



## **ENARD:- IEA Implementing Agreement on Electricity Networks Analysis, Research and Development Newsletter No 8 - May 2010 Grid Policy Workshop Special Edition**

### **Joint ENARD/IEA Grid Policy Workshop held Paris, Wednesday 28th April 2010**

The Joint ENARD/IEA Grid Policy Workshop “Electricity Grids – a key enabler in the delivery of a sustainable energy policy”, took place at the UICP Congress Centre in Paris, Wednesday 28th April. The Workshop drew the support of some 85 delegates from 19 countries and was organised in conjunction with the Electricity Co-ordination Group and the IEA Secretariat. It represented a major milestone in ENARD’s evolution and development and featured a series of high level regional perspectives on the crucial importance of electricity networks, presentations from each of ENARD’s four operational Annexes, followed by a series of presentations from recognised sector leaders. The morning and afternoon panel sessions provided ample opportunity for dialogue and discussion and, crucially, provided an essential input to the ENARD Executive Committee’s subsequent considerations in relation to the priorities to be addressed in the further development of the overall ENARD work programme. This Special Edition Newsletter presents the highlights from the Workshop and also covers various other aspects of ENARD’s activities. Copies of the complementary Workshop Publication and the Workshop presentations may be accessed via the ENARD web-site at [www.iea-enard.org](http://www.iea-enard.org)

#### **Welcoming Address: Bo Diczfalusy, Director of Sustainable Energy Policy and Technology Directorate, International Energy Agency**



**Bo Diczfalusy, Director of Sustainable Energy Policy and  
Technology Directorate at the IEA**

The Workshop was opened by Bo Diczfalusy, Director of Sustainable Energy Policy and Technology Directorate at the IEA. Mr. Diczfalusy noted the development of ENARD, from 2006 on, to its present status as a highly regarded and pro-active Implementing Agreement, within the overall “family” of 42 IEA Implementing Agreements, with their access to some 6,000 expert participants, across the world. He

particularly welcomed the participation of South Africa in ENARD, via its membership of the Implementing Agreement from October 2009 on, as a good example of the IEA’s outreach and engagement with non-IEA member countries. Mr. Diczfalusy commented that the IEA had been active in the field of energy policy for over 30 years, with the interest in electricity network issues growing substantially, over the past 2 to 3 years. The IEA’s World Energy Outlook (WEO) forecasts a growing electricity consumption through to year 2050, a high penetration of intermittent renewable generation, complemented by significant developments in the demand side, including the widespread introduction and adoption of electric vehicles. The present Workshop was therefore particularly topical. Mr. Diczfalusy welcomed delegates to the day ahead.

#### **Keynote Address: Electricity Grids – a key enabler in the delivery of a sustainable energy policy – Marc Boillot, Senior Advisor, ERDF, France**



**Marc Boillot, Senior Advisor, Électricité Réseau Distribution  
France, delivering the keynote Address to the Workshop**

Mr.Boillot’s Keynote Address described the development of the Sustainable Grenelle scenario, as the key to achieving France’s carbon reduction targets, and, in particular, the implications of the scenario on the electricity network. The Sustainable Grenelle scenario itself is aligned with the IEA’s Act and Blue scenarios and forecasts an increase in French electricity demand of 40%, with a major part of this increase attributable to the almost total substitution of fossil fuels in the transport sector by electricity, together with the widespread adoption of heat pumps in the residential and commercial sectors. The direct CO<sub>2</sub> emissions from buildings are forecast to fall from their present level of 92Mt pa to near zero by year 2050. Complementary developments in the generation mix foresee this evolving to 30% renewables, 60% nuclear

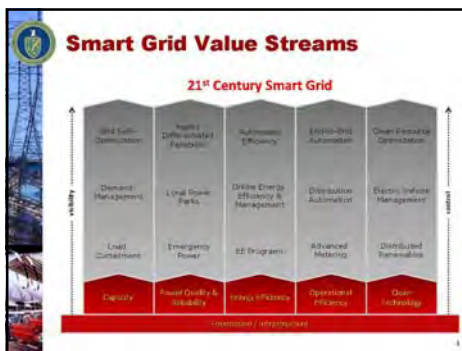


and 10% fossil fuel by year 2050, with a 60 GW/100TWh pa intermittent renewables penetration believed to represent an effective upper limit for France (i.e. excluding the contribution from hydro and biomass).

