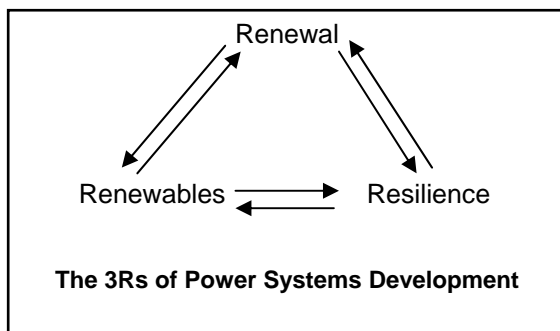
The first year of ENARD's work programme has seen ENARD establish itself as a major international forum in relation to electricity networks, with a growing programme of activities and membership. It has also contributed to the IEA's Grid Integration initiative, which will report to the Hokkaido G8 meeting, July 2008.

Highlights of the first year's activities have included:-

- The organization and delivery of 4 topical experts' meetings and workshops;
- The development of ENARD's membership base, with 11 countries now participating in the Implementing Agreement;
- The completion of the Annex I Interim Digest of T&D Developments;
- The establishment of the fully functional ENARD web-site at www.iea-enard.org;
- The facilitation of two new (R&D) Annexes, addressing DG System Integration and Infrastructure Asset Management, respectively.

Further information on these and related developments is provided in subsequent sections of this Newsletter.

Commenting on these developments, ENARD's Chair, Stig Goethe commented "We have been exceptionally busy during this first year of ENARD's operation and have worked hard to deliver a highly topical and appealing programme-of-work, which is of real value to our membership base. Clearly, the reliable operation of today's and tomorrow's electricity T&D infrastructure is vital to society, industry, commerce and to the public at large. It is therefore a matter of concern for political leaders, policy makers, industry executives, as well as the power engineering supply base. ENARD has specifically been developed to respond to the challenges of network Renewal, Renewables Integration and Network Resilience, otherwise referred to as the "3Rs" of power systems development.



ENARD is a major new International Energy Agency (IEA) Implementing Agreement which provides an international forum for information exchange, research, analysis and collaborative research and development across a range of electricity transmission and distribution (T&D) network issues. Its vision is to facilitate the uptake of new operating procedures, architectures, methodologies and technologies in electricity T&D networks, such as to enhance their overall performance in relation to the developing challenges of network renewal, renewables integration and network resilience.

The first year's Annex I work programme has served as an essential reference datum and to identify and prioritize key themes to be addressed in future dedicated (R&D) Annexes. We have also been pleased to be called upon to contribute to other international forums, not least the IEA G8 Grid Integration Initiative. We therefore look forward to the further development of ENARD during the second year of operation, including the start of work on the new (R&D) Annexes and the further development of the membership base".

Two New Annexes

ENARD's 3rd Executive Committee (ExCo) meeting, held Trondheim, Norway, September 2007, formally adopted two new (R&D) Annexes, namely:-

- Annex II: "DG System Integration"; and
- Annex III: "Infrastructure Asset Management".

Annex II, to be operated by Arsenal Research (Austria) will aim to develop and exchange information and knowledge in relation to all aspects of Distributed Generation (DG) system integration and, specifically, to promote the possibilities for the implementation of active distribution networks. One of the key outcomes from Annex II will be the development of an authoritative set of guidelines for distribution network operators and political decision makers on how to manage the transition from today's passive distribution networks to the active networks of tomorrow.

Annex III, to be operated by EA Technology (United Kingdom) aims to address the challenges associated with the management of ageing T&D asset bases within the participating countries and beyond. Specifically, Annex III will act as a forum for the exchange of information and data in relation to the ageing, degradation, failure and end-of-life characteristics of the T&D asset base and the complementary development of new asset management techniques and methodologies.

It is planned that work will start on each of these two new Annexes, early 2008, which will then operate in parallel with the existing Annex I work programme.

