Technology Development Efforts promoted by NEDO, Japan

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About NEDO

Positioning of NEDO（New Energy and Industrial Technology Development Organization）

- In its role as an **innovation accelerator**, NEDO formulates project plans and establishes project implementation frameworks by combining the capabilities of industry, academia, and government, including public solicitations of project participants.
- NEDO carries out research and development projects and set targets based on changes in social conditions in order to realize maximum results.

NEDO's Core Technologies

Renewables

Energy Conservation

Electronics / ICT

Materials/Nanotech

Hydrogen /Battery

Water Treatment

Smart Community

Environment/ Clean Coal

Robotics/AI

NEDO Project relating to Robots and AI

New technology to enable manual work from anywhere by remote-controlled robots

Source; TELEXISTENCE inc.

- Developing new technology based on TELEXISTENCE, that enables automation of product handling.
- In addition, this technology will help realizing an expanded labor base including manual labors without any physical presence on location

- Conducted a demonstration by introducing a remote-controlled robot "Model-T" that can handle a range of products of various shapes and sizes at a convenience store in Japan.
- Also, R&D is promoted, wherein the command and action between remote controller and robots is digitized and stored as data, and enabling automation without any remote operation with help of AI learning

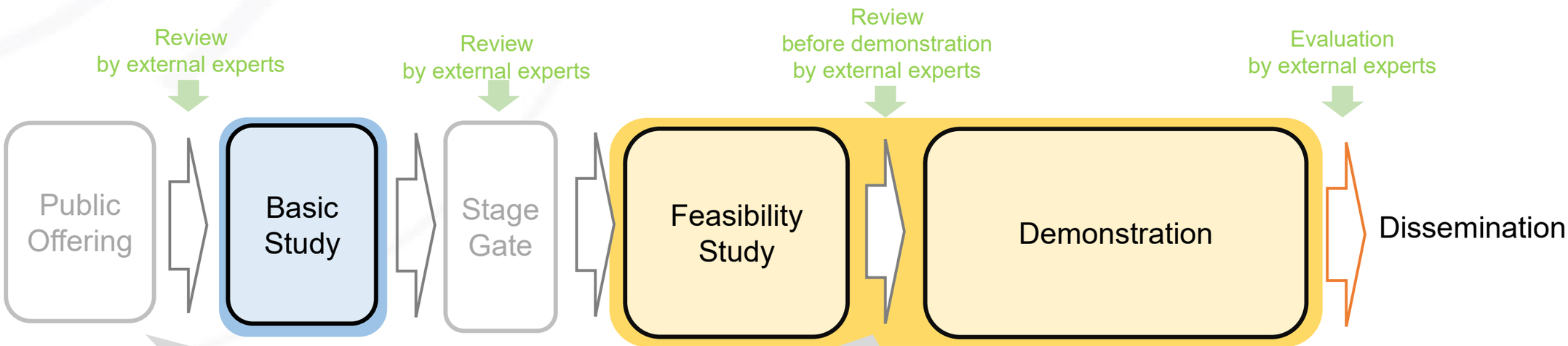
Contributing to solving social issues such as labor shortages due to the decreasing working population

International Energy Demonstration Project

Purpose

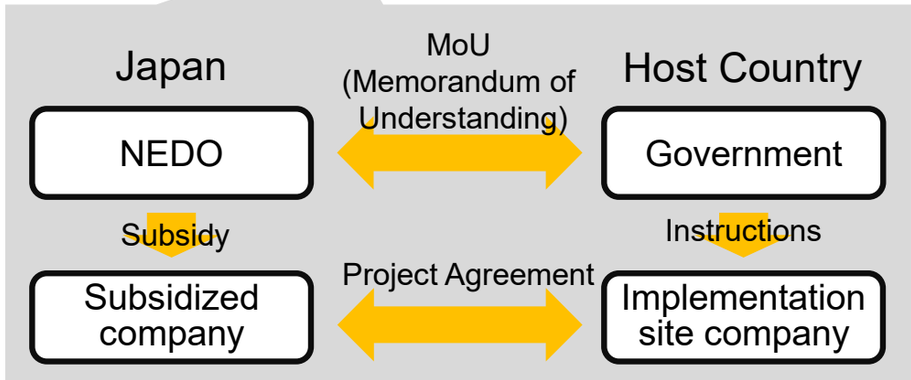
- ✓ Contribute to solving foreign energy problems through a demonstration of Japanese technology and systems for energy conservation.
- ✓ Contribute to obtaining energy security by reducing energy consumption through the dissemination of technology.

