Japanese Official Development Assistance for Coal Fired Thermal Power
- Japan & India Energy Forum 2015 -

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1. Japanese Official Development Assistance and JICA’s Cooperation Scheme
2. JICA’s Cooperation for Power Sector in India
3. Good Practice (Bangladesh case)
1. Japanese Official Development Assistance and JICA’s Cooperation Scheme

JICA is One Stop Executing Agency of Japanese Bilateral ODA.

Official Development Assistance (ODA)

- Multilateral Assistance

Bilateral Assistance

- Technical Cooperation (T/C) (Grant based)
  - Date collection survey, master plan study and feasibility study
    - Training program
    - Dispatch of experts
    - T/C Project
  - ODA Loans
    - Private sector investment finance

- Loans
  - Grants*

* Some scheme of Grant assistance is executed by GoJ.

(Contributions to international organizations)
### 1. Japanese Official Development Assistance and JICA’s Cooperation Scheme

<table>
<thead>
<tr>
<th>FY</th>
<th>ODA Loan (commitment)</th>
<th>Grant Aid (commitment)</th>
<th>Technical Cooperation (Expenditure)</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>2005</td>
<td>155.5</td>
<td>2.1</td>
<td>1.8</td>
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<tr>
<td>2006</td>
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<td>0.6</td>
<td>1.3</td>
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<td>2007</td>
<td>225.1</td>
<td>0.4</td>
<td>1.2</td>
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<td>2008</td>
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<tr>
<td>2009</td>
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<td>1.2</td>
<td>1.9</td>
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<td>2010</td>
<td>48.0*</td>
<td>1.2</td>
<td>1.7</td>
<td>50.9</td>
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<td>2012</td>
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<td>2013</td>
<td>311.5</td>
<td>1.5</td>
<td>3.9</td>
<td>316.9</td>
</tr>
</tbody>
</table>

* Part of commitment was postponed to FY 2011, affected by The Great East Japan earthquake.

#### Sector-wise record of ODA Loan in the past 10 years

- **Power sector is the second biggest.**
1. Japanese Official Development Assistance and JICA’s Cooperation Scheme

JICA’s Seamless Assistance

- Dialogue with Government
- Master Plan
- Feasibility Study
- Financial Support (Loan Agreement)
- Support for Bidding and Construction, Supervision
- Capacity Building

- Identification & Preparation
- Project Formulation
- Project Implementation
- Operation
2. JICA’s Cooperation for power sector in India
   - Overview -

1.1 Trillion Japanese Yen (US$ 11 billion)

25 Percent of JICA’s total commitment to India

5 Percent of total generation capacity

* JICA has focused transmission and distribution in recent years, but is now strengthening its assistance to generation including coal-fired power and renewable energy.
2. JICA’s Cooperation for power sector in India
- Recent ODA Loan Projects -

- Haryana Transmission System Project (2007)
- Haryana Distribution Upgradation Project (2013)
- Maharashtra Transmission System Project (2007)
- Bangalore Distribution Upgradation Project (2006)
- Tamil Nadu Transmission System Improvement Project (2012)
- Umiam Stage II Hydro Power Station R&M Project (2004) (Meghalaya)
- Transmission System Modernization Project in Hyderabad (2006)
- Bakreswar Thermal Power Station Project (2002)
- Purulia Pumped Storage Project (1994, 2005)
- AP Rural High Voltage Distribution System Project (2010)

(More than two States)
- Rural Electrification Project (2005)

Legend
- Generation
- Transmission and Distribution
2. JICA’s Cooperation for power sector in India - Assistance Strategy to Energy Sector -

Priority Area

1. Generation with advanced technology
   - Generation: **Ultra Super Critical Coal Based Thermal Power Plant**, Pumped Storage Power Plant

2. Transmission and distribution with advanced technology and focus on supply to industrial area
   - Transmission: Low-loss / High-Voltage Transmission
   - Distribution: Distribution network with smart grid technology

3. Renewable energy for diversification of energy sources, and energy efficiency and conservation
3. Good Practice (Bangladesh Case)
Matabari Ultra Super Critical Coal Fired Power Project

Project Cost: 450 Billion Yen (380 Billion from Japanese ODA)
Scope: i) 1,200MW USC Plant, ii) Port,
iii) 400kV Transmission Line, iv) Access Road
v) Consulting Service (Procurement, Construction, O&M)
Expected Completion: Port by 2019, Plant by 2023
The Project Site was identified by [JICA-assisted Power Sector Master Plan Study](#), the first high-efficient coal fired power plant in the country.
3. Good Practice (Bangladesh Case)  
JICA’s Technical Assistance II) -Feasibility Study-

i) Necessity and Priority  
ii) Project Scope, Cost, Implementing Structure  
iii) Contract Packaging, Schedule  
iv) Financial Structure  
v) Power Purchase Agreement  
vi) Validation of Financial Model  
vii) Environment and Social Considerations
Township Program

To construct SCHOOLS, HOSPITALs, PARKs for neighboring residents and workers for the plant.

Electrification of Surrounding Area

To supply electricity to neighboring villages (4,000 households, 20,000 residents), by expanding transmission and distribution lines.

Social Development Fund

To allocate 200 million yen per year for Social Development Fund to improve living environment in the neighboring area, based on the policy of Government of Bangladesh.
3. Good Practice (Bangladesh Case)
JICA’s Technical Assistance IV) -Financial Structure Plan-

- JICA 
  - L/A 
  - Ministry of Finance
    - Debt
      - Debt
      - Equity
    - Financing Arrangement
      - Coal Fired Power Company (CPGC)
        - LTSA
          - Contractor
        - FSA
          - Supplier
        - PPA
          - Off Taker
    - GOB
      - Power Development Board (BPDB)

- Civil Contractor
- Engineer
  - Civil Contract
  - Consultant Contract
3. Good Practice (Bangladesh Case)
JICA’s Technical Assistance V) -Capacity Building-

i) Preparation of Management Plan and Human Resource Management Plan
ii) Financial and accounting
iii) Operation and Maintenance
iv) Total Quality Management
v) Performance Evaluation System
3. Good Practice (Bangladesh Case)

JICA’s Seamless Assistance

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Good Practice (Bangladesh Case)
Thank you for your attention!

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