



Introduction to ENARD; the IEA Implementing Agreement on Electricity Networks Analysis, Research & Development

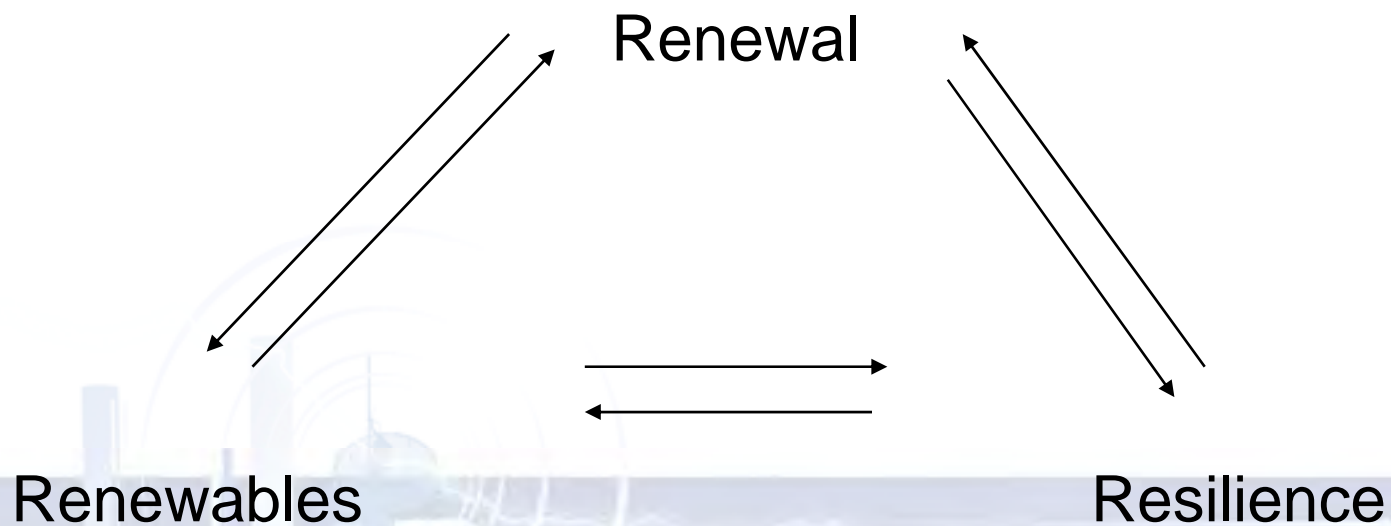
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The IEA Implementing Agreement on Electricity Networks Analysis, Research and Development (ENARD)

- ENARD:- an IEA Implementing Agreement addressing a variety of electricity T&D network issues
- Annex I work programme initiated September 2006

