WindEurope 2018
The global on & offshore conference

25 – 28 September, Hamburg

Call for abstracts topics

Topics relevant to:

Onshore wind energy   Offshore wind energy   Scientific review by EAWE.

Topics plus non-exhaustive list of sub-topics:
Assessing the wind resource and turbine performance
• Measurements and wind speed predictions • Mesoscale modelling • The model chain • Wake effects • Forecasting • Wind atlases • Performance assessment • Complex sites and adverse climatic conditions • New sensing devices • Real-world experiences • Big data (specific applications) • Resource assessment of sites to be repowered/refurbished
Developments in turbine technology
• Innovations in the design of rotors, towers, support structures, foundations • Going offshore: problems, challenges, solutions • Going even bigger: 10-20MW wind turbines • Floating wind turbines • Improvements and experience with load control and performance enhancement • New developments in drive trains and generator technologies • Advanced electrical systems • Real-world experiences • Big data integration (specific examples) • Turbines for low-wind sites
Digitalisation (transversal)
• Managing data • Sharing data • Protecting data • Using data for improved operations • Using data for improved industrial processes • Using data for improved integration • Artificial intelligence / Robotics • Using data to maximise value of every MWh produced • Using data to improve power forecasts • Experience from other industry sectors in using digital technologies

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End-of-life issues

- Policy & regulatory issues
- Technology options
- Life extension, repowering, decommissioning & recycling: real life experiences
- Environmental impact of repowering/refurbishing projects
- Potential for repowering/refurbishing project financing

Environmental impacts, social acceptance & spatial planning

- Impact of wind energy on global climate
- Local impacts (wildlife)
- Survey techniques
- Radar
- Best practices in corporate social responsibility
- Environmental impact of repowering/refurbishing projects
- Co-existence with other industries
- Spatial planning
- Social acceptance: ownership models, community benefits – real life examples of successful partnership between utilities and cooperatives or other forms of organisations
- Waste management

Financing wind energy

- Financing wind in emerging markets
- Financing wind in a merchant environment
- Institutional investors
- Auction design
- Purchasing Power Agreements - PPAs
- Alternative methods of financing including cooperative/community investment
- The potential for a bond market in funding wind
- Lending conditions and credit markets

Health & safety

- Safety culture and/or leadership
- Incidents and lessons learned
- Standardisation
- Best practices in crisis management
- Training

Installation and logistics

- The development of wind energy hubs, ports and hinterlands
- Installation technologies and examples from other industries
- Real-world experiences
- Future logistics, transport and access

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Integrating wind into the energy system 🌀 ❋ 🎓

Grid Integration
- Big data applications for grid integration
- Data exchanges with TSO & DSO, and governance arrangements
- System integration studies
- load aggregation technology / approaches
- virtual power plants
- blockchain technology

Electrical aspects and the grid

Grid support services as additional revenue streams
- Main barriers and best practices regarding the participation of wind farms in balancing and congestion management markets, and other ancillary services
- Innovative storage and grid integration practices
- Operating wind farms in hybrid mode (with storage, with PV, etc.)

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Market design
- Priority dispatch/access and rules for curtailment in times of system stress
- Enhancing system flexibility (e.g. design of intraday market, limiting must-run generation, local vs. single flexibility market)
- Long term investment signals: design of support schemes and market integration (e.g. energy vs. capacity based), price formation (e.g. bidding zone configuration) and potential for hedging instruments

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Operations and Maintenance 🌀 ❋ 🎓

- Reliability, condition monitoring
- Operation & maintenance
- Big data applications to O&M (specific examples and case studies)

Supply chain and procurement 🌀 ❋ 🎓

- Procurement issues
- Supply chain models
- Smaller components
- Big data applications to supply chain management
- Sustainability of the supply chain

Using wind to decarbonise heating, transport and other sectors

Electrifying transport and heating
- using electrification of heating and transport to facilitate grid integration of variable renewables
- using heat pump systems to the electrify heating and contribute to demand-side flexibility
- using charging infrastructure for electric cars to contribute to demand-side flexibility
- grid infrastructure requirement
- challenges to grid operators

Using power to generate gas
- Using clean electricity to produce hydrogen and methane
- Infrastructure challenges
- Grid integration challenges

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