Mr.Boillot commented that the development and implementation of Smart Grids is seen as the key to the effective management of the electricity system in the future, with this being enabled by the Information Technology (IT) revolution and by complementary developments in relation to demand side management, electric vehicles, energy storage and renewables integration. Smart Grids will enable a whole new range of participants to enter the market, including aggregators and virtual power plants and will see the role of Distribution System Operators evolving with time, with the requirement to accommodate a far greater interaction with the demand side. Likewise, Mr.Boillot also commented that the successful development of the Smart Grid concept will also require “Smart Regulation”, in order for it to fully realise and deliver on its potential.

**Session 1: Regional Perspectives. Session Chair – John Baker, ENARD Annex I Operating Agent**

Session 1 saw the delivery of three quite distinct regional perspectives, covering the USA, Europe and South Africa.



**Smart Grid Value Streams:- from Eric Lightner’s presentation, US DOE (reproduced with the kind permission of Eric Lightner, US DOE)**

Eric Lightner’s presentation (US DOE), entitled “The Smart Grid – Enabler of the New Energy Economy”, described the development of the Smart Grid concept in the US context, including the identification of its 5 key value streams. These were described by Mr. Lightner in terms of:-

- Capacity
- Power quality
- Energy efficiency and CO<sub>2</sub> reductions

- Operational efficiency and
- Clean technology/Integration of renewables

Mr.Lightner then described the significant impetus provided to Smart Grids via the \$4.5B funding allocation in the America Recovery and Re-investment Act, with this including \$3.4B of investment grants, together with a \$615M funding package for the support of a series of Smart Grid demonstration schemes, over the next 3 to 5 years. Further developments in-hand within the US program activities were stated to include a Smart Grid Information Clearing House and a Smart Grid Maturity Model.

Professor Ronnie Belmans, of KU-Leuven and Chairman of the European Technology Platform (ETP) SmartGrids, followed with a presentation given from a European perspective. Professor Belmans opened his presentation by describing the electricity network challenges to be addressed, consequential upon the adoption of the European Union (EU) 20/20/20 targets, specifically in relation to the paradigm shift in generation and the substantial changes in the demand base and the supply/demand side interaction. He noted that Denmark’s large scale development of renewables, over the past ten years, had only been managed via the ability to handle two way power flows, to and from its neighbouring countries, a luxury that would not be available to the rest of Europe, as the various other countries developed their own renewable generating bases. Such considerations therefore place considerable challenges upon electricity networks, with this recognised via the development of the European Electricity Grid Initiative (EEGI), to be launched in Madrid, June 2010. The EEGI will provide a previously unprecedented \$2B funding package for electricity network related RD&D programmes.

Professor Belmans then described the nine Key Performance Indicators (KPIs) for Smart Grids, as identified via the ETP Smart Grids programme , prior to concluding with reference to the development of the “EnergyVille” facility in Belgium, as a living test bed for the realisation of such concepts in practice.



**Minnesh Bipath, Senior Manager: End Use & Infrastructure Management, of SANERI, provided a unique emerging economy perspective, to the Workshop**

The third and final presentation in Session 1 was delivered by Dr. Minnesh Bipath, from SANERI, the South African National Energy Research Institute, on the theme of “Electricity Grids – facilitating sustainable economic development in emerging economies”. Dr. Bipath’s presentation provided a unique insight into the essential role of electricity networks in an emerging economy, featuring an overlay of both first world and third world issues. Access to electricity and water have now been formally enshrined in legislation as basic human rights within South Africa and the electrification of society is therefore pursued as a key policy objective. Dr. Bipath described the considerable socio-economic benefits that may be attributed to the electrification of society, with these including those in relation to enhanced employment opportunities and improvements in healthcare, education, security, poverty alleviation and overall quality of life. These considerable benefits of electrification present massive challenges, both in financing the expansion and replacement of the ageing coal fired generation base and in the development of electricity networks, in themselves. Specific challenges were identified in relation to electricity pricing and affordability, energy efficiency, the adoption of renewables, reduction in fiscal losses, together with the overall human and physical resourcing required, to implement this in practice. Dr. Bipath concluded by noting a further consideration to be addressed, namely that in decoupling electricity consumption growth from GDP growth, as the South African economy develops and in an attempt to manage future CO<sub>2</sub> emissions increases.