Membership Development

ENARD continues to develop its membership base, with Spain becoming the eleventh country to formally commit to the Implementing Agreement. Spain is represented on the ENARD



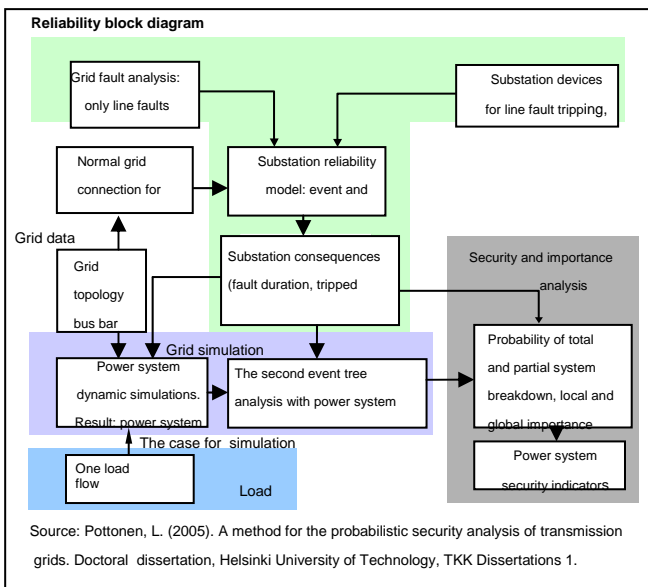
ExCo by the Ministry of Industry, Tourism and Commerce, and with Union Fenosa discharging the Spanish Annex I National Co-ordinator role.



Dialogue is in-hand with a number of other candidate participants and it is anticipated that further announcements will be made here, in the coming months.

Trondheim Transmission Systems Workshop, September 2007

The Trondheim meetings also included a highly successful workshop addressing transmission systems aspects, with 24 participants from 12 countries receiving a range of highly topical presentations and subsequently discussing these in a series of break-out sessions. Issues presented and discussed included Wide Area Monitoring Systems (WAMS), system operations and expansion, sub-sea transmission networks and technologies, probabilistic planning techniques and benefits frameworks.



The workshop concluded with the participants reaching agreement on the case for the development of a dedicated ENARD transmission systems Annex (Annex IV). This is now to be developed over the coming months, with a view to its formal presentation to the Spring 2008 ExCo meeting.

Annex I Spring 2008 Workshop on Intelligent Distribution Networks, micro-Grids and Active Network Management, Chester, United Kingdom.

The next in the series of Annex I workshops, to be held in Chester, United Kingdom, Monday 14th-Tuesday 15th April 2008 will address the theme of intelligent distribution networks, micro-grids and active network management. This workshop will form an essential input to the ExCo's considerations in relation to future activities in these areas and will also serve as an input to Annex II, on DG System Integration. Further details of the workshop will be published in due course on the ENARD web-site at www.iea-enard.org.

ENARD Contributes to IEA Initiative on Grid Integration of Electricity

ENARD's Chair, Stig Goethe, acting President of Power Circle, Sweden, contributed to the second round of discussions in relation to the IEA's initiative on the Grid Integration of Electricity from Renewable Energy, held Berlin, 10th October 2007. Mr Goethe's opening address to the meeting drew upon the work conducted in ENARD to date and highlighted some of the challenges to be faced in relation to the future operation and development of reliable electricity T&D networks, along with a range of possible solutions. The IEA Grid Integration initiative is co-funded by the IEA Secretariat, with additional financial support from the G8 countries, under the Gleneagles Plan of Action. It is to report to the Hokkaido G8 meeting, to be held July 2008.

Further information

Further information on ENARD, including participation in the Implementing Agreement and its activities, may be obtained from the ENARD web-site, at www.iea-enard.org or from the ENARD Secretariat at EA Technology:-

e:mail: enquiries@iea-enard.org

or

Tel. +44-(0)151-347-2445

ENARD, also known as the IEA Implementing Agreement on Electricity Networks Analysis, Research and Development, functions within a framework created by the International Energy Agency (IEA). The views, findings and publications of ENARD do not necessarily represent the views or policies of the IEA Secretariat or of all its individual member countries.