

# **At What Cost? ECAs in India: Bankrolling Nuclear Power Plants, Mega-Dams, and Scandal-Ridden Projects**

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The record of Export Credit Agencies (ECA) in India is no exception to the overall pattern of ECA support for extraordinarily destructive and dangerous mega-projects. Due to the secretive nature of many ECAs, it is still difficult to obtain accurate and timely information on ECA-financed projects. Last year, we combed through information on thousands of projects in 25 Asia-Pacific countries and identified 600 existing and planned ECA-supported projects, including sixty-two projects in India either currently supported by ECAs or in negotiation for ECA finance.<sup>2</sup> Given the contradictory, incomplete and often erroneous nature of data regarding ECA finance, this year we focused on further refining the India data-set, and identified 35 of the most significant ECA-backed projects in India, ranging from controversial nuclear power plants, to the notorious Dabhol/Enron project to hydropower projects associated with massive resettlement plans.

The 35 projects in our sample were valued at over U.S. \$28 billion and were dominated by the power sector. The projects include Russian export credit support for the Kudankulam Nuclear Plant and Canadian ECA support for two phases of the Rajasthan Atomic Power Plant (RAPP 1 and 2). ECAs have shown interest in supporting large hydropower projects, notably the Chamera dams, the proposed Tehri dam, slated to displace over 100,000 people, and the notorious Maheshwar Dam, which spawned a vibrant social movement forcing reconsideration of the project. ECA support is planned for the controversial Mangalore power plant. ECA involvement in India has also included U.S. Export-Import bank support for the Sanghi cement plant, which has been plagued with environmental problems since its inception, generating two public interest lawsuits regarding the location of the plant and its jetty in the Narayan Sarovat Sanctuary and a protected Mangrove Reserve forest.

At times, ECAs work in tandem with multilateral financial institutions such as the World Bank Group and the Asian Development Bank. Japan's ECA, the Japan Bank for International Cooperation (JBIC) worked with the World Bank to support the notorious Coal Sector Rehabilitation Project. The ADB partnered in plans for the scandalous Dabhol/Enron project with British, American, Japanese, and Belgian ECAs. Germany's Hermes partnered with the World Bank's International Finance Corporation (IFC) in plans for the Tehri Dam. The ADB and the IFC are partners with Italy's SACE and Korea's Export Import Bank in plans for the Balagarh Power Project.

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<sup>2</sup> Fried, S. , "Secret Agents of Mass Destruction: Export Credit Agencies in the Asia-Pacific Region", Environmental Defense, December 2002. Presented at Asian Social Forum, Hyderabad, India.

In this brief summary paper, we will examine one case study of an ECA-supported project, the Kudankulam Nuclear Plant.

### **The Case of the Kudankulam Nuclear Power Plant**

In 1988, a year after the Chernobyl accident, India signed an agreement with the Soviet Union for the construction of the two 1000 MW capacity light water nuclear reactors. The Russian state-owned Vnesheconombank agreed to provide export credit loans to the Indian government covering approximately 50% of the construction costs.<sup>3</sup> The proposed Kudankulam nuclear plant in Tamil Nadu was initially estimated to cost 60 trillion rupees (6,000 crore) and the agreement allowed India to repay Russian loans for the project in rubles. Due to the break-up of the U.S.S.R., the project was delayed for over a decade. The deal was resurrected when former president Boris Yeltsin visited India in 1998.<sup>4</sup> Approximately 300 Russian companies are expected to take part in constructing the reactors.<sup>5</sup> Russian firm TVEL will supply US\$400 million worth of nuclear fuel to the Power Plant by 2010.<sup>6</sup> The fuel agreement states that Russia will provide the fuel for 40 years at the fixed cost of US\$157 million per year.<sup>7</sup>