## **Session 2: ENARD:- The IEA Implementing Agreement on Electricity Networks Analysis, Research & Development. Session Chair – Stig Goethe, Chair of the ENARD Implementing Agreement**

Session 2, chaired by Stig Goethe, of Power Circle, Sweden, and Chair of the ENARD Implementing Agreement, opened with introductory remarks from the Chair and an introduction to ENARD, provided by John Baker, ENARD Annex I Operating Agent. Mr. Goethe summarized ENARD as a “networking network about networks” and noted the various challenges to be addressed, including increases in transmission capacity, complex user (customer) patterns, customer in-feeds, localized grids, loss and retirement of central generation facilities, whilst at the same time, maintaining normal day-to-day operations (“keeping the lights on”). A key role for ENARD is therefore in developing a more complete understanding of the interaction between technologies, new business models, competition and regulation and in informing policy makers of such considerations.

John Baker, ENARD Annex I Operating Agent, then described the development of ENARD, from the time of its inception, circa 2005, to date and with its emphasis on the “3Rs” of electricity systems development, namely:-

- Renewal
- Renewables and
- Resilience

He then described the organizational and management structure for the Implementing Agreement and its development to its present status, with 14 participating countries and 4 operational Annexes.

Mr. Baker provided a more detailed insight into the Annex I programme-of-work, highlighting its development and delivery of the series of topical Workshops, its Information sub-Task and its various representation, engagement and outreach activities. He then provided highlights from some of the Annex I Workshops, prior to summarising some of the emerging “top level” policy messages to emerge from the work programme to date.



Dr.Helfried Brunner, ENARD Annex II Operating Agent, described the development and underlying rationale for Annex II, addressing DG System Integration issues. A major objective of Annex II relates to the development of an authoritative set of guidelines, both for Distribution System Operators and policy makers, to help facilitate the transition from today's essentially passive distribution networks to the active distribution networks, which will increasingly be required in the future. Dr.Brunner described the framework within which such active distribution networks will be required to operate, with their having to accommodate and address various technical, regulatory and market related operating requirements. Dr.Brunner concluded his presentation by highlighting the conclusions to emerge from the Annex II programme-of-work to date, prior to identifying a series of recommendations for future actions.

In contrast to Annex II, which is essentially addressing a series of forward looking issues, Annex III "Infrastructure Asset Management" addresses equally important issues in relation to the effective management of the present day electricity T&D infrastructure. John Sinclair, ENARD Annex III Operating Agent, therefore described the development of Annex III and its Phase One work programme, addressing distribution asset management, with its focus on five principal distribution asset groups. He then went on to describe the principal conclusions to emerge from the Phase One work programme, together with the associated recommendations to emerge from this work, including the basis for a proposed Phase Two work programme, to address a series of asset specific aspects.

The presentation on Annex IV, ENARD's most recent operational Annex, established April 2009, was provided by Professor Kjetil Uhlen, joint Operating Agent for Annex IV. He described the overall objective and scope for the Annex and highlighted the significance of transmission grids, prior to presenting a long term vision for transmission system developments. He described the essence of Annex IV's two principal workstreams, namely Task 1, addressing transmission expansion planning and market analysis, and Task 2, addressing transmission system operation management and security. He concluded his presentation by abstracting the key messages to emerge from Annex IV, just half way through its two year work programme, prior to concluding that "the future is electric", with electricity taking increased market share as a primary energy carrier, the increasing need for transmission capacity and energy storage to manage uncertainty and

variability and the requirement for smarter ways of planning and operating the system.

### **Morning Panel Session "Research or Reality?" Moderator – Hermann Halozan, Chairman, IEA End Use Working Party**



**The morning Panel Session "Research or Reality?" ably chaired by Hermann Halozan, Chairman of the End Use Working Party**

The morning Panel Session comprised all the morning speakers, supplemented by the Chairs of the High Temperature Superconductivity (HTS) and Photovoltaic Power Systems (PVPS) Implementing Agreements. It was ably chaired by Hermann Halozan, Chairman of the IEA End Use Working Party (EUWP). Key points of discussion and their responses included:-

