



*Ministero dello Sviluppo Economico*

## **FOURTH MI IC1 SMART GRIDS INNOVATION WORKSHOP**



**MI Smart Grids**  
4<sup>th</sup> WS - Rome 2018

**21 – 23 November, 2018  
Rome - Italy**

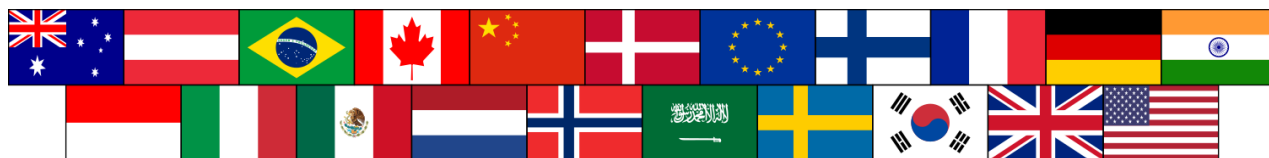
**Venue:**   **Grand Hotel Ritz**   -   **Closed-door meeting (day 1)**  
              **ENEL Auditorium**   -   **1<sup>st</sup> IC1 Industry Workshop (day 2)**  
              **GSE Auditorium**   -   **Public event (day 3)**

**Organized by:**

**RSE, Ricerca Sistema Energetico (IT)**

**CAS, Chinese Academy of Science (CN)**

**DST, Department of Science & Technology (IN)**





## **General Context**

The progressive transformation of the energy systems, ongoing worldwide, is characterized by the introduction in the generation mix of several countries of outstanding shares of renewable energy sources. This fact enables significant reductions in greenhouse gas (GHG) emissions and higher energy and economic efficiency and fosters the progressive reduction of needs of fossil fuels. In 2016, for the first time, the new installations of renewable energy (RE) capacity has overtaken that of new fossil fuel power plants. Many countries have set a goal to reach 100% of RE in the future. On the other hand, the intermittent nature of variable RE raises concerns about their integration in today's power systems due to potential stability and reliability issues. Smart grids and storage are key solutions to optimally balance supply and demand in the context of a high-penetration of renewable energy sources.

Research and development in the field of smart grids is needed to develop technology solutions and enable a seamless integration of up to 100% renewable generation. Research plans need to be carefully coordinated with the perceived needs of industries and network operators, to enable new smart grids functionalities as required to optimize the network management, fostering market uptake and accelerating innovation. This is why *a close coordination exists between IC1 and the Business and Investors Engagement (BIE) subgroup as a bridge between MI countries governments, identifying opportunities and the private sector expanding and enhancing innovation.*

The Smart Grids Innovation Challenge (IC1) is the first of eight ICs under the Mission Innovation (MI), *a global initiative involving 22 countries and the European Union.* The main objective of IC1 is to accelerate the development and demonstration of smart grids technologies in a variety of grid applications, including the robust, efficient, and reliable operation of regional grids and distribution grids as well as micro-grids in diverse geographic conditions, to facilitate the cost effective uptake of renewable energy.

The IC1 on smart grids is co-led by China, India and Italy. Participant countries include Australia, Austria, Brazil, Canada, China, Denmark, Finland, France, Germany, India, Indonesia, Italy, Mexico, Norway, Saudi Arabia, South Korea, Sweden, The Netherlands, United Kingdom, United States of America and the European Union represented by the European Commission.

## **Main Goals**

The fourth IC1 deep-dive workshop will gather international experts around technical and policy discussions on smart grids main challenges. For the first time within IC1, the second day (22 November) will be specifically dedicated to a workshop with the Industry, allowing interactions with experts from the industry. Finally, a full day high-level public event on 23 November will involve representatives from ministries, International Organizations and key stakeholders for discussing and contributing on smart grids research and innovation.

## **Participants**

- Representatives of Mission Innovation, Smart Grids Innovation Challenge (IC1);
- Smart grids stakeholders - such as policy makers and senior advisors, technical experts, DSOs, TSOs, industry representatives;
- Representatives from international organizations/institutions and in particular IEA/ISGAN, IRENA, WEF, ETIP-SNET and the National Stakeholders Coordination Group (NSCG);
- Broader audience is invited to attend to the public event on November 23, 2018.



