



NEDO's Contribution to Addressing Climate Change Issues

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**New Energy and Industrial Technology Development
Organization (NEDO)**

Outline

1. Overview of NEDO
2. Introduction of “Innovation for Cool Earth Forum (ICEF)”

1. Overview of NEDO

What is NEDO?



Organization	National Research and Development Agency
Mission	1. Addressing energy and global environmental problems 2. Enhancing industrial technology
Established	1980
Budget	1.43 billion US dollars (FY2019)
Role	



NEDO's Accomplishments



For more than 30 years, NEDO has been promoting the development of many kinds of energy-related technologies.



Residential fuel cells

Succeeded in generating power from a 1 kW module in 1995



Photovoltaics

Successfully reduced the cost of solar power cell production to less than 1/200 (20,000—30,000 yen/W → 100 yen/W)



Energy storage

Testing conducted on a 10 MWh single cell battery using materials and data needed to develop a 100 MWh single cell battery and a multi-kWh battery pack



Geothermal

Greatly improved the economic viability of deep geothermal resource exploration



Superconductivity

Developed the world's first 70,000 kW superconducting generator and succeeded in producing 80,000 kW over 700 hours



Gas turbines

Succeeded in operating a ceramic gas turbine with an inlet temperature of 1350 °C and achieving a thermal efficiency of 38.6%

Comprehensive Strategy for Establishing a Sustainable Circular Society (Three Pillars and Examples of Relevant Technologies)

Recent technological advances,
social environment changes

Technological advancement: technology
constructing an energy system, such as
sensor, AI, blockchain

Contribution to SDGs,
expansion of ESG investment

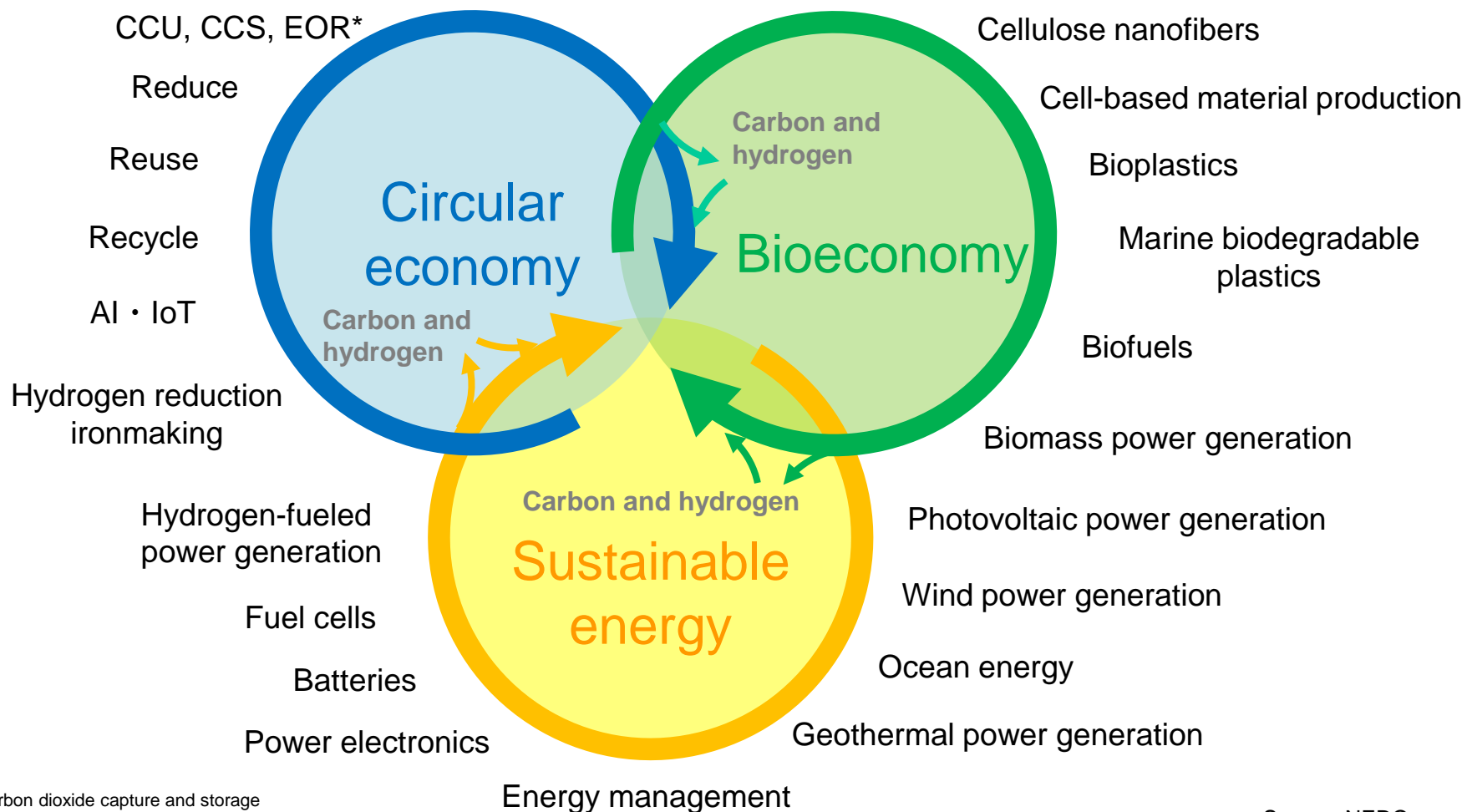
Surplus generation of renewables
during low demand period

Progress of sharing economy

Prohibits the sale of ICE cars, mobility
electrification

Ocean plastic pollution

Social acceptability of CCS



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CCS: Carbon dioxide capture and storage
CCU: Carbon dioxide capture and utilization
EOR: Enhanced oil recovery (injection of carbon dioxide to enhance oil production combined with CCS)

2. Introduction of “Innovation for Cool Earth Forum (ICEF)”



What's ICEF? (1)

About ICEF

- Initiative of Prime Minister Shinzo Abe
- Held in Tokyo every October
- **Participants:** 1000+ leaders in academia, industry, and government from 70 countries and regions
- **Aim:** Platform to solve climate change through innovation
- **Main theme:** Achieving “net-zero CO₂ emissions”
- **Hosts:**
 - Ministry of Economy, Trade and Industry (METI)
 - New Energy and Industrial Technology Development Organization (NEDO)
- **Outcomes:**
 - Top 10 Innovations, roadmap, and statement



ICEF Steering Committee Members: 2018—2019



6th Annual Meeting (ICEF 2019)

- Overall theme: “Bending down the emissions trajectory by Innovation and Green Finance”
- Participants: 1000+ experts from over 70 countries



Plenary Sessions *Broad Perspective*

Business Decarbonization Initiatives

Green Hydrogen Global Network

Industrial Decarbonization

Concurrent Sessions *Social Innovation*

Impact of Carbon Removal Technologies

Climate Communications

E-Mobility in Sharing Services and Fleets

Green Urbanization

Energy Productivity through IT and AI

Balance Between the Benefits of Plastics and Marine/Land Ecosystem Protection

Concurrent Sessions *Technological Innovation*

Grid Integration of Renewables

Fuel Cells

Digital Technology for Distributed Energy Resources

Innovations in Nuclear Energy

Genetic Engineering for CO₂ Reduction

CO₂ Utilization

Outcomes of ICEF (1)

ICEF Statement

#1 Inspire investment in technology, products, and services for green growth

#2 Involve industry and consumers in accelerating technologies and innovation for decarbonization

#3 Internationalize cooperative efforts for deploying innovation outcomes



Outcomes of ICEF (2)

Top 10 Innovations



Find out more about the "Top 10 Innovations" on the ICEF website: <https://www.icef-forum.org/>

ICEF Roadmap Projects



These are available on the ICEF website: <https://www.icef-forum.org/>

7th Annual Meeting (ICEF 2020)



Save the Date



Innovation for Cool Earth Forum
7th Annual Meeting
OCTOBER 7-8, 2020

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