- The approaches to Smart Grids in the USA and Europe; are they essentially similar, or different? The response from the Panel was in terms of:-
  - Their being essentially very similar in their characteristics
  - European KPIs aligning well with US rationale
  - Care must be taken to compare like with like, eg Automated Meter Reading (AMR) is not considered a Smart Grid attribute within Europe
  - US is more proactive and successful in "selling" the concept
  - Implementation of the concept in the US has benefited from the Stimulus package.
- Is there sufficient engagement with other stakeholders, outwith the T&D sector, eg with customers, ICT providers etc? The response from the Panel was in terms of:-



- There has been and continues to be substantive engagement with the ICT sector in both the EU and US approaches
- Engagement with appliance manufacturers is somewhat more problematical
- Reference to the telecommunications industry may provide a benchmark for appropriate good practice.
- What are the implications on the grid of policies pursuing a CO<sub>2</sub> free vision, relative to a renewables vision and vice versa? The response from the Panel was in terms of:-
  - The differences will be more pronounced at the distribution network level, with the renewables approach imposing a requirement to accommodate and integrate a variety of distributed energy sources
  - The impact on the transmission system is likely to be less pronounced
  - There is likely to be a growing emphasis on utilisation issues in either scenario, eg analogous to that in the 1970s, predicated at the time on a predicted abundance of low cost nuclear electricity
  - The operation of the network is likely to be somewhat different, dependent on the generation approaches adopted
  - The adoption of balanced generation portfolios is likely to require a greater degree of flexibility from the grid in general.
- What information is available on asset management experiences in relation to Smart Grids? The response from the Annex III Operating Agent was in terms of:-
  - Very little, if any firm information available
  - Identified as an important research topic
  - Some suggestion that “sweating the assets” in a Smart Grid would increase risk
  - No substantive Smart Grid base per se, hence the lack of substantive data.
- Will the implementation of Smart Grids impact on the overall planning of electricity systems? The response from the Panel was in terms of:-
  - Whilst the development of the concept on the distribution network adds to uncertainty in terms of planning, it also creates opportunities, which should be utilised
  - Pursuit of an aggressive programme of utility unbundling over the past ten to twenty years has served to create a series of entities, each with defined boundaries. Realisation of the full benefits of the Smart Grids vision will require interaction at these boundaries and the evolution of the regulatory framework, to accommodate this
  - There is no defined path for the roll-out of Smart Grids, although the (US) Smart Grid Maturity Model (SGMM) will show what is required for successful implementations
  - The SGMM will also provide a firm methodology to collect data and to develop cost:benefit justifications.
- What could act to limit the realisation of the Smart Grid vision? The response from the Panel was in terms of:-
  - There is a clear need to engage with and educate the customer, to ensure that the customer recognises the value of the concept and thereby demands appropriate Smart Grid compatible domestic appliances
  - Funding, as a major obstacle to the realisation of prototypical applications demonstrators
  - The cost of energy is still such at the present time that, in many instances, it does not provide a clear financial case for the adoption of Smart Grid solutions
  - The requirement for an effective tie-up between the traditional power systems infra-structure and the ICT overlay on this
  - The requirement to develop a substantive justification for the adoption of the concept in emerging economies
  - The over-riding requirement to engage with and educate key decision makers.



Delegates taking the opportunity to “network about networks” in the pleasant surroundings of the UICP Congress Centre

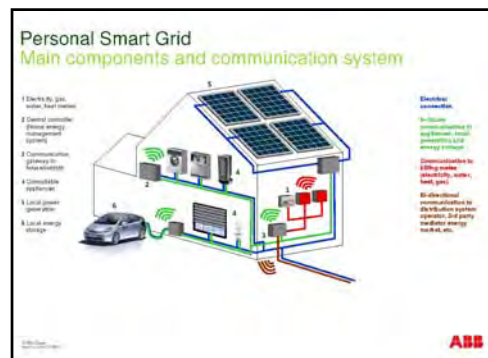
### Session 3: Future Challenges for Networks. Chair - Pierre Mallet, ERDF

Session 3, chaired by Pierre Mallet, deputy head of ERDF’s network division, featured presentations from a series of industry leaders and the IEA Secretariat, in relation to the future challenges for electricity networks.

The first of these presentations was delivered by Bart Stoffer, Director Power Economics Europe, for GE Energy and addressed the accommodation of future projected developments in the generation mix, from the perspective of GE Energy’s internal consulting resource. Mr.Stoffer opened his presentation by commenting that most large inter-connected power systems can accommodate circa 25% renewables at their peak demand periods, prior to differentiating between variability and uncertainty in generation. He proceeded to develop his presentation by reference to six specific US studies and the lessons learnt from these, in terms of impediments, cost and success factors.

