

EXECUTIVE SUMMARY

Session 6: Challenges for DSOs in new business environments

SUMMARY

Session 6 has for 2017 focused on the following four key blocks of papers in our selection:

- Block 1 New DSOs roles in a digital world
- Block 2 Development of regulation
- Block 3 Enabling flexibility
- Block 4 Asset and Risk Management

The blocks addresses each prominent issues related to the DSO business. The first block highlights issues related the role of DSOs in the age of digitalization. The second block focuses on the ongoing developments in regulation of the distribution business. The third block targets different aspects of how to meet the need for increased flexibility in load, generation and in the network. Finally, the fourth block looks into the recent developments within asset and risk management, which are relevant for the DSO business.

On particular interest the round-tables around future cost reflective and dynamic tariffs, decision making frameworks, societal benefits of Smart Grids and Block-chain (the 2 last round-tables where joint with Session 5). Also worth mentioning is the active participations of authorities (European Commission, Regulators and energy agencies') in both papers and round-tables. In total Session 6 had accepted 97 papers.

MAIN SESSION 6: Block 1

New DSOs roles in a digital world

The papers presented in this block covered data management platforms, modelling data flows and establish customer models to enable flexibility and the active customer. Also covered is the experiences of smart meter usage and roll-out. In this context it is evident that different countries and companies are in different phases and that the community can really learn from each other in order to find best practices and align view moving forward.

MAIN SESSION 6 - BLOCK 2

Development of regulation

The papers presented in this block gave an insight in the development of regulation in different countries in Europe. Issues regarding innovation incentives for flexibility and smart grids were covered including an approach on regulation of supply continuity as well as an example on how DSOs can make information on end-customer interruptions available for all market actors (electricity retailers) as a change to a new supplier-centric-market model.

MAIN SESSION 6 - BLOCK 3

Enabling flexibility

The papers presented in this block addressed different aspects related to how to enable and improve flexibility in distribution grids – covering e.g. innovative tariffs, new technologies and services for flexibility and actors enabling increased flexibility. Examples of topics that were presented were local energy market solutions, planning the pathway for power based tariffs and reporting experiences from a large scale testing scheme at the island of Gotland.

MAIN SESSION 6 - BLOCK 4

Asset and Risk Management

This block opened up a new focus for Session 6. The presented papers covered strategic asset/risk management models that look holistically on the business situation for the DSO as well as more operative asset management, for example guidelines and identifying infrastructure change. Of special interest is the Smart Grids Architecture Model (SGAM), common information model (CIM) and decision making frameworks like ISO55000 and PAS55.

ROUND TABLE 2

Cost reflective dynamic tariffs for the future

The Round Table on cost reflective dynamic tariffs was chaired by Dag Eirik Nordgård (CIRED Session 6 rapporteur) with contributions from Carl Johan Wallnerström (Electricity market inspectorate, EI, Sweden), Laurent Gilotte (Enedis, France) and Jukka Lassila (Lappeenranta University, Finland).

The round-table discussed topics and challenges related to introduction of new types of cost reflective dynamic tariffs - as seen from different perspectives (regulator, DSO and academia). The background for choosing this topic is that new trends are increasing the grid's peak power demand, while distribution network tariffs are still mostly based on energy use. Many countries are therefore working on developing and implementing tariff structures that give appropriate incentives to the costumers, which will give the right incentives for optimal development of the electricity distribution system.

The panellists gave each an introductory view on the topic, followed by 50 minutes of questions from the audience answered by the panel.

ROUND TABLE 3

Establishing a decision making framework

This Round Table on decision making frameworks was chaired by Peter Söderström (CIRED Session 6 chairman) with contributions from Stefan Sadnicki (Copperleaf, UK), Diego Klappenbach (UMS, Sweden) and Jouni Pylvänäinen (Elenia, Finland). Topics included why decision making frameworks are important, an overview of the standards PAS55 and ISO55000 and how it can be practically applied in DSO's. Key questions oriented around the business value framework business and relation between risk, strategy and value and how that can be managed.

ROUND TABLE 6

Societal cost/benefit of smart grids (Sessions 5 & 6)

This Round Table on societal cost/benefits of smart grids was a joint Round Table between Session 5 and 6 and was chaired by Peter Söderström (CIRED Session 6 chairman) and co-chaired by Fabrizio Pilo (CIRED Session 5 chairman). Contributions came from Ricardo Prata (EDP, Portugal), Richard Hampton (European Commission, Belgium), Jens Lundgren (Regulator Ei, Sweden), Manuel Weindorf (GE, Germany), Yoann Desgrange (Enedis, France). The panel's view was that there is a positive societal cost/benefit of smart grids.

POSTER TOURS SESSION 6

4 poster tours were provided matching each of the above blocks. The poster tours covered the full context of Session 6 as outlined in the special report. The poster tours were led by the Chairman and rapporteurs of Session 6 Peter Söderström (tours 1 and 4), Peter Kiær Hansen (Tour 2) and Dag Eirik Nordgård (Tour 3). Approximately 25-30 authors and other participants joined each tour.

CONCLUSIONS

The papers, presentations, posters, round table discussions and other contributions across all Session 6 activities has been of a high quality and the engagement of the attendees has been good. The conference app worked very well for the round tables, however the setup during main sessions with a short Q/A after each paper presentation made it hard to use the app. Experiences show that questions like asset/risk management and flexibility will remain a focus for the next conference.