



Renewable Energy Grid Integration Systems Workshop

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New Energy and Industrial Technology Development Organization (NEDO)

Overview of NEDO

Establishment: 1980 as New Energy Development Organization

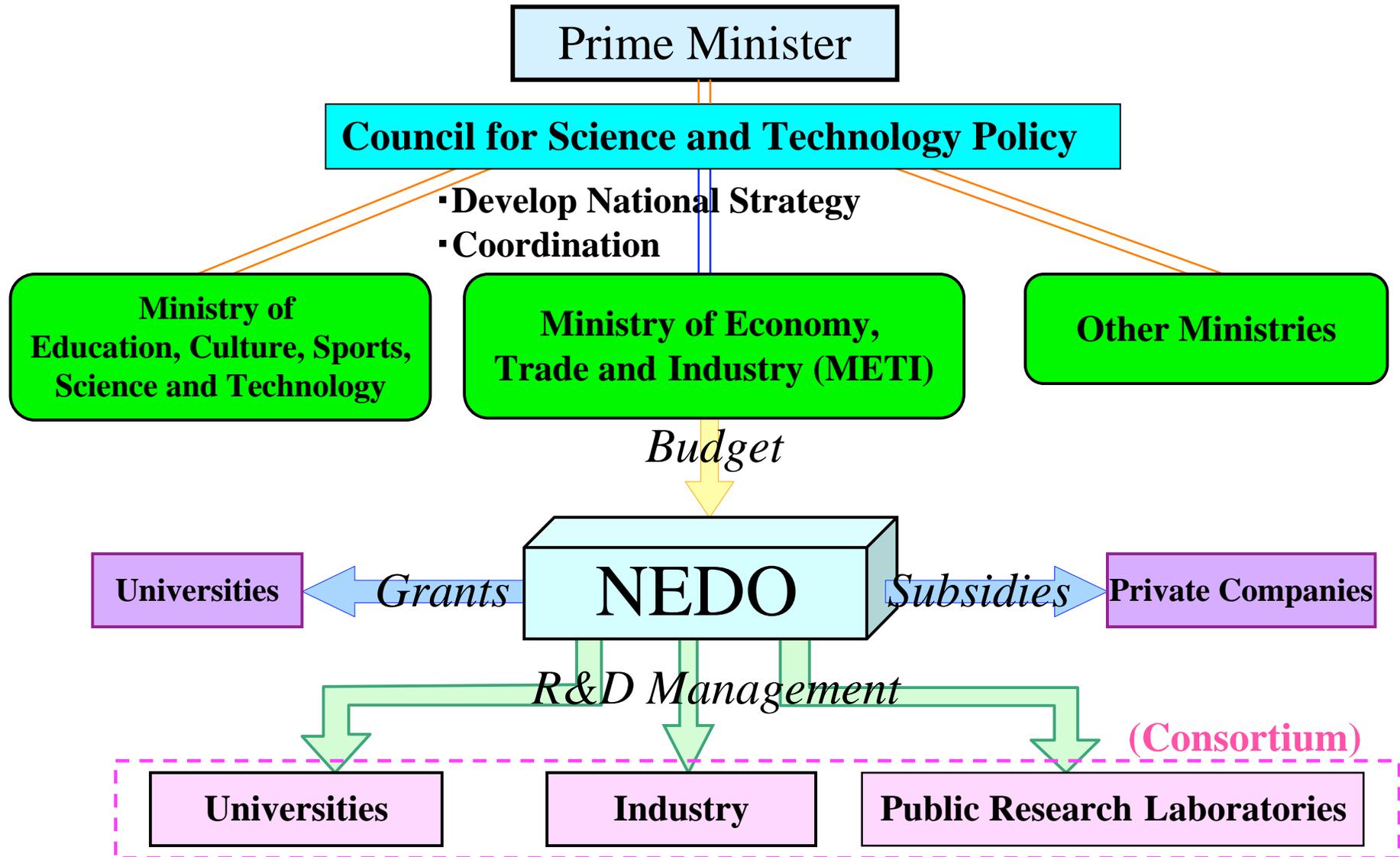
Role: Japan's largest public management organization promoting R&D & dissemination of new energy, environmental and industrial technologies

Personnel: Approximately 1,000

FY2008 Budget: Approximately ¥232.9 billion (\$2.32 billion)