Peter Jones, Head of Technology, ABB UK, then provided a presentation on the role of new technologies, from a power engineering equipment supplier’s perspective. Mr.Jones noted the many and varied stakeholders involved in the development of the electricity systems of the future, including governments, generation, transmission, distribution and supply companies, regulatory bodies and the customer. He noted the crucial importance for any manufacturer to fully understand the motives of these various stakeholders and their determination to drive forward and deliver on top level policy objectives, prior to investing in the development of the suite of new technologies required. He then drew upon ABB’s experience in the UK and its interaction with government and the electricity supply industry, such that it had developed the necessary confidence to make significant investments, to enable it to service

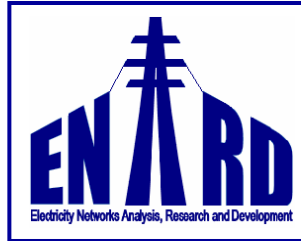
the requirements of the sector, as it develops into a low carbon electricity supply system. ABB had identified specific opportunities in relation to demand response, the integration of electric vehicles, renewables integration and network reliability and efficiency, with a major issue identified in the UK context as that of balancing the system. This had therefore led to the development and launch of their SVC Light System with Energy Storage, able to provide up to 50MW discharge capability and with discharge durations of between 5 and 60 minutes. He concluded by noting ABB’s developing appreciation of the financial benefits that may be exploited via the adoption of this technology, although equally recognised that the realisation of such benefits was becoming increasingly complex.



“Personal Smart Grid ” Peter Jones, ABB UK  
(reproduced with the kind permission of ABB Corporate Research Centre in Daettwil)

Mr.Lars Fodstad, Senior vice-President, Statkraft, Norway, and ENARD vice-Chair then provided a Norwegian perspective on harnessing the potential of the North Sea offshore wind resource. He referenced the European Network of Transmission System Operators for Electricity (entsoe) ten year development plan, which clearly identified wind power as developing as a major part of the electrical power system and with dispatch priority. He developed his presentation by reference to the Tradewinds projects, highlighting the variability in output that would have to be accommodated, eg including a reduction in output of 95,000 MW over a four day period.

Mr.Fodstad then highlighted the substantive Norwegian hydro-resource, both in terms of reservoir hydro and actual or potential pumped hydro, that could be deployed or developed to provide a regional balancing resource, via a series



of transmission system interconnections and expansions.

The fourth and final Session 3 presentation was provided by David Elzinga, from the IEA Secretariat. Mr. Elzinga's presentation covered the theme of developing a common vision for the grid of the future and reported on the IEA Secretariat's considerations in this area. He highlighted the essential role of technologies, as required to meet the objectives of the IEA 450 reference scenario, intended to mitigate the deleterious effects of climate change to a temperature increase of no more than 2K. Energy efficiency measures were noted to represent the largest single part of the abatement options considered and with electricity becoming increasingly significant as an energy source. Mr. Elzinga noted the IEA Secretariat's view that robust technology policies are believed to be an essential key to success here and described the IEA Secretariat's work, in terms of the development of technology roadmaps. Mr. Elzinga then highlighted the significant increase in emphasis on electricity network issues within the IEA, including that in the forthcoming ETP 2010 publication (Energy Technology Perspectives 2010). He concluded by describing the work in hand in terms of developing a Smart Grids Roadmap, to be published late 2010/early 2011.

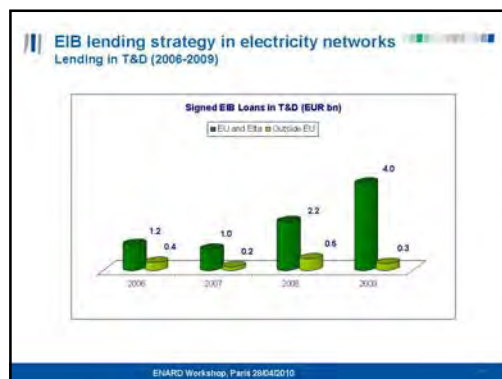
**Session 4: Regulation, Financing and Investment. Chair: Rainer Bacher, Bacher Energy, Switzerland**

Session 4, chaired by Rainer Bacher of Bacher Energy and Swiss Alternate on the ENARD ExCo, featured two presentations in relation to regulatory and financing aspects.

