

Addressing the Geo-Spatial Aspects of Variable Renewable Energy in Long-Term Planning

Expert workshop agenda

12-13 December 2019 | Gustav-Stresemann Institute, Langer Grabenweg 68, 53175 Bonn, Germany

Thursday, December 12th

8:45 – 9:15	Registration and Coffee
9:15 – 10:00	<p>Session 1 – Introduction</p> <p>Dolf Gielen (IRENA) – Welcome</p> <p>Participant self-introductions</p> <p>Asami Miketa / Bilal Hussain (IRENA) – Scene setting presentation</p> <ul style="list-style-type: none"> • Overview of the workshop structure • Recap of the AVRIL 2017 report and of the previous AVRIL workshops • Geospatial representation in the long-term energy planning and models
10:00 – 10:45	<p>Session 2 – Country experience on the use of modelling tools for official energy planning and the representation of geo-spatial aspects</p> <p>Moderator: Daniel Russo (IRENA)</p> <ul style="list-style-type: none"> • Daniel Russo (IRENA) – Insights from IRENA regional workshops • Abu Dhabi - Ahmed Ali Al Bloushi (Department of Energy) • Saudi Arabia – Ali Al Heji (Policy & Strategic Planning Deputyship, Ministry of Energy, Industry and Mineral Resources) • Egypt - Abdel Zaher Elshafey (Egyptian Electricity Holding Company, Ministry of Electricity and Renewable Energy)
10:45 – 11:05	Coffee break
11:05 – 11:50	<p>Session 2 – Continued</p> <p>Moderator: Pablo Carvajal (IRENA)</p> <ul style="list-style-type: none"> • Germany - Dennis Volk (Federal Network Agency) • Croatia - Lucija Krstanović (Energy Institute Hrvoje Požar) • Lithuania - Arvydas Galinis (Lithuanian Energy Institute) • European Union - Andreas Schmitz (Joint Research Centre, European Commission)
11:50 – 13:00	<p>Session 3 – Increasing spatial resolution</p> <p>Moderator: Valentin Bertsch (University of Bochum)</p> <p>[AVRIL chapter 4.2] What are the impacts of location-specific spatial and temporal characteristics of VRE on long-term expansion planning? How much detail is needed?</p> <ul style="list-style-type: none"> • Galen Maclaurin (National Renewable Energy Laboratory) – Geospatial representation in NREL’s Regional Energy Deployment System (ReEDS) model • Yvonne Scholz (German Aerospace Center) – Geospatial representation in REMix • Moderated discussion <p>Opening intervention: Marianne Zeyringer, University of Oslo</p>

13:00 – 14:00	Lunch break
14:00 – 15:45	<p>Session 4 – Geographic information system (GIS) tools, data-processing widgets, and climate impacts Moderator: Paul Deane (University College Cork)</p> <p>[AVRIL chapter 5.1 & 7.2] What is the availability of geospatial data and pre-processing tools at different spatio-temporal resolutions? How can the geospatial resolution issues of climate change scenarios and impacts on renewable resources be accounted for?</p> <ul style="list-style-type: none"> • Galen Maclaurin (National Renewable Energy Laboratory) - NREL's GIS tools • Iratxe González-Aparicio (Accenture Research) – JRC's EMHIRES dataset and interface between energy models and meteorological information • Imen Gherboudj (IRENA) – IRENA geo-spatial data services including Global Atlas • Sebastian Sterl (Vrije Universiteit Brussel) – Climate impacts • [Demonstration] Wim Clymans (Flemish Institute for Technological Research) – Dynamic Energy Atlas for Belgium • Moderated discussion <p>Opening intervention: Craig Hart, International Energy Agency (IEA)</p>
15:45 – 16:15	Group photo and coffee break
16:15 – 17:30	<p>Session 5 – Distributed Variable Renewable Energy (VRE) Parallel session A – Grid-connected distributed VRE Moderator: Bilal Hussain (IRENA)</p> <p>How should the development of grid-connected distributed VRE be reflected in capacity expansion planning?</p> <ul style="list-style-type: none"> • Kais Siala (Technical University of Munich) – Reflecting distributed VRE in capacity expansion planning • Martin Robinius (Forschungszentrum Jülich) – Global pathways and sector coupling approaches highlighting impacts to be captured in long term planning • Moderated discussion
16:15 – 17:30	<p>Session 5 – Distributed Variable Renewable Energy (VRE) Parallel session B – Energy access, rural electrification, mini-grids, stand-alone systems (IRENA office) Moderator: Pablo Carvajal (IRENA)</p> <p>How should the development of distributed VRE under the context of energy access be reflected in long-term planning, especially in deciding between grid extension, mini-grids, and stand-alone systems?</p> <ul style="list-style-type: none"> • Anteneh Dagnachew (PBL Netherlands Environmental Assessment Agency) – Decentralized energy system planning in Sub-Saharan Africa • Dimitrios Mentis (World Resources Institute) – Geospatial electrification planning with OnSSET • Moderated discussion
18:00	Dinner reception at Trattoria Da Giovanni, Brandenburger Str. 2, 53175 Bonn

Friday December 13th

9:00 – 9:30	Coffee
9:30 – 10:00	Session 5 (continued) – Joint discussion of parallel sessions 5A and 5B Moderator: Pablo Carvajal/Bilal Hussain (IRENA)
10:00 – 11:00	<p>Session 6 – Representing grid investment in capacity expansion models Moderator: Asami Miketa (IRENA)</p> <p>[AVRIL chapter 7.1 & 7.2] How can grid investment needs be represented in long term models using simplified vis a vis advanced geo-referenced methodology? How optimization of generation, transmission and system flexibility could be realized while keep model complexities as limited as possible?</p> <ul style="list-style-type: none"> • Tim Mennel (DNV-GL) – VRE-driven grid investment needs • Yvonne Scholz (German Aerospace Centre) – Parameterising grid investment needs in REMix • Kostas Tigas (University of Patras) – Co-optimization of grid investment and renewable investment in Greece-TIMES model • Yunshu Li (IRENA) – Zoning approach used in IRENA’s SPLAT Africa model
11:00 – 11:20	Coffee break
11:20 – 12:10	Session 6 (Continued) – Moderated Discussion Moderator: Emanuele Taibi (IRENA) <ul style="list-style-type: none"> • Moderated discussion
12:10 – 12:30	Session 7 – Wrap-up Conclusions and next steps by Asami Miketa (IRENA)
12:30 – 13:30	Lunch