## Wednesday, 21<sup>st</sup> November 2018 – 4<sup>th</sup> IC1 deep-dive Workshop

Venue: Grand Hotel Ritz, Congress Center

Address: Via Domenico Chelini, 41 Roma

08:40	Registration	
09:00	Welcome by the host and IC1 co-leads	
	Welcome by the co-leads	Luciano Martini - RSE JBV Reddy - DST Yibo Wang - IEE CAS
09:15	Organization and Management	
	Participants' introduction	All participants
	Adoption of the agenda	Luciano Martini - RSE
	Other organizational and management issues	Co-leads
09:40	IC1 recent achievements and next steps	
09:40	Review of IC1 progress & recent engagements	Co-leads, IC1 participants
10:00	IC1 website / service platform: Official launch and next steps	Mattia Cabiati / All
10:15	Mission Innovation priorities and delivering impact through the ICs	<b>Jennie Dodson</b> , MI Secretariat
10:35	Presentation and open discussion on the "Smart Grids Innovation Accelerator" SGIA platform	Co-leads / All
11:00	Coffee break	
11:20	IC1 joint R&D Tasks: Open discussion towards the PoW document finalization	Task leaders, All
	Task 1: Storage Integration	Timothy Moore - CSIRO Miriam Hall - BEIS
	Task 2: Demand Response	Henrik Bindner - DTU Kari Mäki - VTT
	Task 3: Regional Electricity Highways	SC Srivastava – IITK Giovanni Pirovano - RSE
	Task 4: Flexibility Options	NP Padhy – IITR Josef Ayoub – NRCAN
	Task 5: New Grid Architectures	Ron Melton – PNNL (tbc) Mattia Cabiati - RSE
	Task 6: Power Electronics	Huan Wang - IEE CAS
	Approval of IC1 Tasks' PoW document	All / Co-Leads
12:50	Lunch	



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## Innovation Challenge IC1: Smart grids

13:50	Open discussion on future IC1 activities	Moderator: Co-leads
13:50	Towards the Country Report 2019	<b>Yibo Wang</b> - CAS / All
14:10	Towards MI members effective collaboration: the D-SIDES project	<b>NP Padhy</b> - IITR
14:20	EC funded smart grids projects being launched and involving IC1 members	<b>Irene Bonvissuto</b> - DG RTD, European Commission
14:30	Funding Opportunities: present and future IC1 members involvement and strategy	All
15:00	The BRIDGE initiative: the Cooperation group of Smart Grids and Energy Storage projects	<b>Michela Marasco</b> - DG ENER, European Commission
15:15	The Joint Programming Platform on Smart Energy Systems and opportunities for IC1	<b>Michael Huebner</b> - Coordinator
15:30	Open discussion on effective interaction with ISGAN and key International Organizations (IEA, IRENA, WEF, ETIP SNET, etc.)	Co-leads / All
15:50	IC1 link with other MI Innovation Challenges	Moderator: Sanjay Bajpai
15:50	IC1 - IC2 Collaboration Opportunities	<b>Francesco Sergi</b> - CNR <b>Sukumar Mishra</b> - IITD
16:05	IC1 - IC7 Collaboration Opportunities	<b>Angelo Freni</b> - CNR <b>Graeme Maidment</b> - BEIS <b>JBV Reddy</b> - DST
16:20	Open discussion towards effective cooperation between IC1 and other ICs	Co-leads / All
16:50	Coffee Break	
17:10	Drafting of the IC1 <i>Rome Declaration</i>	All
17:45	Wrap-up and conclusion of the 1 <sup>st</sup> day meeting	Co-leads
17:50	End of the 1 <sup>st</sup> day meeting	
19:45	Social dinner (hosted)	



