

## EXECUTIVE SUMMARY

### Session 6 – DSO business environment enabling digitalization and energy transition

#### SUMMARY

Session 6 accepted 159 papers who were presented in the blocks of the main session, round tables and the poster tours.

Session 6 focuses on the evolving business environment and regulation of the DSO to support active customer's and society's energy transition. This includes the fast paced and disruptive developments around digitalization, collaborative economy, market based flexibility services, integration of microgrids, storage & e-mobility and, not to be forgotten, cyber-security to ensure a sustainable and efficient electricity distribution infrastructure.

#### MAIN SESSION 6 - BLOCK 1 *Flexibility*

6 papers were selected and presented in this block focusing on various aspects related to how to meet the need for increased flexibility.

**Convenors:** Dag Eirik Nordgård (SINTEF Energi), Ingrid N., Christie (Eidsiva nett)

#### MAIN SESSION 6 - BLOCK 2 *Legacy DSO*

6 papers were selected and presented in this block focusing on the more classical aspects of DSO business, e.g. related to asset management.

**Convenors:** Ingrid N., Christie (Eidsiva nett), Dag Eirik Nordgård (SINTEF Energi)

#### MAIN SESSION 6 - BLOCK 3 *Future DSO*

6 papers were selected and presented in this block focusing on among other things new regulations and visions for the DSO in the years to come-

**Convenors:** Dag Eirik Nordgård (SINTEF Energi), Ingrid N., Christie (Eidsiva nett)

#### MAIN SESSION 6 - BLOCK 4 *Information management*

6 papers were selected and presented in this block focusing on various aspects related to information management.

**Convenors:** Ingrid N., Christie (Eidsiva nett), Dag Eirik Nordgård (SINTEF Energi)

#### ROUND TABLE RT8 – *Cyber security in the DSO business*

This Round table was dedicated to the issue of cyber security. Cyber security and Information security are focus areas for DSOs as well as regulators. New EU regulation like GDPR and the NIS directive have set the basis for a future, where e.g. private energy consumption data and security of supply must be protected and secured 24-7-365.

The topic was addressed from representatives from DSOs, regulator, consultants and manufacturers.

**Convenor:** Gerd H. Kjølle, SINTEF Energi

**Speakers:** Carlos Montes Portela (Enexis), Guro Grøtterud (NVE), Steve Little (Frazer-Nash Consultancy), Jean-Yves Pochtier (POCTHIER)

## **ROUND TABLE RT10 - From technologies to new business models. Roadmaps for the digitalisation of the networks**

The Round table provided an overview of the status and expectations of the power system evolution, mostly focussed on Europe (with particular focus on the ETIP SNET Vision 2050), USA (with particular focus on USA distribution grid modernisation programme) and India (with focus on the expectations in India for the new market opportunities enabled by 'digitalization' of the power sector).

**Convenor:** Illaria Losa, RSS

**Speakers:** Mark McGranaghm (EPRI), Nikos Harziargyriou (HEDNO), Veli-Pekka Saajo (CEER), Reji Kumar Pillai (ISGF)

## **ROUND TABLE RT12 – Flexibility and Local Markets**

The Round table provided an overview of the status regarding different aspects of flexibility in the distribution grid. Flexibility is getting more and more important for the secure operation of the grid. It is driven by the significant increase of intermittent energy resources, increased lead times for building new networks and the regulative push for efficient use of the grid.

**Convenor:** Yvonne Ruwaida (Vattenfall Eldistribution AB)

**Speakers:** Enno Böttcher (NODES), Luis Manuel Santos Moro (EDP España), Peter Hermans (Stedin), Wilhelm Cramer (RWTH Aachen University)

## **ROUND TABLE RT13 – Future role of the DSO**

The final Round table of Session 6 provided a discussion of the future perspectives concerning the role of the DSO. The energy transition and its implementations (for example the Clean Energy Package in Europe) changes the way the energy system need to work. Various aspects regarding this topic was addressed by DSO representatives from Portugal, Finland and Germany, together with the views of the regulator (CEER)

**Convenor:** Dag Eirik Nordgård (SINTEF Energi)

**Speakers:** João Torres (EDP distribuição), Thomas Schaefer (Stromnetz Berlin), Tomi Yli-Kyyny (Caruna), Veli-Pekka Saajo (CEER / Finnish Energy Regulatory Authority).

## **POSTER TOURS**

Eight guided tours were held in Session 6, related to the four main topic *Flexibility*, *Legacy DSO*, *Future DSO* and *Information management*. The numbers of participants varied from tour to tour and during the day from less than 10 to more than 30.

## **CONCLUSIONS**

The different activities related to session 6 were generally well attended, and the feedback received from the audience (through questions and comments) and the presenters indicates that the topics of the session were well received. The administration and lead of the session worked well.