In November 2001, India and Russia updated their earlier agreement, indicating that the investment for the plant would require 170 trillion rupees (17,000 crore) or approximately US\$3.5 billion, to be repaid in dollars. The new agreement eliminated Russia's obligation to take back the spent fuel and changed the terms of the loan so that it would be repaid in U.S. dollars instead of rubles.<sup>8</sup> The meeting to finalize the new agreement was held behind closed doors, apparently contrary to the public hearing clause in the 1994 EIA law<sup>9</sup>. Apparently, very little is known about any of the environmental, social or technical clearances provided for the project. Since nuclear plants are treated as issues of national security, none of the studies for the project have been released to the public.<sup>10</sup> Concerns have been expressed that the thermal pollution could destroy marine life along the coast from Kanyakumari to Ramanathapuram and have an impact on Sri Lanka.<sup>11</sup>

The plant will utilize VVER Russian pressurized light water reactors.<sup>12</sup> In 1997

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<sup>3</sup> Vnesheconombank, a Russian state-owned bank acts "to establish efficient governmental mechanisms to promote Russian exports. Based on the world's practice, specifically, the experience of OECD member-states and with due regard to all WTO requirements and standards, VEB is developing mechanisms designed to help Russian export companies to gain access to the world market. Vnesheconombank owns 95% of Roseximbank – an institution charged with putting these mechanisms into effect." The Mumbai office of the bank is one of the most active offices world-wide. 1999 Annual Report, also VEB website.

<sup>4</sup> "Russia, India sign 400-million-dollar nuclear fuel deal," Agence France Presse, 2/3/02

<sup>5</sup> ibid

<sup>6</sup> India Signs Contract With Russia for Supply of Nuclear Fuel, Global News Wire - Asia Africa Intelligence Wire, February 13, 2003

<sup>7</sup> Russia-India, The Press Trust of India, September 23, 2002

<sup>8</sup> Later estimates have been made of 13,171 crore rupees. "Kudankulam Nuclear Power Project Ahead of Schedule: The Total Cost of the Project was RS 13, 171 Crore and the Russian Government would Fund 50 Per Cent as a Soft Loan," Kasturi and Sons Ltd, Business Line, 1/2/03. Vigourous campaign against Koodankulam project planned, The Hindu, November 12, 2001

<sup>9</sup> Vigourous campaign against Koodankulam project planned, The Hindu, November 12, 2001

<sup>10</sup> Rediff.com interview with S P Udayakumar, Rediff.com, November, 2000

<sup>11</sup> Vigourous campaign against Koodankulam project planned, The Hindu, November 12, 2001

<sup>12</sup> <http://www.npcil.org/docs/kudintron.htm>

Dr. Alexy Yablokov, Chairman of the Russian National Ecological Security Council stated that VVER reactors were not safe.<sup>13</sup> Dr. A Gopalakrishnan, chairman of the Atomic Energy Regulatory Board from 1993 to 1996, stated that as of 2000, the most pressing safety recommendations for Indian nuclear reactors had not yet been implemented.<sup>14</sup> There are apparently plans to install an additional 6 reactors at Kudankulam after the initial 2 are finished.<sup>15</sup>

There have been reports that the loan package for the reactors may be linked to defense deals with Russia: the purchase of T-90 tanks, SU-30 fighter aircraft, a Russian aircraft carrier Admiral Gorshkov, and the possible purchase of a nuclear submarine.<sup>16</sup> The compensation paid to the communities for the land on which the reactors will be built, which was often the sole asset held by many families, was approximately US\$43 per acre with a payment of US\$2 per cashew tree.<sup>17</sup>

### **Activists Take Note: Indian Power Plants in the Planning Stages, Currently Negotiating with Export Credit Agencies for Finance**

According to Indian power and finance publications, proponents of the following twelve power plants are in the process of attempting to secure support from ECAs in Germany, Switzerland, Britain, France, Belgium, the United States, Korea, Italy, and Japan:

#### **Coal**

Videocon Power Project/ Ennore; (Germany's Hermes; Switzerland's ERG)  
Central India Power Company/Bradrawati; (Britain's ECGD; France's COFACE)  
Vizag/Power Hinduja National power/ Vishakhapatnam (Britain's ECGD, Belgium's OND)  
BPL Power Projects/Ramagundam (Japan's JBIC)  
Talcher Transmission (Germany's Hermes)  
Korbra Power (Korea's Export Import Bank; Italy's SACE, Germany's Hermes)