## Thursday, 22<sup>nd</sup> November 2018 – “1<sup>st</sup> IC1 Industry Workshop”

Venue: Auditorium ENEL

Address: Viale Regina Margherita 125, Rome

08:30	Registration and welcome coffee	
09:00	Welcome by the host and IC1 co-leads	
09:10	Welcome address by the Italian Ministry of Economic Development	<b>Marcello Capra</b> , MiSE
09:20	Welcome address by the Host	<b>Livio Gallo</b> , ENEL Global Infrastructure and Networks
09:30	IC1 recent past and present activities: ICs assessment outcome and future plan	Co-leads
09:50	IC1 active link with MI Business Investors Engagement (BIE)	<b>Nelson Mojarro</b> – BIE co-lead
10:05	BIE & proposals for Industry Engagement in IC1	<b>Ornella Celi</b> – IC1 BIE
10:20	MI IC1: The linking between private and public sector	Moderator: Michele de Nigris, RSE
10:20	The Smart Grids Innovation Accelerator (SGIA) SGIA: industry endorsement and Italy case study	Co-leads & Industry <b>Vincenzo Ranieri</b> , E-Distribuzione
11:00	Success stories of public-private cooperation in IC1 countries. Short contributions / highlights at global level (5 minutes each)	<b>Industry-led session</b> with IC1 members support
12:20	Lunch	
13:20	<b>Round Table I: IC1 meeting Industry expectations</b> <i>The discussion will focus on sharing different smart grids stakeholders perspective and R&amp;D needs and IC1 R&amp;D topics opportunities for an effective dialogue between Industry and Research.</i> <u>Involved</u> : Industry and Research Centers representatives from IC1 Countries.	Moderator: Luciano Martini Confirmed Panelists: <u>Maher Chebbo</u> , GE Global <u>Dai Zhen</u> , Power Links Technology Limited <u>Ricardo Perez Sanchez</u> , ENEL
14:50	<b>Round Table II: IC1 - Industry engagement: the way forward</b> <i>The discussion will focus on strategies and approaches to be developed to foster the engagement of the Private sector in IC1.</i> <u>Involved</u> : Industry representatives from IC1 Countries, Research Centers/Academia and Funding Agencies.	Moderator: SC Srivatarra, IITK Confirmed Panelists: <u>Nelson Mojarro</u> , MI-BIE <u>Arvind Tiwari</u> , GE <u>Dai Zhen</u> , Power Links Technology Limited
16:20	Coffee break	
16:40	Conclusions and the way forward	Host & Co-leads
16:50	End of the 1 <sup>st</sup> IC1 workshop with Industry	
17:00	(A) Finalization of the Rome Declaration	IC1 members and Industry representatives
17:15	(B) Technical visit to <b>ENEL's Control Center</b> by groups of 15-20 people	
18:00	End of the 2 <sup>nd</sup> day meeting	
20:15	Social dinner (hosted)	

## Friday, 23<sup>rd</sup> November 2018 – 4<sup>th</sup> IC1 Public Event

Venue: Auditorium GSE

Address: Viale Maresciallo Pilsudski, 92, Rome

08:45 Registration and welcome coffee --- IC1 highlights video clip

09:10	Welcome by the IC1 co-Leads	Luciano Martini, JBV Reddy, Yibo Wang
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09:20	Welcome by the Host	President GSE (tbc)
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09:40 Launch of the 4<sup>th</sup> IC1 Public Event: Welcome addresses

	Moderator:	Luciano Martini
<b>Greeting speech by Italy</b>		Hon. <b>Andrea Cioffi</b> , Undersecretary of State, Ministry of Economic Development
<b>Greeting speech by China</b>		Prof. <b>Sun Chengyong</b> , Counsellor for Science & Technology Chinese Embassy in Italy
<b>Greeting speech by India</b>		H.E. <b>Reenat Sandhu</b> , Indian Ambassador to Italy
<b>Greeting speech by Italian Ministry of Foreign Affairs and International Cooperation</b>		<b>Vincenzo de Luca</b> , Director General, DGCP