Context: The Three Rs of Power Systems Development

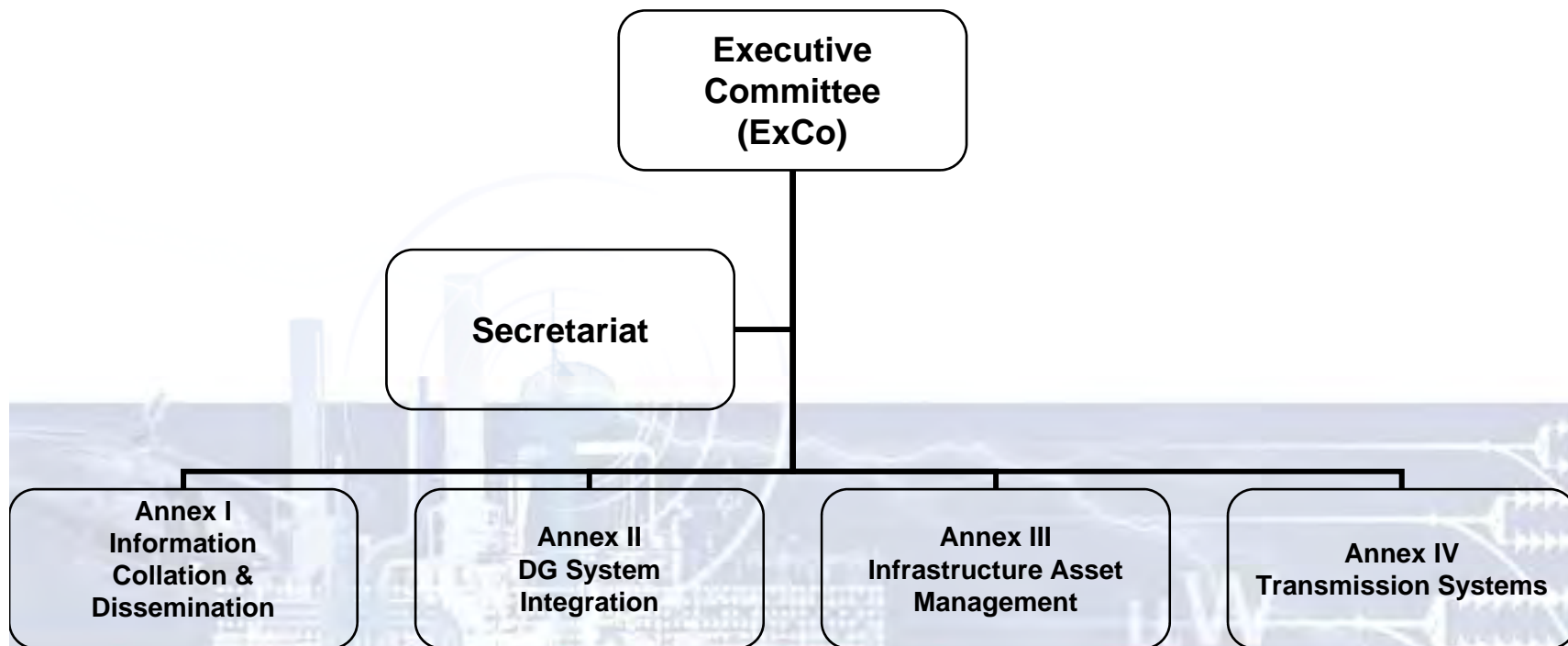




Mission:

“To provide a major international forum for information exchange, in-depth research and analysis and collaborative R&D in relation to electricity T&D networks”

Organisational and Management Structure



Participation



Austria



Belgium



Denmark



Finland



France



Italy



Netherlands



Norway



South Africa



Spain



Sweden



Switzerland



UK



USA

Annex I (Information Collation and Dissemination)

- Combination of collation and dissemination of pertinent T&D network related information and data, complemented by organisation and delivery of series of topical workshops
- Operating Agent and national co-ordinator (expert) roles defined
- Further role as the springboard for the development of future (R&D) Annexes

Inaugural Annex I Workshop, CESI Ricerca, Milano, September 2006



Annex I Workshops (delivered)

Date	Venue	Theme
September 2006	Milan, Italy	Distribution Systems and Association End User Issues
March 2007	Vienna, Austria	Integration of Distributed Energy Sources and New Business Models
May 2007	CIREN, Vienna	Managing an Ageing Infra-structure
June 2007	Leuven, Belgium	Economic & Regulatory Issues
September 2007	Trondheim, Norway	Transmission Systems Issues
April 2008	Chester, UK	Intelligent Networks
May 2009	Gotland, Sweden	Communications & Control
October 2009	Fredericia, Denmark	Balancing the Variability in Renewable Electricity Supplies
September 2010	Madrid, Spain	<i>Markets and Regulation:- Financing the Smart Grid</i>

Workshop Objectives

In general terms, workshops aim to identify:

- key challenges
- information requirements
- opportunities for future collaborative R&D
- complementarities with other initiatives and programmes
- associated opportunities to develop structured follow-on (R&D) Annexes

Annex I Associated Activities

- Information Collation and Dissemination
 - Specific Information sub-Task activities (reports, digests, briefings), as decided by the ExCo
 - Confidential information and data, within context of Annex I and further Annexes
 - Public dissemination via overview reports, outputs and events
- Web-site development and maintenance

Current Status

- Annex I: Operational and ongoing activities
- Annex II: “DG System Integration”; adopted by September 2007 ExCo Meeting and started work, May 2008
- Annex III: “Infrastructure Asset Management”; adopted by September 2007 ExCo Meeting and started work, April 2008
- Annex IV: “Transmission Systems”; adopted by September 2008 ExCo Meeting and started work, April 2009

Annex II DG System Integration – Overall Objectives

- to build up and **exchange knowledge** on DG system integration aspects and existing active network approaches **amongst the global players** in distribution networks
- to **promote implementation possibilities** for active distribution networks as an overall goal of Annex II
- to develop **guideline(s)** for network operators and political decision makers on how to manage and implement the **transition from passive to active distribution networks**

Annex III “Infrastructure Asset Management”

Aim: To address the challenges associated with the management of increasingly ageing T&D asset bases within the participating countries and beyond, via 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

Annex IV “Transmission Systems”

Aim:

- To develop a long term vision for transmission systems, beyond 2020

Objectives:

- To address the main barriers towards the development of transmission capacity
- To identify the most promising solutions and challenges in terms of expansion planning and market analysis, and secure operation of transmission networks
- To identify the need for new transmission technologies





ENARD Web-site

www.iea-enard.org



Innovators in Power Engineering