#### **Naptha:**

Dholpur Power Company (Germany's Hermes)

#### **Gas:**

Vypeen Power Project/ Puthuvypeen (Switzerland's ERG)  
Bellary Power Project, Bellary (U.S. Export Import Bank)

#### **Gas/Naptha:**

PPN Power Generating Co/Pillaiperumalnallur (Japan's JBIC)

#### **Hydro:**

Dhaultiganga Hydroelectric Power Plant (Japan's JBIC)

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<sup>13</sup> The Russian Connection, rediff.com, November, 2000

<sup>14</sup> Rediff.com interview with Dr. A Gopalakrishnan, Rediff.com, November, 2000

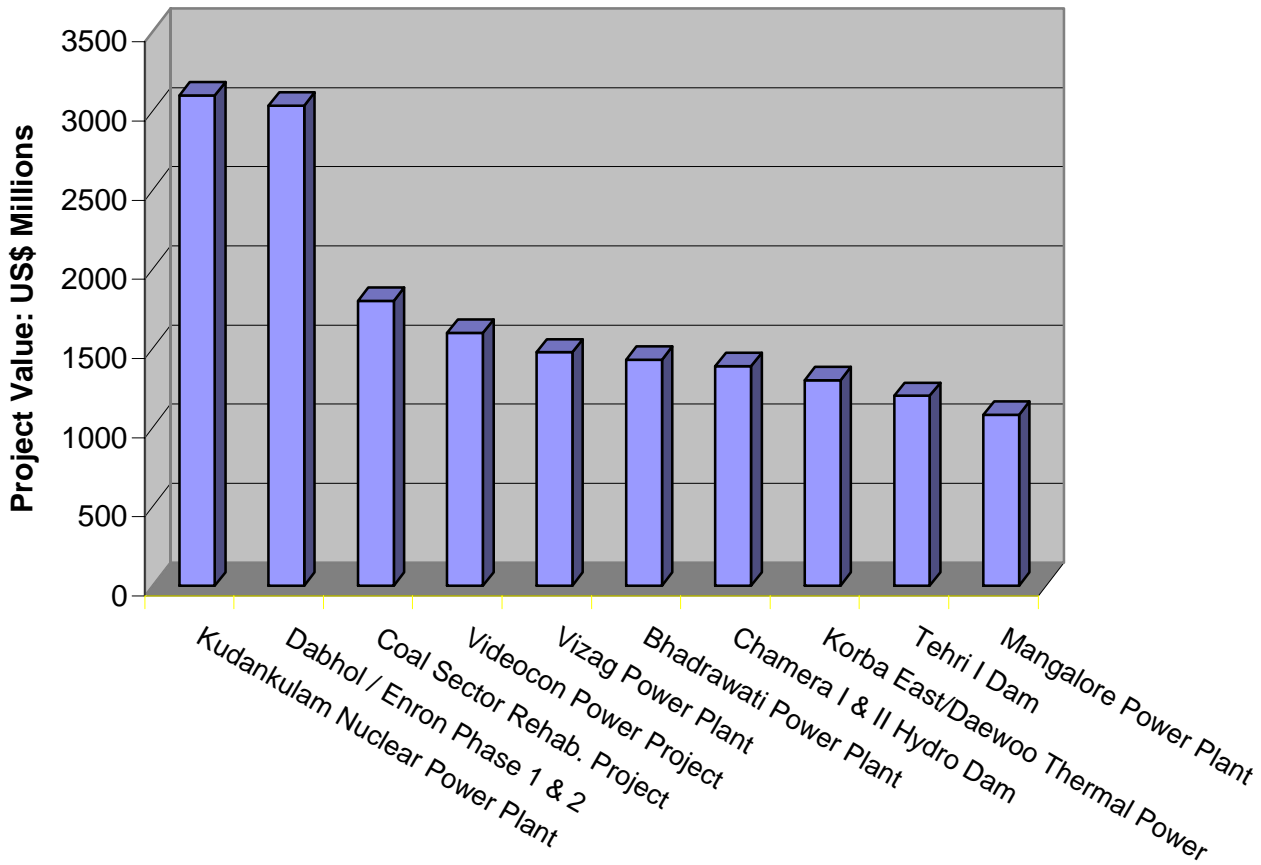
<sup>15</sup> Indian-Russian nuclear power project on course, Moscow News, December 11, 2002