10:30 MI IC1 Rome Declaration: Hand over to Ministries' representatives

**Group Photo**

10:50 Key Announcements from IC1 members

	Moderator:	Co-Leads / Host
Recent achievements and official launch of the IC1 <b>Tasks' Program of Work</b>		Luciano Martini, Yibo Wang, NP Padhy
Launching of the Smart Grids Innovation Accelerator: <b>The SGIA platform</b>		Co-leads & Industry
Signature of <b>MI IC1 – ISGAN Letter of Intent</b>		ISGAN representative / co-leads
New smart grids <b>funding opportunities</b> in IC1 countries		Indian, Mexican, and other IC1 country Representatives
Other <b>announcements</b> as requested by IC1 members		Canada, Austria, and other IC1 country Representatives
Other <b>announcements</b> as requested by IC1 members		IC1 country Representatives

11:30 Coffee break - and - IC1 highlights video clip



**11:50 IC1 industry RD&D strategy on smart grids**

	Moderator:	Michele de Nigris, RSE
Main outcomes from the “1 <sup>st</sup> IC1 Industry Workshop”		Co-leads / Industry Representatives
<b>The Italian excellence along the whole smart grids value chain</b>		<b>Stefano Besseghini</b> , President ARERA <b>Roberto Moneta*</b> , CEO GSE <b>Romano Ambrogi</b> , RSE <b>Matteo Codazzi</b> , CEO CESI <b>Claudia Guenzi</b> , Chair Smart Grids Group ANIE Energia <b>Livio Gallo</b> , Head ENEL Global Infrastructure and Networks

**12:50 Lunch**

**13:50 Industry RD&D strategy on smart grids: Examples**

	Moderator:	Co-leads
Blockchain Solution for interconnection of main Grid and Microgrid		Zheng Yu, Power Links Technology Limited (China)
Industry R&D strategy and key results		Arvind Tiwari, GE Global Research
Enel R&D strategy and technologies for smart grids		Ricardo Perez Sanchez, ENEL (Italy)

**14:20 IC1 interaction with International Organizations**

	Moderator:	Co-leads
<i>BRIDGE - Accelerating smart grids and storage deployment by removing barriers to innovation</i>		<b>Michela Marasco</b> , DG ENER, European Commission
<i>IEA TCPs and IC1: synergies and high-impact opportunities for collaboration</i>		<b>Alicia Mignone</b> , Chair IEA CERT
<i>Tracking progress in smart grids towards a sustainable electricity future</i>		<b>Luis Munuera</b> , International Energy Agency - IEA
<i>IRENA Innovation Week 2018: key messages on electrification and digitalization</i>		<b>Emanuele Taibi</b> , International Renewable Energy Agency - IRENA
<i>ISGAN activities and their link with IC1 priorities</i>		<b>Josef Ayoub</b> , NRCAN, ISGAN ExCo member
<i>Energy Innovations priorities towards 2050 decarbonized Europe: the vision of ETIP SNET</i>		<b>Maher Chebbo</b> , vice-Chair ETIP SNET
<i>The Joint Programming Platform ERA-Net Smart Energy Systems</i>		<b>Michael Huebner</b> , Bmvt (Austria)

**15:30 International Initiatives and lighthouse projects**

	Moderator:	Michele de Nigris, RSE
<b>Smart grids key projects worldwide</b>		Project coordinator / IC1 Country's representative
<b>Smart grids key projects worldwide</b>		SC Srivastava, IITK NP Padhy, IITR
<i>The Best Paths and the OSMOSE EU projects: Past experiences and future opportunities</i>		Luca Orrù, TERNA (Italy)



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# Innovation Challenge IC1: Smart grids

*TSO-DSO interaction in the SmartNet EU project*

Gianluigi Migliavacca,  
RSE (Italy)

*Integrated operation planning tool for TSOs and DSOs –  
The INTERPLAN Project*

Giorgio Graditi, Marialaura Di  
Somma, ENEA (Italy)

16:50 Conclusions

**Announcement of the 5<sup>th</sup> IC1 workshop**

IC1 Country representative

17:00 End of the 4<sup>th</sup> IC1 public event

17:00 Technical Visit to the GSE Control Centre

18:00 End of the Technical Visit

\* To be confirmed

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## City Map:

