



## NEWCASTLE 2017 SYMPOSIUM ON MICROGRIDS

CSIRO Energy Centre, Newcastle

10 Murray Dwyer Circuit, Mayfield West

Wednesday and Thursday, 29-30 November 2017

### PRE-SYMPOSIUM & POST-SYMPOSIUM ACTIVITIES

#### TUESDAY 28 NOVEMBER – PRE-SYMPOSIUM RECEPTION

|             |  |
|-------------|--|
| 14:00       | Shuttle pick-up from Crowne Plaza and Noah's on the Beach hotels |
| 14:30-19:00 | Registration open  |
| 15:00-17:00 | <b>CSIRO Energy Centre site tour</b>                             |
| 17:00-19:00 | <b>Cocktail welcome reception</b>                                |
| 19:00       | Shuttle departure from CSIRO Energy Centre                       |

#### FRIDAY 1 DECEMBER – POST-SYMPOSIUM TOUR

|             |   |
|-------------|---|
| 8:30        | Shuttle pick-up from Crowne Plaza and Noah's on the Beach hotels                          |
| 9:00        | Shuttle pick-up from CSIRO Energy Centre  |
| 10:15       | Arrival at Narara Ecovillage, <u>25 Research Road, Narara</u>                             |
| 10:30-12:30 | <b>Tour of Narara Ecovillage</b>  |
| 12:30-13:30 | Lunch   |
| 13:30       | Shuttle departure from Narara Ecovillage  |
| 13:45       | Drop off at Gosford train station   |
| 15:00-15:30 | Arrive at Newcastle (drop off at CSIRO Energy Centre, Crowne Plaza & Noah's on the Beach) |

## SYMPOSIUM AGENDA DAY ONE

| <b>WEDNESDAY 29 NOVEMBER – MORNING SESSION</b> |   |
|--|---|
| 8:00   | Shuttle pick-up from Crowne Plaza and Noah's on the Beach hotels  |
| 8:30   | Registration open   |
| 09:00-09:05                                    | Saad Sayeef, CSIRO & Symposium Chair<br><b>Welcome</b>  |
| 09:05-09:20                                    | Lord Mayor of Newcastle, Cr Nuatali Nelmes<br><b>Official Opening of the Newcastle 2017 Symposium on Microgrids</b>     |
| 09:20-09:30                                    | Ryoichi Hara, Hokkaido University & Int. Symposium Steering Committee Chair<br><b>The Microgrid Symposium Tradition</b> |
| 09:30-11:00                                    | <b>ASIA Session 1</b><br><i>Chairs: Dong-Jun Won (Inha U.) and Jaeho Choi (Chungbuk National U.)</i>                    |
| 09:30-09:50                                    | Toshifumi Ise, Osaka University, and Alex Chong, A*STAR<br><b>Overview of Microgrids in Asia</b>                        |
| 09:50-10:00                                    | Discussion  |
| 10:00-10:20                                    | Xiaofeng Sun, Yanshan University<br><b>New Direction of Microgrids in China</b>   |
| 10:20-10:30                                    | Discussion  |
| 10:30-10:50                                    | Samson Shih, A*STAR<br><b>Achieving High Reliability: Design Considerations for Microgrids</b>                          |
| 10:50-11:00                                    | Discussion  |
| 11:00-11:30                                    | Coffee Break  |
| 11:30-12:30                                    | <b>ASIA Session 2</b><br><i>Chairs: Jianhua Zhang (North China Power U.) and Hak-Man Kim (Incheon U.)</i>               |
| 11:30-11:50                                    | Dong-Jun Won, Inha University<br><b>Construction of IoT based Campus Microgrid in Seoul National University</b>         |
| 11:50-12:00                                    | Discussion  |
| 12:00-12:20                                    | David Stephens, Horizon Power<br><b>DER Control and Optimisation on Horizon Power's Microgrids</b>                      |
| 12:20-12:30                                    | Discussion  |
| 12:30-13:30                                    | Lunch   |

| <b>WEDNESDAY 29 NOVEMBER – AFTERNOON SESSION</b> |  |
|--|--|
| 13:30-14:00                                      | <b>Plenary Session</b><br><i>Chairs: Ron Brandl (Fraunhofer IWES) and Ali Mehrizi-Sani (Washington State U.)</i> |
| 13:30-14:00                                      | Peter Asmus, Navigant<br><b>Overview of the World Microgrid Market</b>   |

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**WEDNESDAY 29 NOVEMBER – AFTERNOON SESSION continued**

|                    |   |
|--------------------|---|
| <b>14:00-15:30</b> | Panel Session: State-of-the-art in Microgrid Hardware   |
|                    | <i>Chairs: Ron Brandl (Fraunhofer IWES) and Ali Mehrizi-Sani (Washington State U.)</i>  |
| <b>14:00-15:30</b> | <ul style="list-style-type: none"> <li>- Cyprian Peters (RTDS Technologies, Canada)</li> <li>- Craig Blizard (ABB, Australia)</li> <li>- Pierre-Francois Allaire (OPAL-RT, Canada)</li> <li>- Owen Lock (S&amp;C Electric Company, Australia)</li> <li>- Frankie Lu (Siemens, Australia)</li> <li>- Ron Hall (EPSA – CAT, Australia)</li> </ul> |
| <b>15:30-15:45</b> | <b>Group Photo Session</b>  |
| <b>15:45-16:00</b> | Short break   |
| <b>16:00-17:00</b> | <b>Poster Introduction</b>  |
|                    | <i>Chairs: Miky Albu (Politechnica U. Bucharest) and Shigeru Bando (CRIEPI)</i>   |
| <b>16:00-17:00</b> | Each poster presenter gives a 3 minutes teaser (Posters 1-20)   |
| <b>17:00-17:30</b> | Move to hotels (shuttle bus departing at 17:00)   |
| <b>18:15</b>       | Shuttle pick-up from Crowne Plaza and Noah’s on the Beach hotels to Merewether Surfhouse  |
| <b>18:30-22:00</b> | Symposium dinner  |
| <b>22:00</b>       | Shuttle bus departure from Merewether Surfhouse, <u>5 Henderson Parade, Merewether</u>  |

**SYMPOSIUM AGENDA DAY TWO**

**THURSDAY 30 NOVEMBER – MORNING SESSION**

|                    |   |
|--------------------|---|
| <b>09:00</b>       | Shuttle pick-up from Crowne Plaza and Noah’s on the Beach hotels  |
| <b>09:30-11:30</b> | <b>EUROPE Session</b>   |
|                    | <i>Chairs: Goncalo Mendes (Lappeenranta U. of Technology) and Mar Martinez-Diaz (K.U. Leuven)</i>   |
| <b>09:30-09:50</b> | Britta Buchholz, ABB, and Maria Bruccoli, EDF<br><b>Overview of Microgrids in Europe</b>  |
| <b>9:50-10:00</b>  | Discussion  |
| <b>10:00-10:20</b> | Samuli Honkapuro, Lappeenranta U. of Tech.<br><b>Microgrid Opportunities in Finland</b>   |
| <b>10:20-10:30</b> | Discussion  |
| <b>10:30-10:50</b> | Mar Martinez-Diaz, K.U. Leuven<br><b>ElectrifyMe.org: Research studies, trends and opportunities for researcher’s community integrating renewables off-grid</b> |
| <b>10:50-11:00</b> | Discussion  |
| <b>11:00-11:20</b> | Axel Seibel, Fraunhofer IWES<br><b>Grid-forming Inverters in Microgrids</b>   |
| <b>11:20-11:30</b> | Discussion  |
| <b>11:30-12:30</b> | Lunch   |

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| <b>THURSDAY 30 NOVEMBER – AFTERNOON SESSION</b> |  |
|---|--|
| <b>12:30-14:30</b>                              | <b>THE AMERICAS Session</b>  |
|   | <i>Chairs: Jim Cale (Colorado State U.) and Guillermo Jimenez (U. of Chile)</i>  |
| <b>12:30-12:50</b>                              | Brian Miller, NREL; Alexandre Prieur, NRCAN; and Guillermo Jimenez, University of Chile<br><b>Overview of Microgrids in Americas</b> |
| <b>12:50-13:00</b>                              | Discussion   |
| <b>13:00-13:20</b>                              | Fereidoon Sioshansi, Menlo Energy Economics<br><b>Innovation and Disruption at the Grid's Edge</b>                                   |
| <b>13:20-13:30</b>                              | Discussion   |
| <b>13:30-13:50</b>                              | Brian Miller, NREL<br><b>NREL Microgrid Controller Innovation Challenge Event</b>  |
| <b>13:50-14:00</b>                              | Discussion   |
| <b>14:00-14:20</b>                              | Ali Mehrizi-Sani, University of Washington<br><b>Stability Considerations in Microgrids</b>  |
| <b>14:20-14:30</b>                              | Discussion   |
| <b>14:30-15:00</b>                              | Break  |
| <b>15:00-17:30</b>                              | <b>Remote Session</b>  |
|   | <i>Chairs: Xavier Vallvé (TTA) and Alexandre Prieur (NRCAN/RNCAN)</i>  |
| <b>15:00-15:20</b>                              | Choo Fook Hoong, Nanyang Technological University<br><b>REIDS Project at Semakau Landfill, Singapore</b>                             |
| <b>15:20-15:30</b>                              | Discussion   |
| <b>15:30-15:50</b>                              | Kamlesh Khelawan, The World Bank<br><b>Microgrids – A Solution for Electricity Access in the Pacific Island Countries?</b>           |
| <b>15:50-16:00</b>                              | Discussion   |
| <b>16:00-16:20</b>                              | Dow Airen, NT Power & Water Corporation<br><b>Daly River High Penetration Diesel-Solar-Battery System</b>                            |
| <b>16:20-16:30</b>                              | Discussion   |
| <b>16:30-16:50</b>                              | Junpei Baba, University of Tokyo<br><b>Integration of R&amp;D Project on Grid Integration of Variable Renewable Energy</b>           |
| <b>16:50-17:00</b>                              | Discussion   |
| <b>17:00-17:20</b>                              | Pekik Dahono, Bandung Institute of Technology<br><b>Applications of Microgrids for Remote Areas in Indonesia</b>                     |
| <b>17:20-17:30</b>                              | Discussion   |
| <b>17:30-18:15</b>                              | <b>Closing Session</b>   |
| <b>18:30</b>                                    | Shuttle departure from CSIRO Energy Centre   |

**THANK YOU FOR ATTENDING THE  
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