

## *How2Guide for Wind Energy*

### Expert workshop in support of implementing a wind energy technology roadmap for India

New Delhi, India – 16<sup>th</sup> September 2015

Family Room, Hyatt Regency Delhi, Bhikaiji Cama Place, Ring Road, New Delhi - 110 066

### Draft Programme

Time	Session content and speakers
9:15-9:45	<p><b>Opening remarks</b></p> <ul style="list-style-type: none"> <li>• Mr. Krishan Dhawan, Chief Executive Officer, Shakti Sustainable Energy Foundation</li> <li>• Ms. Dagmar Graczyk, India Programme Manager, International Energy Agency (IEA)</li> <li>• Ms. Varsha Joshi, Joint Secretary, Ministry of New and Renewable Energy (MNRE)</li> <li>• Mr. Pankaj Batra, Chief Engineer (Regulatory Affairs), Central Electricity Authority</li> </ul>
9:45-11:00	<p><b>Session 1: Global wind energy outlook and deployment perspectives in India</b></p> <p><i>Moderator: Hugo Chandler / Nick Gibbins, New Resource Partners (NRP)</i></p> <ul style="list-style-type: none"> <li>• Wind energy outlook in India and policy framework – <b>Mr. Jethani, Ministry of New and Renewable Energy (MNRE)</b></li> <li>• The business case for wind energy in India: outlook on barriers and actions options – <b>Mr. D V Giri, Indian Wind Turbine Manufacturers Association</b></li> <li>• IEA Technology Roadmap for Wind Energy and the How2Guide conceptual framework – <b>Dagmar Graczyk, IEA</b></li> <li>• The integration challenge: how can power system remain reliable and cost-effective while supporting high shares of variable renewable energy? – <b>Simon Mueller, IEA</b></li> </ul> <p>Followed by short Q&amp;A (10 minutes)</p>
11:00-11:20	<p><i>Break</i></p>
11:20-13:00	<p><b>Session 2: Accelerating wind energy development in India</b></p> <p><i>Moderator: Deepak Gupta, Sr. Programme Manager (Power), Shakti Sustainable Energy Foundation</i></p> <ul style="list-style-type: none"> <li>• Accounting for variable renewable energy in long term system planning: economic and operational considerations for grid integration - <b>David Palchak, National Renewable Energy Laboratory (NREL)</b></li> <li>• Group exercise (60min): applying the <i>How2Guide</i> methodology to analyse <b>barriers</b> relevant to India's context <ul style="list-style-type: none"> <li>○ <b>Group A: <u>focus on project development, regional/national planning</u></b> (facilitated by Dagmar Graczyk/Nick Gibbins)</li> <li>○ <b>Group B: <u>grid integration, including data collection and management</u></b> (facilitated by Simon Mueller, IEA)</li> <li>○ <b>Group C: <u>wind energy policies and markets / sharing responsibilities, risks and benefits among stakeholders</u></b> (facilitated by Hugo Chandler, NRP)</li> </ul> </li> </ul>

13:00-14:00	<i>Lunch</i>
14:00-15:45	<p><b>Session 3: Implementing a wind roadmap for India: from vision to action options</b></p> <p><i>Moderator: Jon Hansen, IEA</i></p> <ul style="list-style-type: none"> <li>• The <i>How2Guide</i> methodology: tools and action options to achieve the desired scale of deployment for wind technology - <b>Nick Gibbins, New Resource Partners (NRP)</b> (15 min)</li> <li>• Group exercise (60min): applying the <i>How2Guide</i> methodology to analyse <b>action options</b> relevant to India's context <ul style="list-style-type: none"> <li>○ <b>Group A: <u>focus on project development, regional/national planning</u></b> (facilitated by Nick Gibbins, NRP)</li> <li>○ <b>Group B: <u>grid integration, including data collection and management</u></b> (facilitated by Simon Mueller, IEA)</li> <li>○ <b>Group C: <u>wind energy policies and markets / sharing responsibilities, risks and benefits among stakeholders</u></b> (facilitated by Hugo Chandler, NRP)</li> </ul> </li> </ul>
15:30-16:00	<i>Coffee break</i>
16:00-17:00	<p><b>Session 4: Reporting back from groups and take-away messages</b></p> <p><i>Moderator: Ms. Varsha Joshi, Joint Secretary, MNRE</i></p> <ul style="list-style-type: none"> <li>• Reports from the three Groups A, B and C based on solutions identified in each of the breakout sessions 3, particularly: <ul style="list-style-type: none"> <li>○ Key action options and recommendations;</li> <li>○ Timeline and key milestones, with an indication of how progress will be measured.</li> </ul> </li> <li>• Open discussions, Q&amp;A</li> <li>• Presentation of metrics to gauge timeline for key milestones of policy or technology deployment and presentation of qualitative and quantitative indicators for monitoring progress of wind deployment - <b>Hugo Chandler, NRP</b> (15min)</li> </ul> <p>Wrap-up and closing remarks by the session moderator</p>