Scheme

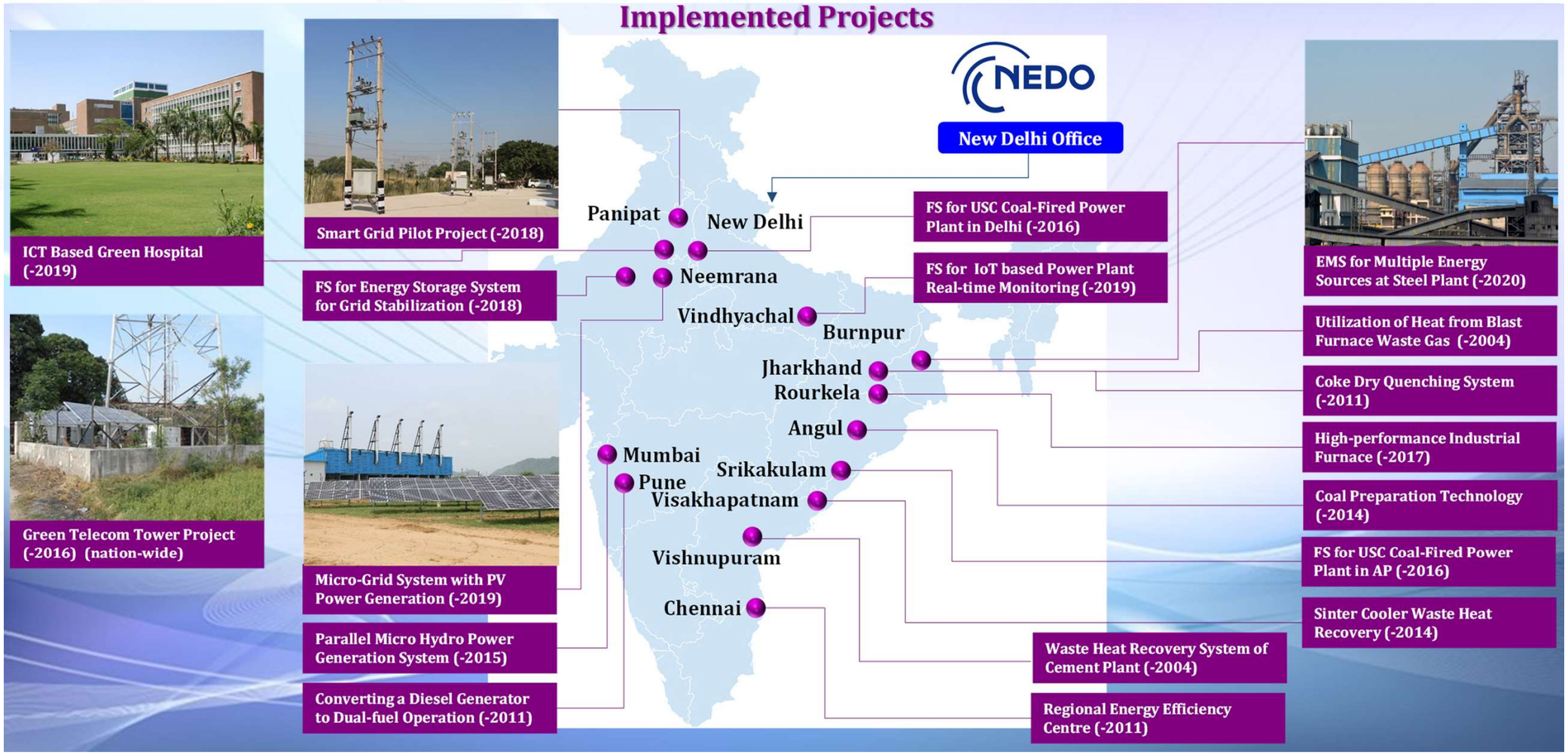


Next public offerings are planned in **Spring and Fall in 2021**

※ Indian companies or universities may participate in the projects, together with Japanese companies which are supposed to apply for the offering.



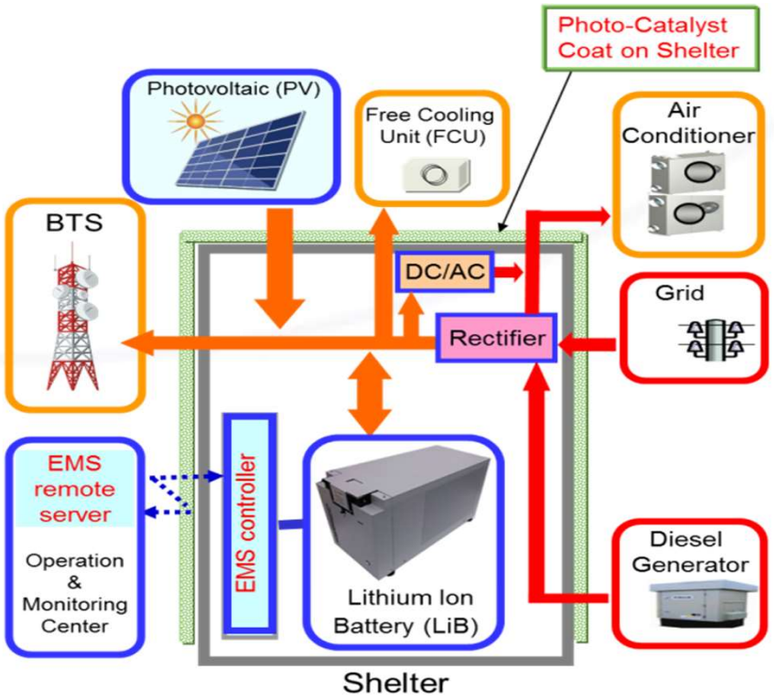
Implemented Demonstration Projects in India



International Energy Demonstration Project

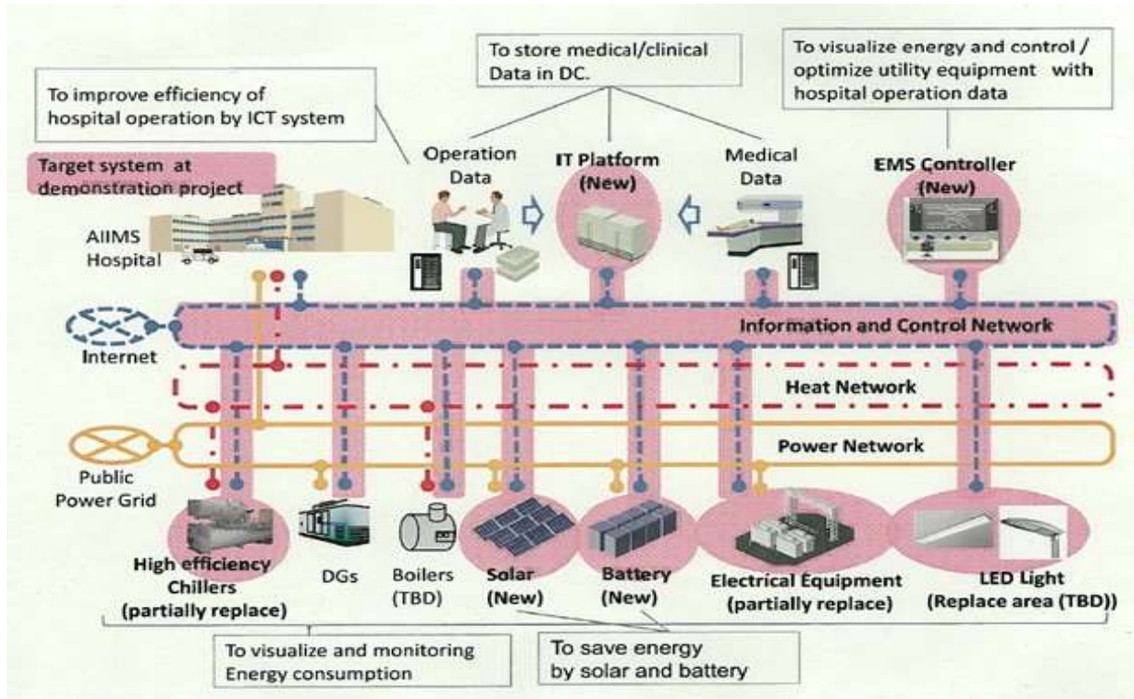
Green Telecom Tower Project in India

- Control of PV power generation and battery reduces diesel.
- Photocatalyst coating reduces temperature rise in the shelter.



Green Hospital Project in AIIMS, Delhi

- Reduce fossil fuel consumption by introducing PV, batteries, LED lights, chillers, and high-voltage AC adapters which are fully integrated by an EMS.
- Improve operational efficiency at AIIMS Delhi by compiling an enormous amount of clinical data and transferring it to integrated energy-saving data servers.