<sup>16</sup> The Russian Connection, rediff.com, November, 2000

<sup>17</sup> India's interest is not electricity, but nuclear bombs, rediff.com, November, 2000

**Figure 1. India: Top Ten Existing & Planned Projects for ECA Finance**

Sample Size: 35 existing and proposed projects.



|   | Project                               | Status | Amount (US\$m) | Initial Clearance / MOU Date | ECAs               | ECA Finance (US\$m) | Other Public Finance | Other Public Finance Amount (US\$m) | Sector | Sub-sector |
|---|---------------------------------------|--------|----------------|------------------------------|--------------------|---------------------|----------------------|-------------------------------------|--------|------------|
| 1 | <b>Kudankulam Nuclear Power Plant</b> | Signed | 3,100          | 6/1/88                       | Vnesheconombank    | 2,600               |                      |                                     | Power  | Nuclear    |
| 2 | <b>Dabhol / Enron Phase 1 &amp; 2</b> | Signed | 3,035          | Phase I: 1/1/1996            | I: JEXIM<br>I: OND | 258                 | I: ADB<br>I: MITI    | 26<br>175                           | Power  | Gas        |

|    |                                                                                    |         |       |                                               |                                                   |                         |             |          |        |                            |
|----|------------------------------------------------------------------------------------|---------|-------|-----------------------------------------------|---------------------------------------------------|-------------------------|-------------|----------|--------|----------------------------|
|    |                                                                                    |         |       | Phase II:<br>6/14/99                          | I: OPIC<br>II: ECGD<br>II: OPIC<br>II: USEXIM     | 392<br>16<br>100<br>298 |             |          |        |                            |
| 3  | <b>Coal Sector Rehabilitation Project</b>                                          | Signed  | 1,800 | 9/9/97                                        | JEXIM                                             | 530                     | IBRD<br>IDA | 530<br>2 | Mining | Coal                       |
| 4  | <b>Videocon Power Project</b>                                                      | planned | 1,600 | 10/1/94                                       | ERG<br>SACE<br>Hermes                             | 115<br>73<br>300        |             |          | Power  | Coal                       |
| 5  | <b>Vizag Power Plant</b>                                                           | planned | 1,475 | 7/1/95                                        | ECGD<br>OND                                       | 150                     |             |          | Power  | Coal                       |
| 6  | <b>Bhadrawati Power Plant</b>                                                      | planned | 1,430 | 6/18/93                                       | ECGD<br>COFACE                                    | 440<br>440              |             |          | Power  | Coal                       |
| 7  | <b>Chamera I &amp; II Hydro Dam</b>                                                | Signed  | 1,390 | Phase I:<br>1/1/1984<br>Phase II:<br>1/1/1986 | I: EDC<br>II: EDC                                 | 309<br>175              |             |          | Power  | Hydro-power                |
| 8  | <b>Korba East Thermal Power Station (Daewoo Power Project)</b>                     |         | 1,300 | 10/1/94                                       | SACE<br>Hermes<br>Korea Export Import Corp (KEIC) | 431<br>223<br>144       |             |          | Power  | Coal                       |
| 9  | <b>Tehri I Dam</b>                                                                 | Signed  | 1,200 | 1/1/73                                        | Hermes                                            | 32                      | IFC<br>KfW  | 3        | Power  | Hydro-power                |
| 10 | <b>Mangalore Power Plant (cancelled?)</b>                                          |         | 1,080 | 7/30/92                                       | USEXIM<br>ECGD                                    | 329<br>263              |             |          | Power  | Coal                       |
| 11 | <b>Talcher Transmission Project</b>                                                | planned | 917   | 1/1/98                                        | Hermes                                            |                         | KfW         | 179      | Power  | Transmission               |
| 12 | <b>Gujarat Paguthan Power Project (Gujarat PowerGen Energy Corporation - GPEC)</b> | Signed  | 761   | 2/3/94                                        | Hermes                                            | 0                       | KfW         | 290      | Power  | Dual Fuel (Naptha and Gas) |
| 13 | <b>Dholpur Power Project</b>                                                       | planned | 725   | 2/1/94                                        | Hermes                                            | 274                     | KfW         | 106      | Power  | Combined Cycle             |
| 14 | <b>BPL Power Project (Ramagundam Power</b>                                         | planned | 672   | 4/1/96                                        | JBIC                                              | 285                     |             |          | Power  | Coal                       |

