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Ministero dello Sviluppo Economico

FOURTH MI IC1 SMART GRIDS INNOVATION WORKSHOP



MI Smart Grids

4th WS - Rome 2018

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

Venue: Grand Hotel Ritz - Closed-door meeting (day 1)
ENEL Auditorium - 1st 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.



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**Innovation Challenge
IC1: Smart grids**

Wednesday, 21st November 2018 – 4th 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	Co-leads / All
10:15	Mission Innovation priorities and delivering impact through the ICs	Jennie Dodson , 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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13:50	Open discussion on future IC1 activities	Moderator: Co-leads
13:50	Towards the Country Report 2019	Yibo Wang , All
14:10	Towards MI members effective collaboration: the D-SIDES project	NP Padhy - IITR
14:20	EC funded smart grids projects being launched and involving IC1 members	Irene Bonvissuto - 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	Michela Marasco - DG ENER, European Commission
15:15	The Joint Programming Platform on Smart Energy Systems and opportunities for IC1	Michael Huebner - 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	Francesco Sergi - CNR Sukumar Mishra - IITD
16:05	IC1 - IC7 Collaboration Opportunities	Angelo Freni - CNR Graeme Maidment - BEIS JBV Reddy - 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 st day meeting	Co-leads
17:50	End of the 1 st day meeting	
19:45	Social dinner (hosted)	



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Thursday, 22nd November 2018 – “1st 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	Marcello Capra , MiSE
09:20	Welcome address by the Host	Livio Gallo , 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)	Nelson Mojarro – BIE co-lead
10:05	BIE & proposals for Industry Engagement in IC1	Ornella Celi – 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 Vincenzo Ranieri , E-Distribuzione
11:00	Success stories of public-private cooperation in IC1 countries. Short contributions / highlights at global level (5 minutes each)	Industry led session with IC1 members support
12:20	Lunch	
13:20	Round Table I: IC1 meeting Industry expectations <i>The discussion will focus on sharing different smart grids stakeholders perspective and R&D needs and IC1 R&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 (CN) <u>Ricardo Perez Sanchez</u> , ENEL
14:50	Round Table II: IC1 - Industry engagement: the way forward <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>Arvind Tiwari</u> , GE <u>Dai Zhen</u> , Power Links Technology Limited (CN)
16:20	Coffee break	
16:40	Conclusions and the way forward	Host & Co-leads
16:50	End of the 1 st IC1 workshop with Industry	
17:00	(A) Finalization of the Rome Declaration	IC1 members and Industry representatives
17:00	(B) Technical visit to ENEL's Control Center by groups of 15-20 people	
17:50	End of the 2 nd day meeting	
20:15	Social dinner (hosted)	

Friday, 23rd November 2018 – 4th 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

09:20 Welcome by the Host **Francesco Vetrò**, President GSE
Roberto Moneta, CEO GSE

09:40 Launch of the 4th IC1 Public Event: Welcome addresses

	Moderator:	Luciano Martini
Greeting speech by Italy		Hon. Andrea Cioffi , Undersecretary of State, Ministry of Economic Development
Greeting speech by China		Prof. Sun Chengyong , Cousellor for Science & Technology Chinese Embassy in Italy
Greeting speech by India		H.E. Reenat Sandhu , Indian Ambassador to Italy
Greeting speech by Italian Ministry of Foreign Affairs and International Cooperation		Massimo Gaiani , Director General, DGMO Vincenzo de Luca , 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 Tasks' Program of Work		Luciano Martini, Yibo Wang, NP Padhy
Launching of the Smart Grids Innovation Accelerator: The SGIA platform		Co-leads & Industry
Signature of MI IC1 – ISGAN Letter of Intent		ISGAN representative / co-leads
New smart grids funding opportunities in IC1 countries		Indian, Mexican, and other IC1 country Representatives
Other announcements as requested by IC1 members		Canada, Austria, and other 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
11:55 Main outcomes from the "1 st IC1 Industry Workshop"		Co-leads / Industry Representatives
12:15 Italian excellence along the whole smart grids value chain		Italian high level Representatives from Regulator & grid stakeholders
12:40 Lunch		



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13:40 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
Industry R&D strategy and key results		Industry or IC1 country member representative (tbd)
Industry R&D strategy and key results		Industry or IC1 country member representative (tbd)

14:20 IC1 interaction with International Organizations

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

15:30 International Initiatives and lighthouse projects

	Moderator:	Michele de Nigris, RSE
Smart grids key projects worldwide		Project coordinator / IC1 Country's representative
Smart grids key projects worldwide		SC Srivastava, IITK NP Padhy, IITR
<i>The Best Paths and the OSMOSE EU projects: Past experiences and future opportunities</i>		Luca Orrù, TERNA (IT)
<i>TSO-DSO interaction in the SmartNet EU project</i>		Gianluigi Migliavacca, RSE (IT)
<i>Integrated operation planning tool for TSOs and DSOs – The INTERPLAN Project</i>		Giorgio Graditi, Marialaura Di Somma, ENEA (IT)

16:50 Conclusions

Announcement of the 5th IC1 workshop	IC1 Country representative
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17:00 End of the 4th IC1 public event

17:00 Technical Visit to the GSE Control Centre

18:00 End of the Technical Visit



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City Map:

