



MISSION INNOVATION

accelerating the clean energy revolution

MISSION INNOVATION

Media kit



Media kit

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MI backgrounder

Launched at COP21 in November 2015, Mission Innovation (MI) is a global initiative designed to accelerate the pace of innovation and make clean energy widely affordable. Led by the public sector, it aims to mobilise both public and private sector efforts. MI also provides a platform to support collaboration among members and facilitate engagement with business, industry and investors, in order to attract more public and private funding into innovative clean energy research.

MI member countries are: Australia, Austria, Brazil, Canada, Chile, China, Denmark, the European Commission on behalf of the European Union, Finland, France, Germany, India, Indonesia, Italy, Japan, Mexico, Morocco, the Netherlands, Norway, Republic of Korea, Saudi Arabia, Sweden, the United Arab Emirates, the United Kingdom and the United States.

Links to key information

- [2015 Mission Innovation Joint Launch Statement](#)
- [Mission Innovation Action Plan](#)
 - [Delivering the Action Plan 2018-2020](#)
- [MI members](#)
- [MI 2019 Impact Review: The Story So Far](#)
- [Country Highlights Report 2019](#)

"MI By the Numbers" infographic



A GLOBAL INITIATIVE WORKING TO ACCELERATE CLEAN ENERGY INNOVATION



1 GOAL

To **accelerate** the pace of clean energy **innovation** to achieve performance breakthroughs and cost reductions to provide widely **affordable** and **reliable** clean energy solutions.

25 MEMBERS

Launched in 2015 at COP21 in **PARIS**

MI Members represent about 80% of global government investment in clean energy RD&D

4 OBJECTIVES



Substantial boost in public sector investment



Increased private sector engagement and investment



Increasing international collaboration



Raising awareness of the transformational potential of energy innovation



8 INNOVATION CHALLENGES

Global collaborations to accelerate innovation in key technology areas



IC1 Smart Grids



IC2 Off-grid Access to Electricity



IC3 Carbon Capture



IC4 Sustainable Biofuels



IC5 Converting Sunlight



IC6 Clean Energy Materials



IC7 Affordable Heating and Cooling of Buildings



IC8 Renewable and Clean Hydrogen



19 MISSION INNOVATION CHAMPIONS

A program for recognizing and supporting the next wave of energy technology leaders

6 MAJOR COLLABORATORS

- BEC** Breakthrough Energy Coalition
- GCoM** Global Covenant of Mayors for Climate and Energy
- IEA** International Energy Agency
- IRENA** International Renewable Energy Agency
- WBG** World Bank Group
- WEF** World Economic Forum



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www.mission-innovation.net

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MI's achievements

Since its launch in 2015, MI's members have delivered:

- A **\$4.6 billion USD increase** in annual public investments in clean energy innovation
- **\$1.3 billion USD** in funding for **59 new international collaborations** supporting clean energy innovation
- **70 international publications** highlighting MI's work
- Launched the [MI Champions](#) Program, with **19 innovators** selected from around the world
- **100 innovations** identified that will avoid **2 gigatonnes of CO₂ emissions** per year by 2030
- **46 events on 4 continents** involving 4300 innovators, investors and policy makers

Find out more in the [MI 2019 Impact Review: The Story So Far](#).

MI Innovation Challenges backgrounder

The eight [Innovation Challenges](#) (ICs) spearheaded by MI are global calls to action aimed at accelerating research, development and demonstration (RD&D) in technology areas that promise to reduce the cost of clean energy, provide significant CO₂ reductions and increase energy security.

The MI ICs help reduce research duplication and accelerate innovation by facilitating global networks and increasing communications between governments, researchers, institutions and private industry.

[IC1 – SMART GRIDS](#)



- **Goal:** To accelerate the development of future grids powered by affordable, reliable, decentralised renewable electricity systems.
- **Context:** The development of smart electric grids that can be observed in real-time, fix themselves and integrate renewable energy sources has the potential to significantly improve the generation and distribution of power. Optimized power distribution will both reduce waste and allow for various sources of renewable energy to be integrated into the grid, leading to reduced CO₂ emissions and increased reliability.

[IC2 – OFF-GRID ACCESS TO ELECTRICITY](#)



- **Goal:** To develop systems that enable off-grid households and communities to access clean, affordable and reliable renewable electricity.

- **Context:** Off-grid households or communities often rely on diesel generators or other greenhouse gas-emitting solutions for access to energy. With over 1.1 billion people currently living without access to electricity, providing them with clean energy sources will significantly reduce CO₂ emissions.

IC3 – CARBON CAPTURE



- **Goal:** To identify and prioritize breakthrough carbon capture technologies, and to recommend various RD&D plans and collaboration mechanisms.
- **Context:** Globally, power plants and factories make up about 50% of all greenhouse gas emissions. Transitioning or replacing this existing infrastructure will take time and significant investment. Carbon capture, utilization and storage (CCUS) can achieve significant CO₂ reductions from existing power plants (fuelled by coal, natural gas and biomass) and industrial applications while cleaner infrastructure is developed and brought online.

IC4 – SUSTAINABLE BIOFUELS



- **Goal:** To accelerate biofuels RD&D in order to achieve biofuels performance breakthroughs and cost reductions significant enough to make the use of sustainable biofuels more attractive than the use of conventional fossil fuels.
- **Context:** The use of fossil fuels in transportation and industrial applications contributes up to 35% of global greenhouse gas emissions. Unfortunately, many of the most exciting biofuels remain at the pre-commercial stage of development. Once affordable, biofuels can play an important role where electrification cannot be implemented, where the added weight of batteries is impractical or in applications which require high operating temperatures.

IC5 – CONVERTING SUNLIGHT



- **Goal:** To develop innovative, efficient and affordable solutions to convert the sun's energy into storable solar fuels, using new materials.
- **Context:** Solar energy has been around for a long time but the transition from fossil-based fuels to cleaner solar fuels has been slowed by the high cost of technologies that convert and store sunlight into energy. While prices have fallen steadily, there still exists a significant gap between the potential of solar energy and its implementation.

IC6 – CLEAN ENERGY MATERIALS

 [#MI_IC16](#)

- **Goal:** To accelerate the exploration, discovery and use of new high-performance, low-cost materials to be used in clean energy solutions.
- **Context:** The materials used in the energy sector can take up to 20 years to go from laboratory to market. Accelerating and improving this process through international collaborative RD&D combined with innovative research methods, such as artificial intelligence and robotics, could accelerate modeling, simulating and testing of materials, resulting in major breakthroughs for the energy sector.

IC7 – AFFORDABLE HEATING AND COOLING OF BUILDINGS

 [#MI_IC17](#)

- **Goal:** To develop building heating and cooling systems and improve building exteriors to deliver affordable, efficient, low-emission heating and cooling solutions.
- **Context:** Buildings, whether homes, offices or factories, account for almost a third of global end-user energy consumption. Keeping these buildings cool or warm and providing them with hot water makes up about half of this energy use. This means there is significant space for energy efficiency improvements in these three sectors.

IC8 – RENEWABLE AND CLEAN HYDROGEN

 [#MI_IC18](#)

- **Goal:** To accelerate the development of technologies to extract hydrogen from clean, renewable sources such as water and biomass and to accelerate the development of a global clean hydrogen market by identifying and overcoming challenges in the production, distribution, storage and use of hydrogen.
- **Context:** The majority of hydrogen produced today is extracted from natural gas. While the extraction cost is quite low, the environmental costs are high. Producing hydrogen from renewable sources, such as water, has the potential to deliver large volumes of clean energy. Unfortunately, the energy requirements and associated costs are important barriers.

MI Champions backgrounder

The MI Champions program was launched at the third MI Ministerial held in Sweden on May 22-24, 2018. The program recognizes exceptional researchers and innovators who are helping to accelerate the clean energy transition by developing novel ways of making energy cleaner, cheaper and more reliable. The program will call worldwide attention to the most promising ideas from across the globe and seeks to facilitate engagement among the Champions and MI governments, research institutions, affiliated organizations and private sector investors. The program will also support cross-border exchanges of ideas and talent and build a community of visionaries committed to the promise of clean energy RD&D.

During the fourth MI Ministerial held in Vancouver on May 28, 2019, 19 Champions were brought together to discuss leading clean energy innovations and how their work fits within the broader picture of climate change and clean energy.

Together, the Champions represent some of the most promising innovators within the global clean energy sector. They serve as role models for the international community and have an opportunity to highlight their work as well as the progress achieved under MI.

For more information, please visit:

<https://www.michampions.net/>

<http://mission-innovation.net/our-work/champions-program/>