The first of these was provided by Ms.Cécile George, Director of Electric Grid Access, Commission de Régulation de l'Énergie (CRE), France, and addressed the subject of developing the regulatory framework. Ms.George opened her presentation by describing the role of regulators in general and of CRE, in particular. She then identified three specific challenges to be addressed, namely those in relation to renewables integration, new end use applications and demand side management. She commented that tariffs form the essential heart of any regulatory framework, determining the rate-of-return that may be achieved on the asset base, although noting other relevant considerations as including stability, predictability and innovation incentives.

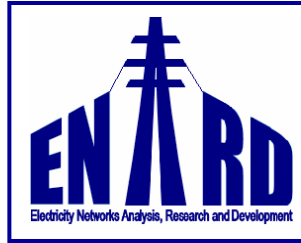
Ms.George developed her presentation with reference to CRE's regulatory approach to interconnections, connection capacities and Smart Grids, as the three principal solutions mechanisms to the challenges previously identified above. She concluded by noting that regulators have the tools available to frame the development of networks in accordance with future (European) energy policy development, although noting the requirement for a comprehensive dialogue between the many stakeholders involved.

The final presentation of the afternoon was provided by Dr. Paola Bresesti of the European Investment Bank (EIB), Luxembourg, on the subject of financing and investment.



EIB Lending in the Electricity T&D Sector, 2006 to 2009 (reproduced with the kind permission of Dr Paola Bresesti, EIB)

Dr.Bresesti opened her presentation by identifying the four priority lending areas for the EIB, with loans in relation to T&D networks representing 30% to 40% of total energy related lending in the European Union in 2009, amounting to some €4B of a total energy related lending of €11B. The EIB's lending into the T&D sector is apportioned 70% to distribution and 30% to transmission. Dr.Bresesti noted that the transmission system infra-structure is generally somewhat younger than that of the distribution asset base, with ageing and asset replacement being a somewhat more pertinent consideration in the latter. She also highlighted the EIB's role in the (part) financing of a number of major transmission system interconnection projects. Dr.Bresesti commented on the anticipated development of the Smart Grid and that the EIB recognised this as a candidate for a significant increase in lending volumes, through to year 2020.



She noted that the forthcoming series of applications demonstrators should provide meaningful data in relation to the costs and benefits of such schemes.

**Afternoon Panel Session:- “Electricity Grids – Enabler or Bottleneck?” Moderator – Michel de Nigris, ERSE SpA, and ENARD vice-Chair.**



**The afternoon Panel Session responding to questions on the theme “Electricity Grids - Enabler or Bottleneck?”**

The afternoon Panel Session comprised all the afternoon speakers, supplemented by Hans Nilsson, Chair of the DSM Implementing Agreement. It was ably chaired by Michel de Nigris of ERSE SpA and ENARD vice-Chair. Dr. de Nigris opened the Session by inviting Mr. Nilsson to say a few words on the work of the DSM Implementing Agreement, which he was pleased to do, highlighting the need for effective customer communications (as opposed to education) and the DSM Implementing Agreement’s new Task on product branding. Dr. de Nigris then expanded on the terms-of-reference of the Session in relation to it seeking to address such considerations as:-

- The funding of Smart Grids
- The role of demonstrators
- The apportionment of costs and benefits and
- The financing of research.

The discussion developed to include the following considerations and Panel responses:-

- How best to initiate Smart Grids projects; should specific funding be allocated to “buy” trials and learning experiences? The response from the Panel was in terms of:-

- Clear recognition from a CRE regulatory perspective of the need for prototypes. For example, a recent proposal to cover the cost of a scheme involving 300,000 smart meters had been approved for immediate sanction
- Recognition that the funding of the Smart Grid in general is a “hot topic”, with a grouping of European power utilities presently in dialogue with the European Commission on this subject
- The differences in funding objectives between the US and EU noted, with the US being somewhat more amenable to the funding of public interest research
- The emergence of the European Electricity Grids Initiative, as a major funding platform for shared cost RD&D.
- The requirement to reconcile (investment) costs and benefits – who pays and who benefits? The response from the Panel was in terms of:-
  - The role of demonstration projects in providing firm information and data in relation to costs and benefits
  - The requirement for all the parties involved to make a return on the Smart Grids concept
  - The role of the IEA Secretariat in convening a Workshop on the roles of business and government in energy related RD&D.
- Professor Belmans requested the Panel’s response in relation to the one problem that is often overlooked, that in relation to human resources. The response from the Panel was in terms of:-
  - ABB’s recognition of this as a potentially limiting problem, via their participation in the (UK) Power Academy and with their further proposals to government for the DNOs to accommodate the provision of enhanced training requirement in their cost bases