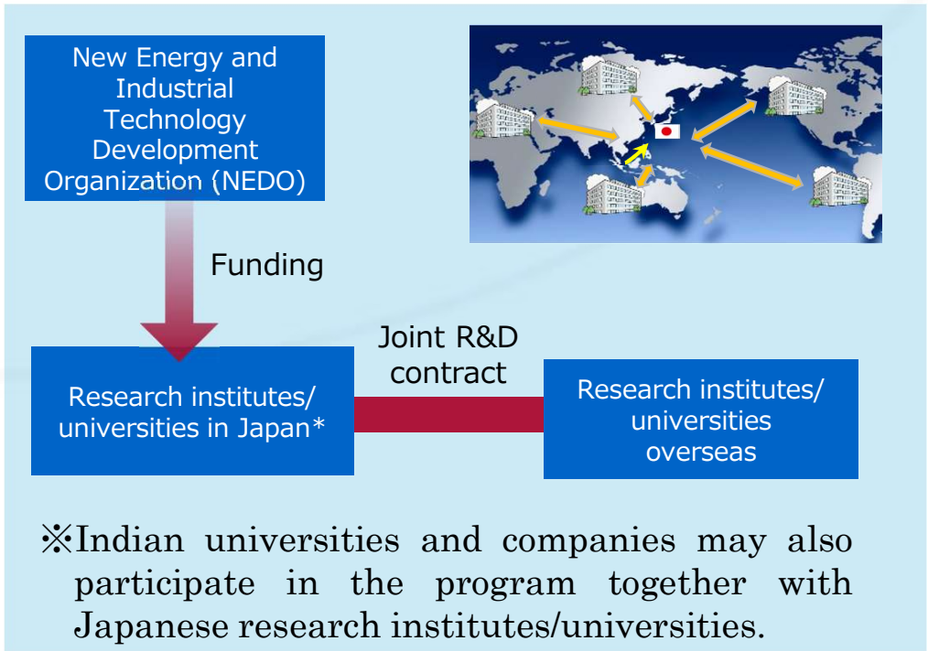


R&D Program for Promoting Innovative Clean Energy Technologies through International Collaboration (FY2020–FY2024)

● Program Outline

- ✓ In order to address the global challenge of climate change, innovation in the field of clean technology through international collaboration is important.
- ✓ The aim of this program is to develop and strengthen international joint Research and Development between Japan and other countries in order to create new and innovative clean energy technologies that will have practical use after 2030.
- ✓ This program supports Japanese research institutes and universities conducting joint international R&D projects with institutions from G20 member and other countries.

● Program Scheme



※Indian universities and companies may also participate in the program together with Japanese research institutes/universities.

● Project Details

NEDO calls for proposals from Japanese research institutes/universities that conduct innovative projects through international collaboration.

Project scheme	International collaboration between Japanese research institutes/universities and research institutes/universities overseas. Private companies may participate but only when research institutes/universities also participate.
Project budget	Maximum of almost INR 3.5 crores per project/per year. Note: NEDO will only fund the Japanese side of the international collaboration.
Project term	Maximum of 3 years.
Target technologies	Clean energy technologies, including renewable energy and energy-saving and environmental technologies that will have practical application after 2030. 7 R&D themes have been selected for FY2020.

R&D Program for Promoting Innovative Clean Energy Technologies through International Collaboration (FY2020–FY2024)

- **R&D Themes for FY2020**

Theme 1: Development of elemental photovoltaic cell technologies that simultaneously realize higher efficiency, lower costs, and higher durability more than ever before

Theme 2: Development of innovative geothermal power generation technologies utilizing overseas fields, including resource exploration/assessment and materials/measurement technologies

Theme 3: Development of innovative bioprocess technologies utilizing microorganisms and genome editing technology

Theme 4: Development of elemental technologies for innovative hydrogen production/use which contribute to substantial cost reduction for realization of a future hydrogen society

Theme 5: Development of innovative devices and evaluation technologies which utilize/control unused heat (hot and cold heat) generated from waste heat as well as renewable energy sources

Theme 6: Development of innovative devices and system control/evaluation technologies for making effective use of distributed power networks

Theme 7: Development of methodologies to ensure the reliability and quality of innovative heat resistant materials which contribute to improving aircraft engine fuel efficiency

Thank you for your attention!

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