



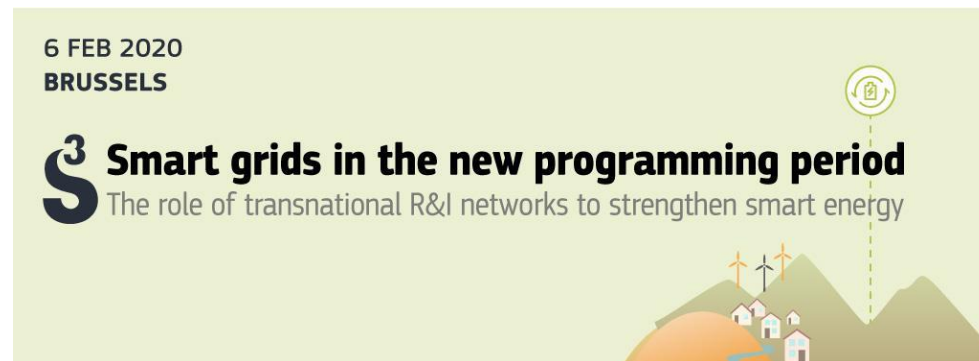
▶ **Smart grids in the new programming period:  
The role of transnational R&I networks  
to strengthen smart energy**

Luciano Martini  
JP SG Coordinator, RSE

---

6 February 2020, Brussels

## EXPERTS PANEL 3: Funding and support mechanisms for Smart Grids

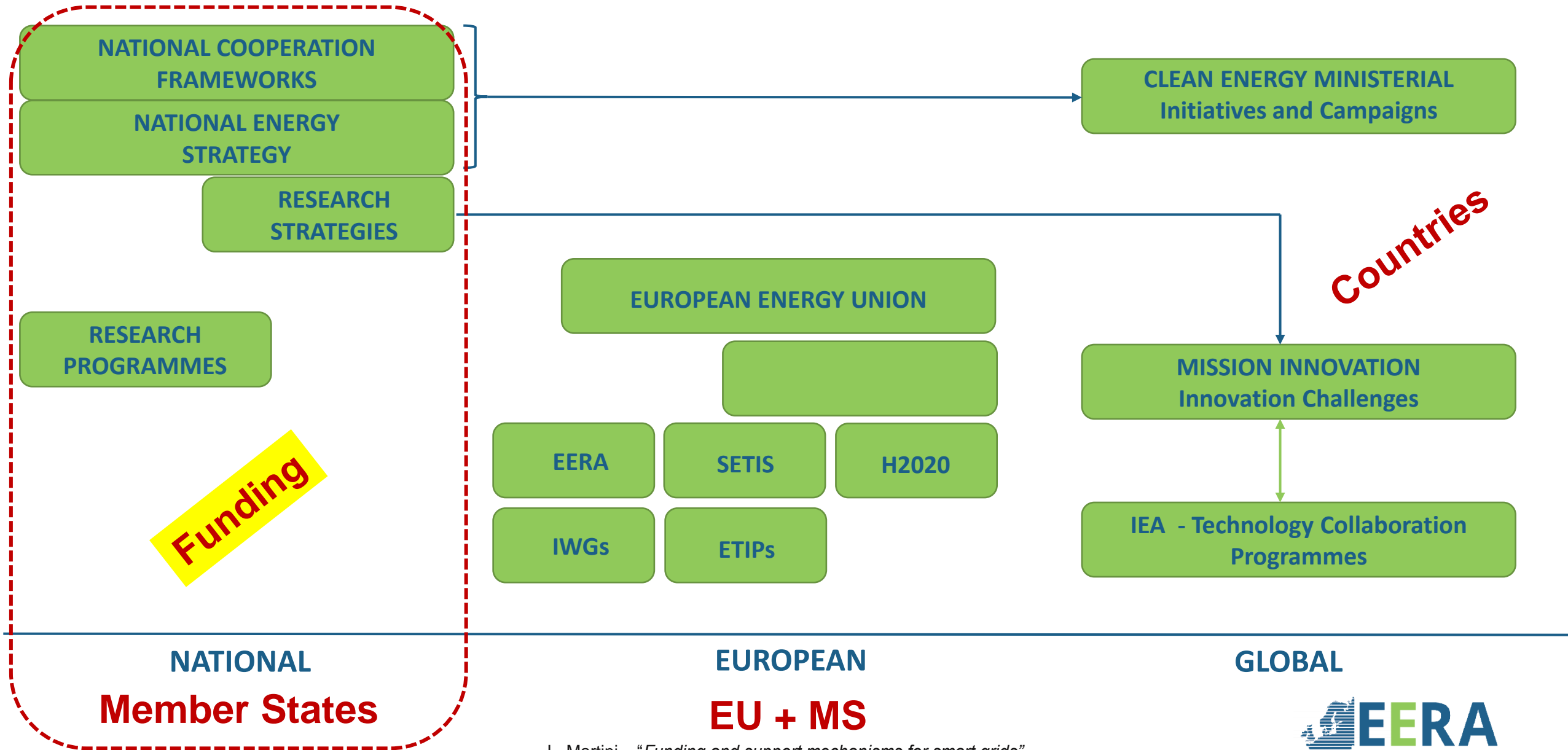


### Transnational R&I networks at continental and global level: Examples

- **The European Energy Research Alliance and the Joint Programme on Smart Grids**
- **Mission innovation and the Innovation Challenge on Smart Grids**



# CONTEXT FOR THE DEPLOYMENT OF SMART ENERGY SYSTEMS



# EERA - The European Energy Research Alliance //

---

Alliance that aims to accelerate development of new energy technologies

- Strengthen, expand and optimize research capabilities
- Improve coordination and cooperation
- Reduce fragmentation and duplication
- Promote harmonization of National and EC programmes



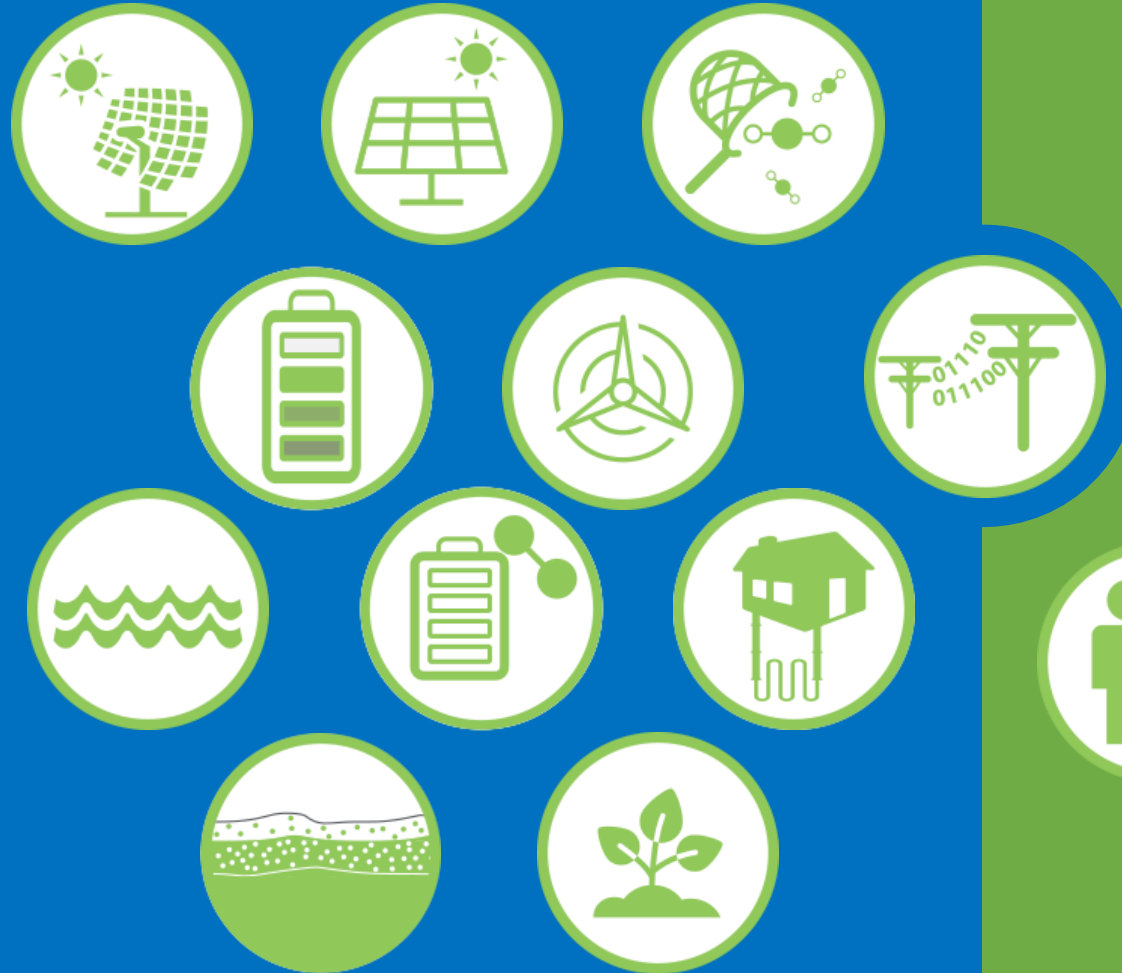
Called for in the Strategic Energy Technology (SET) Plan

Participation in EERA is in principle open to all research organizations  
Not just a membership; need to bring in significant R&D capacity

# MATERIALS



# TECHNOLOGIES

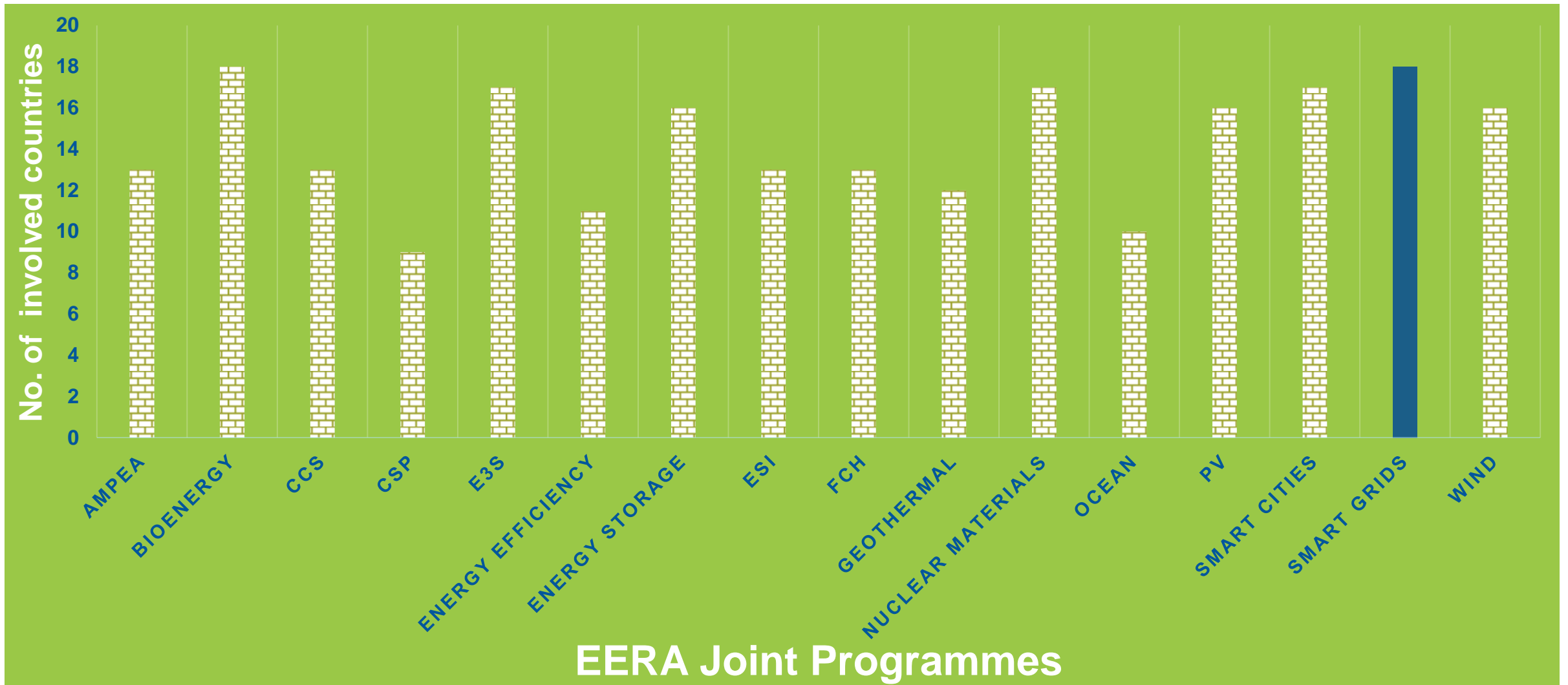


# SYSTEMS



**EERA Joint Programmes**

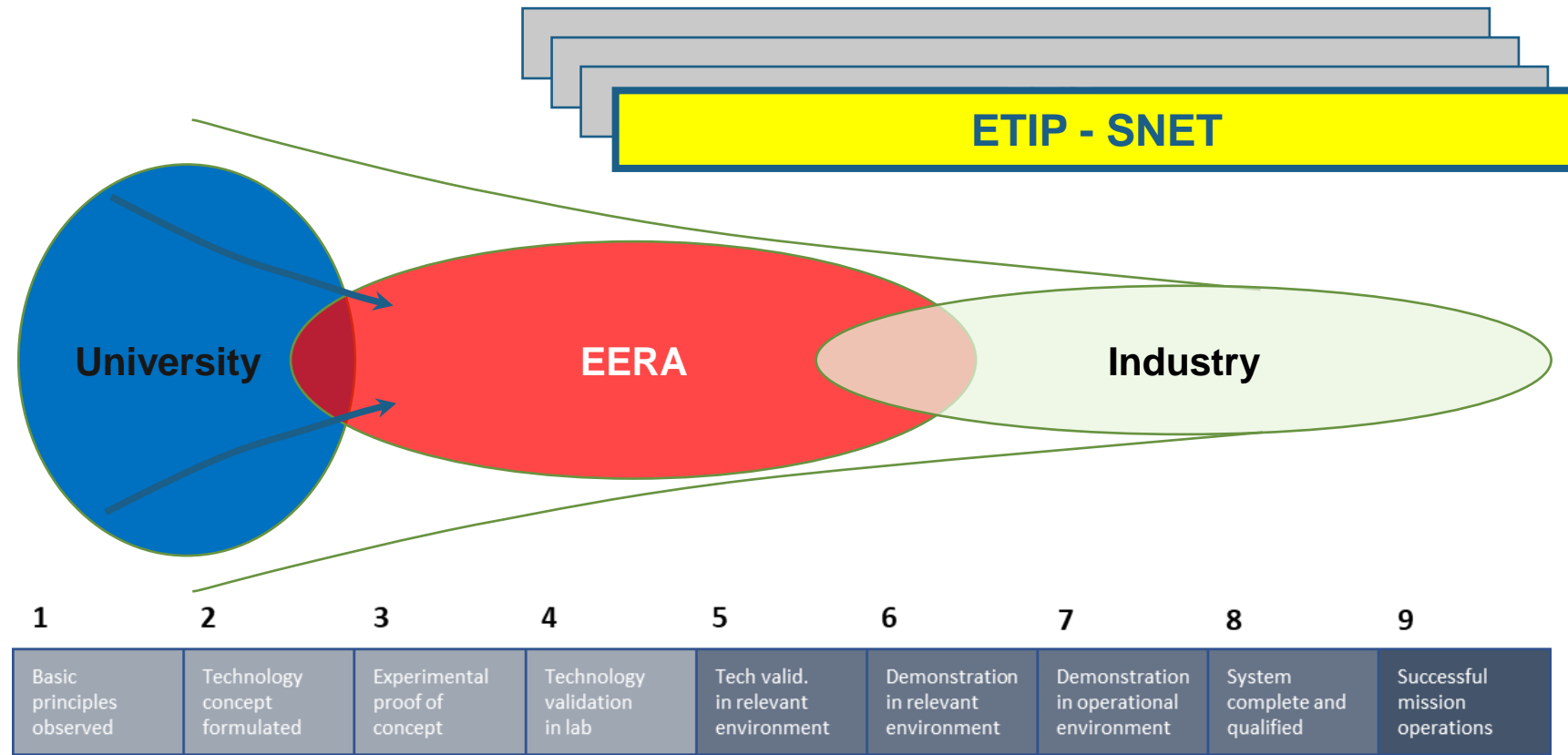
# MS/AC involvement in EERA Joint Programmes //



# EERA positioning in the R&I landscape

//

TRL level 2-6(7), with a strong focus on TRL 2-4(5)



# VISION 2050

A SYSTEM OF SYSTEMS



**NETWORKS**

- Electricity
- Heating & Cooling
- Gas
- Data





MI Smart Grids

## Innovation Challenge IC1: Smart Grids

# Mission Innovation and the Innovation Challenge on smart grids

Luciano Martini – IC1 co-Lead



**MISSION  
INNOVATION**

accelerating the clean energy revolution

*To dramatically accelerate the availability of clean, affordable and reliable clean energy around the World by:*

- 1. Doubling public sector investments in clean energy RD&D;**
- 2. Increasing private sector engagement and investment;**
- 3. Facilitating new and strengthened partnerships and collaboration;**
- 4. Engaging and informing MI members and the wider clean energy innovation community.**



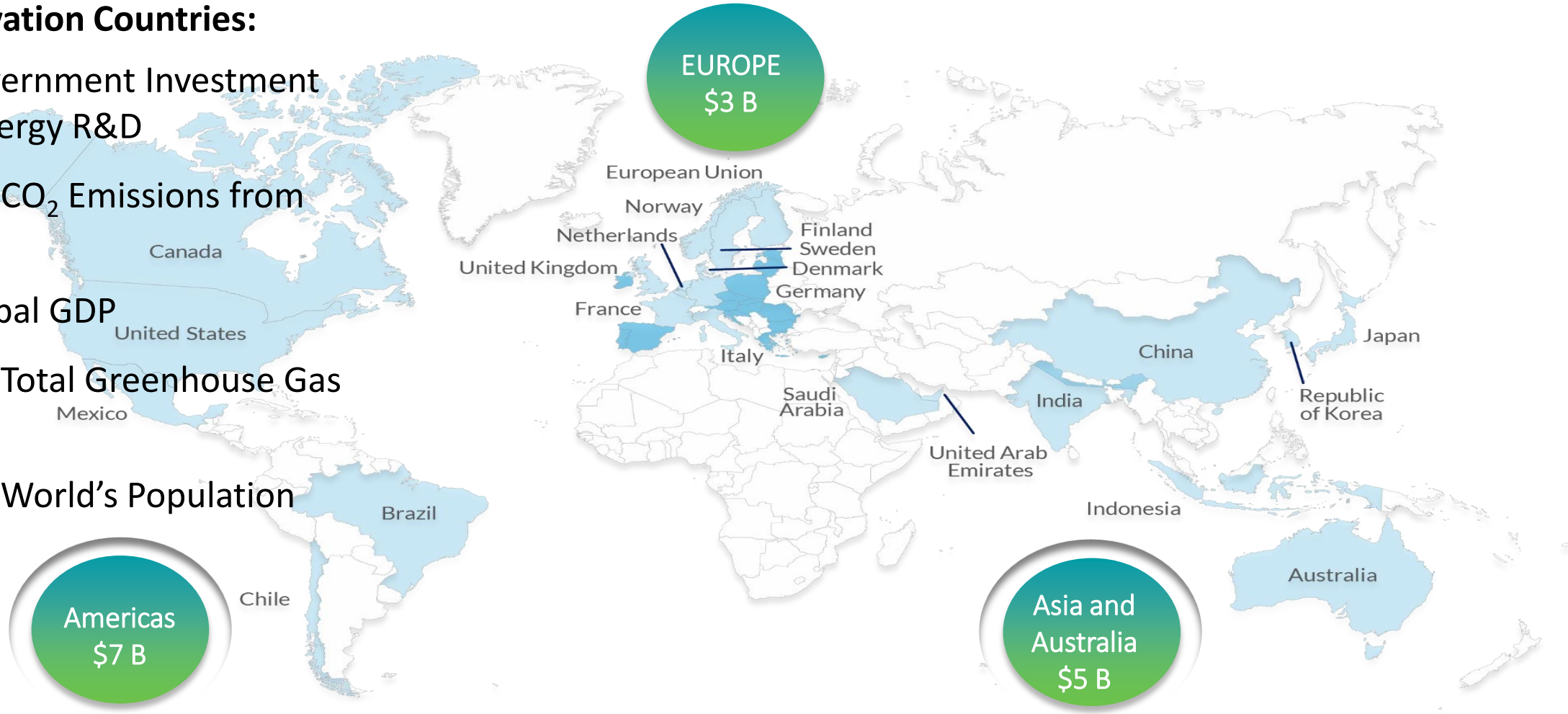
# Baseline Distributed Globally



MI Smart Grids

## Mission Innovation Countries:

- 80% of Government Investment in Clean Energy R&D
- 75% of the CO<sub>2</sub> Emissions from Electricity
- 70% of Global GDP
- 67% of the Total Greenhouse Gas Emissions
- 60% of the World's Population



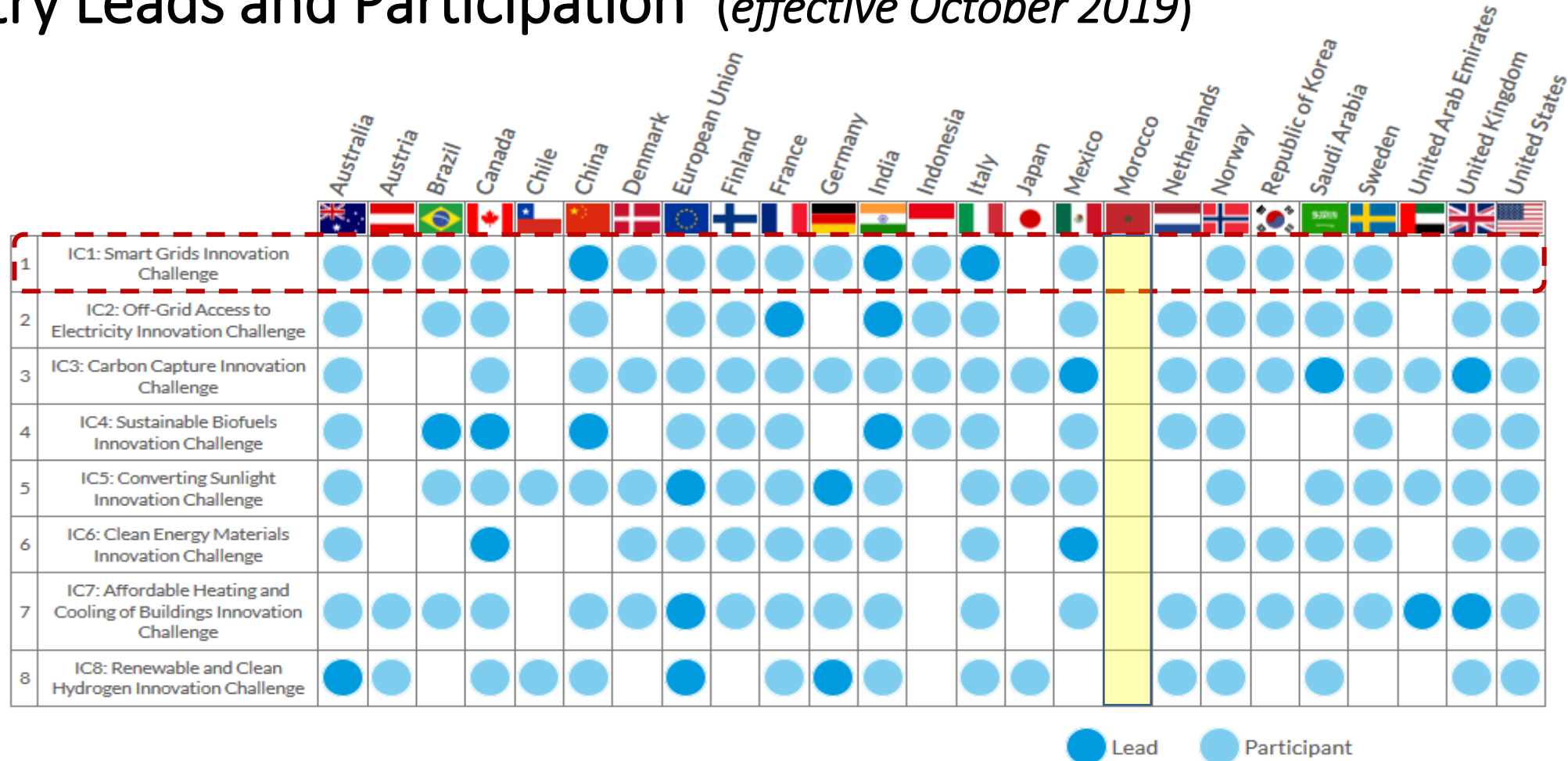
# How to find out more



MI Smart Grids

- More information is available from the [MI website](#)
- Follow us on Twitter  [@MICleanEnergyRD](#)
- Sign up to our [newsletter](#)
- Contact the MI Secretariat by [email](#)

## Country Leads and Participation (effective October 2019)





**SMART GRIDS**



**OFF-GRID ACCESS**



**CARBON CAPTURE**



**SUSTAINABLE  
BIOFUELS**

**MI 2020  
SOLUTIONS**

3<sup>RD</sup> MI MINISTERIAL 2018

**CONVERTING  
SUNLIGHT**



**CLEAN ENERGY  
MATERIALS**



**AFFORDABLE HEATING  
AND COOLING OF  
BUILDINGS**



**HYDROGEN**












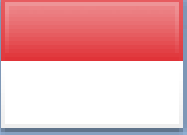


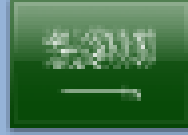


**MISSION INNOVATION**  
Accelerating the Clean Energy Revolution

# IC1 Smart Grids membership



MI Smart Grids

<p><b>Co-Leads (A)</b></p>	 <p><b>China</b></p>	 <p><b>India</b></p>	 <p><b>Italy</b></p>	<p><b>20 Countries and the EC (on behalf of the EU)</b>                  Out of the 24 Countries and EC in MI</p>			
<p><b>Participants (B)</b></p>	 <p><b>Australia</b></p>	 <p><b>Austria</b></p>	 <p><b>Canada</b></p>	 <p><b>Denmark</b></p>	 <p><b>EC</b></p>	 <p><b>Finland</b></p>	 <p><b>France</b></p>
<p><b>Participants (C)</b></p>	 <p><b>Brazil</b></p>	 <p><b>Indonesia</b></p>	 <p><b>Netherlands</b></p>	 <p><b>Korea</b></p>	 <p><b>Saudi Arabia</b></p>		

# IC1 Smart Grids: **Mission and Goals**



MI Smart Grids

- **Enable** future grids that are powered by affordable, reliable, resilient, flexible and decentralized electricity systems able to accommodate up to 100% renewables
- **Establish** a global smart grids collaboration network of research organizations, academia, industry, and business investors to share knowledge and best practices
- **Define** the smart grids R&D topics priorities towards increased governmental investments
- **Accelerate** development, demonstration and deployment of innovative smart grids technologies in different grid applications and geographic conditions, thus facilitating broader market uptake
- **Leverage** expertise and results made available by national programs of MI members and the private sector





The Smart Grids CR2019 contains relevant information about energy strategy, vision, ongoing activities, lighthouse projects and case studies in the smart grids field from:

## 16 Countries and the European Union

Released on May 28, 2019 at CEM10/MI-4 in Vancouver, Canada

(178 pages), available for downloading at:

[www.mi-ic1smartgrids.net/our-work/activities/country\\_report\\_2019](http://www.mi-ic1smartgrids.net/our-work/activities/country_report_2019)



# 13<sup>th</sup> Governing Board Meeting

Brussels, 31 January 2020

## The Smart Grids Innovation Accelerator (SGIA)

SGIA video  
Web-link

SGIA video link



**MISSION  
INNOVATION**

accelerating the clean energy revolution

# Thank you!

Luciano Martini

[Luciano.Martini@rse-web.it](mailto:Luciano.Martini@rse-web.it)



[www.eera-set.eu](http://www.eera-set.eu)