

# MISSION INNOVATION

Accelerating the Clean Energy Revolution

## Innovation Challenges: Midterm Results

### Smart Grids

#1



#### Objective

Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

#### Co-leads



### Off Grid Access to Electricity

#2



#### Objective

Develop systems that enable off-grid households and communities to access affordable, reliable renewable electricity.

#### Co-leads



### Carbon Capture, Utilization, and Storage

#3



#### Objective

Enable near zero CO<sub>2</sub> emissions from power plants and carbon-intensive industries.

#### Co-leads



### Sustainable Biofuels

#4



#### Objective

Develop ways to produce at-scale widely affordable, advanced biofuels for transportation and industrial applications.

#### Co-leads



### Converting Sunlight

#5



#### Objective

Discover affordable ways to convert sunlight into storable solar fuels.

#### Co-leads



### Clean Energy Materials

#6



#### Objective

Accelerate the exploration, discovery and use of new high-performance, low-cost clean energy materials.

#### Co-leads



### Affordable Heating and Cooling of Buildings

#7



#### Objective

Make low-carbon heating and cooling affordable for everyone.

#### Co-leads



### **new** Hydrogen

#8



#### Objective

Accelerate the development of a global hydrogen market by identifying and overcoming key technology barriers to the production, distribution, storage, and use of hydrogen at gigawatt scale.

#### Co-leads



## Top Accomplishments in 2017

- India & Australia launched **calls for proposals** in June to support effective collaboration among IC1 members.
- **Collaboration agreements** (India, US, UK, Italy) were announced on Nov. 16-18.
- 14 members contributed to the publication of the **2017 Country Report**.

- India & France launched **calls for proposals** in June/July and each selected 9 winning projects. Winners of the French competition focused on access to energy in African countries while winners of the Indian competition partnered with at least one MI country.

- A CCUS **experts workshop** was held in Houston with 257 academic and industry participants from 22 countries and across 13 panels to establish the current state of CCUS technology.
- The **workshop report** will serve as an important signpost for future R&D activities in carbon capture, utilization, and storage technologies.

- Launched **survey** in partnership with Biofutures Platform and IEA to better understand the landscape of biofuels technology and identify research gaps, priorities, and collaboration activities.
- India launched a **funding call** worth USD \$5 million, which can be replicated in other MI countries.

- The EC launched an inducement **prize** called “Fuel from the Sun” to produce useful fuels using artificial photosynthesis.

- Mexico hosted the **inaugural workshop** in September, which catalyzed subsequent workshops hosted by Canada and laid the foundations for a **collaborative research project** to accelerate the discovery of clean energy materials.

- An Extreme Efficiency Cooling **Prize** is being developed in conjunction with the Rocky Mountain Institute.
- A **collaborative research project** with the IEA is underway to develop an integrated heating, cooling, and power system for buildings.


## Current Status

- Launched at the third Mission Innovation Ministerial in May 2018.
- A **deep-dive workshop** is planned for October 2018.

# MISSION INNOVATION




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## Country Leads and Participation

#1


**Smart Grids**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#2


**Off Grid Access to Electricity**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#7


**Affordable Heating and Cooling of Buildings**

**Objective**  
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**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#4


**Sustainable Biofuels**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#5


**Converting Sunlight**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#3


**Carbon Capture, Utilization, and Storage**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE




**Top Accomplishments in 2017**

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#6

**Clean Energy Materials**

**Objective**  
Enable future grids powered by affordable, reliable, decentralised renewable electricity systems.

**Co-leads**  
  
CHINA  
  
INDIA  
  
GRECE

**Top Accomplishments in 2017**

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