- ERDF's experiences in terms of the Smart Grid serving to attract a greater number of younger persons into the industry
- Likewise, the success of IDEA (Inventer la Distribution Electrique de l'Avenir), at the University of Grenoble, in doubling its intake via the advent of the Smart Grid concept, with almost half of these being women.
- Mr.Fodstad commented that the very significant permitting delays, experienced in transmission line developments, would mitigate against the achievement of the year 2020 targets, unless appropriate measures were taken.
- Dr.de Nigris concluded by noting the four key considerations to emerge, namely those in relation to customer engagement, the financing of demonstration schemes, permitting and human resources development.
- The different perspectives and priorities of the emerging economies, relative to those of the developed world
- The significance of the Smart Grid, not only in terms of its capabilities, but also as a clear focus, for the identification and prioritisation of electricity network issues
- The requirement to engage with the demand side
- The essential role of demonstrators
- Costs and benefits
- Markets, financing and regulation and
- The implications of all the above towards energy policy development.

### **Closing Remarks – Stig Goethe, Chair of the ENARD Implementing Agreement**

Mr.Goethe provided a brief overview of some of the principal messages to emerge from the Workshop, including that the various stakeholders now have a better developed understanding of each other, the essential role of the regulatory framework and the importance of international collaboration and knowledge exchange. He concluded that ENARD now had a clear obligation to deliver in relation to such challenges, both to its full range of participants and in support of the IEA Secretariat's own work. He expressed his thanks to the Annex I Operating Agent and ENARD Secretariat, for their organisation of the Workshop and to all the contributors and participants who had made the event possible.

### **8th ENARD Executive Committee Meeting, held Paris La Defense, 29th-30th April**

The Joint ENARD/IEA Grid Policy Workshop was immediately followed by the convening of the 8th ENARD Executive Committee (ExCo) Meeting, hosted by ERDF in their offices at Paris La Defense. The ExCo took due consideration of the various messages to emerge from the Workshop, with these being noted to include:-

Significantly, the ExCo voted to formally initiate the process which will lead to the submission of a formal request for the renewal of ENARD's present 5 year Term, from July 2011 on. A dedicated ExCo sub-Group will now work on the development of a draft Strategic Plan, for the consideration of the full ExCo, at its 9th Meeting, to be held in Madrid, September 2010.

### **Membership and Participation**

Fourteen countries presently participate in the ENARD Implementing Agreement, as shown below.



Interest in membership and participation continues to develop, with three observer countries participating in the 8th ExCo Meeting.



## **Annex I Workshop on "Markets & Regulation - financing the Smart Grid", to be held Madrid, Spain, September 2010**

The next in the series of ENARD's topical Annex I Workshops will be held in Madrid, Spain, 28th-29th September 2010 and will address the theme of "Markets and Regulation - financing the Smart Grid". This latest in the series of topical Annex I Workshops is aimed at stimulating discussion in relation to the challenges to be addressed in relation to financing the significant investments required, to realize the Smart Grids vision, in its various forms throughout the world. The structuring and operation of electricity markets, in combination with the development and application of appropriate regulatory frameworks, are likely to be major influencing factors in determining the sector's ability to finance the levels of investment required, over the next decade and beyond. The Workshop will aim to establish the extent and magnitude of the challenge to be addressed, prior to examining associated regulatory, implementation, market and economic related considerations. The requirements for future actions and initiatives will be identified and these will be encapsulated, in terms of messages for policy makers. A full Workshop programme will be posted on the ENARD web-site, mid June.

ENARD is an 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.

## **Further information**

Further information on ENARD, including participation in the Implementing Agreement and its activities, may be obtained from the ENARD website, at [www.iea-enard.org](http://www.iea-enard.org) or from the ENARD Secretariat at EA Technology:-

e:mail: [enquiries@iea-enard.org](mailto:enquiries@iea-enard.org)

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