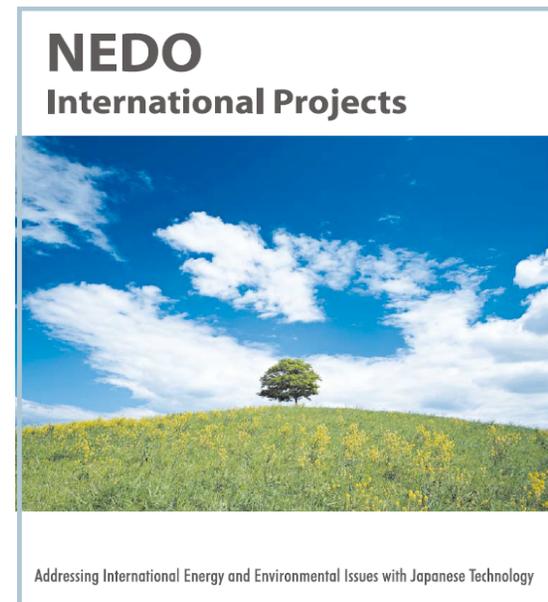


Japan's R&D Promotion Scheme



NEDO's Mission

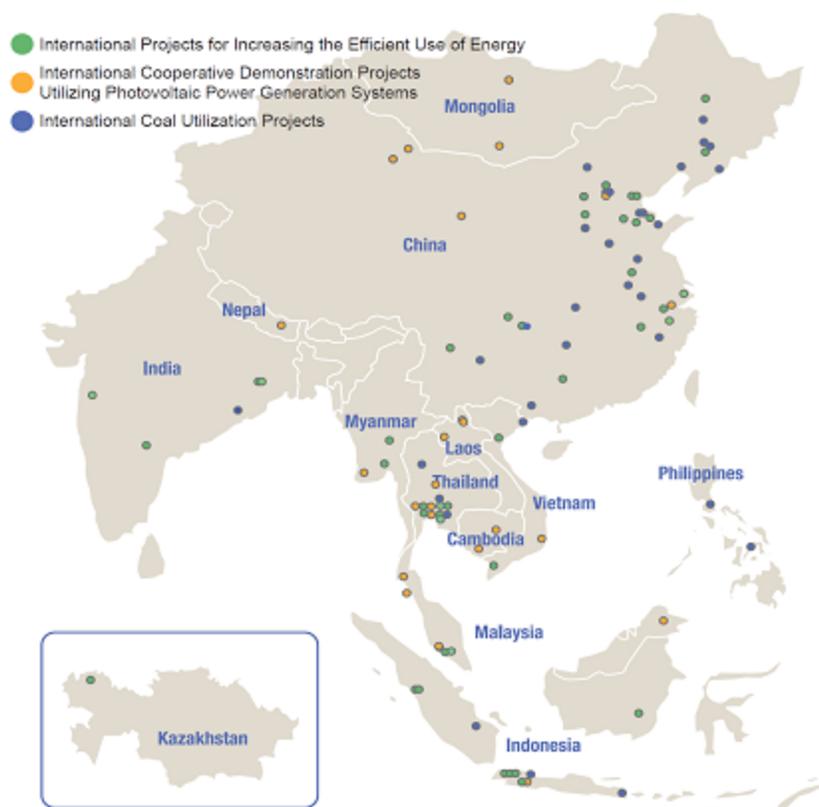
- Strategically prioritize and promote R&D projects on industrial, new energy, energy conservation and environmental technology by means of **government, industry and academic cooperation**
- Contribute to resolving energy and environmental problems
- Procure emission reduction credits to support Japan's efforts to meet its Kyoto obligation
- **Conduct international activities to introduce advanced Japanese technologies to developing countries in order to encourage sustainable development**



NEDO International Model Projects



NEDO has implemented a total of 93 international projects, including 21 International Cooperative Demonstration Projects Utilizing Photovoltaic Power Generation Systems. Many of these projects have focused on hybrid systems, micro grids, grid stabilization and energy storage.



NEDO International Projects (As of Jan. 2009)

	● International Projects for Increasing the Efficient Use of Energy	● International Cooperative Demonstration Projects Utilizing Photovoltaic Power Generation Systems	● International Coal Utilization Projects
China	19	5	20
Thailand	6	4	3
Indonesia	6	1	3
India	4	–	1
Vietnam	2	1	1
Myanmar	2	1	–
Kazakhstan	1	–	–
Malaysia	2	2	–
Philippines	–	–	2
Mongolia	–	2	–
Cambodia	–	2	–
Laos	–	2	–
Nepal	–	1	–
Total	42	21	30

NEDO International Projects Related to Renewable Energy Grid Connection



- Demonstrative Research on a Grid-connected Photovoltaic Power Generation System (Myanmar and Thailand)
- Demonstrative Research on Efficient Photovoltaic Power Generation Units for Grid-connected System (China)
- Demonstrative Research on Efficient Technologies for Photovoltaic Power Generation for Grid-connected System (water-cooled PV + diesel generator + advanced batteries) (China)
- Development of Islanding Prevention Methods under Clustered PV Conditions and Improvement of Electricity Quality (China)
- Demonstrative Research Project on Integrated Control Technology for Large-scale Photovoltaic Systems (China)
- Demonstrative Research Project to Stabilize Output of Hybrid PV Power Generation Systems (PV + micro hydro + capacitors) (Laos)
- Demonstrative Research on Micro Grid Stabilization (PV + SVG) (Thailand)
- Demonstrative Research Project for Stabilized and Advanced Grid-connected Photovoltaic Micro Grid Systems (PV + compensating equipment) (China)
- International Cooperative Demonstration Project on Stabilized and Advanced Grid-connection Photovoltaic Systems (PV + circuit breaker) (Indonesia)
- International Cooperative Demonstrative Project for Stabilized and Advanced Grid-connection Photovoltaic Systems (PV + battery energy storage system) (Malaysia)



NEDO and APEC EGNRET

- NEDO as Japan's representative at EGNRET meetings
- October 2007: Japan raises idea of APEC EGNRET project focused on NRE grid-connection issues
- August 2008: Japan submits full proposal for “**Addressing Grid-interconnection Issues in Order to Maximize the Utilization of New and Renewable Energy Sources**” to APEC Secretariat
- August 2008: US, led by Jeff Skeer and Dan Ton of DOE, propose self-funded “**APEC Workshop on Grid Integration of Renewable Energy**”
- November 2008: Japan proposal approved by APEC Secretariat
- Project timeline
- REGIS workshop proceedings as basis for EGNRET project

Japan's REGIS Delegation



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Recognition of Speakers