|                                                                        |                                                                  |           |       |          |                   |           |            |            |                    |                                                      |
|------------------------------------------------------------------------|------------------------------------------------------------------|-----------|-------|----------|-------------------|-----------|------------|------------|--------------------|------------------------------------------------------|
|                                                                        | Project)                                                         |           |       |          |                   |           |            |            |                    |                                                      |
| 15                                                                     | Balagarh Power Project                                           | planned   | 632   |          | SACE<br>KEXIMBANK | 44<br>153 | ADB<br>IFC | 115<br>140 | Power              | Coal                                                 |
| 16                                                                     | Bhilai Power Plant                                               | planned   | 625   | 10/3/97  | USEXIM<br>OPIC    | 81<br>200 |            |            | Power              | Coal                                                 |
| 17                                                                     | Vypeen Power Project/Puthuvypeen/LPG Power Plant                 | planned   | 415   | 1/1/95   | ERG               |           |            |            | Power              | LNG                                                  |
| 18                                                                     | Pillaiperumalnallur Power Generation Company Project (PPN Power) | completed | 276   | 11/24/95 | JEXIM             | 59        | MITI       | 39         | Power              | Naptha                                               |
| 19                                                                     | Kondapalli Power Project                                         | completed | 275   | 1/22/98  | KEXIMBANK         | 70        |            |            | Power              | Combined Cycle                                       |
| 20                                                                     | Maheshwar Dam                                                    | withdrawn | 257   | 1/1/97   | Hermes            | 257       |            |            | Power              | Hydro-power                                          |
| 21                                                                     | Dhauliganga Hydroelectric Power Plant                            | Signed    | 215   | 2/25/95  | JBIC              | 141       |            |            | Power              | Hydro-power                                          |
| 22                                                                     | Simhadri Thermal Power Station Project                           | Signed    | 206   | 3/10/95  | JBIC              |           |            |            | Power              | Coal                                                 |
| <b><i>The projects listed below are currently being researched</i></b> |                                                                  |           |       |          |                   |           |            |            |                    |                                                      |
| 23                                                                     | Gandhar gas cracker plant                                        | Signed    | 1,000 | 1/1/92   | ECGD<br>USEXIM    | 47<br>147 |            |            | Oil/<br>Gas        | Proces-<br>sing                                      |
| 24                                                                     | Ibil Energy Systems Limited/ Gas Turbines                        | Signed    | 70    | 6/26/97  | USEXIM            | 19        |            |            | Power              | Integrated<br>Gasifica-<br>tion<br>Combined<br>Cycle |
| 25                                                                     | Sanghi Cement Plant                                              | Signed    | 280   | 3/22/95  | USEXIM            | 30        |            |            | Manufac-<br>turing | Cement                                               |
| 26                                                                     | Jindal Tractebel Power                                           | Signed    | 357   | 1/1/93   | USEXIM            | 74        |            |            | Power              | Combined                                             |

|    | Plant                                                                        |        |       |                                                   |                   |                                 |     |     |                | Cycle       |
|----|------------------------------------------------------------------------------|--------|-------|---------------------------------------------------|-------------------|---------------------------------|-----|-----|----------------|-------------|
| 27 | Jindal Vijaynagar Steel Mill                                                 | Signed | 1,520 | 1/1/94                                            | EDC<br>USEXIM     | 13<br>85                        |     |     | Manufacturing  | Steel       |
| 28 | Jindal Vijaynagar Pellet Plant                                               | Signed |       |                                                   | USEXIM            | 34                              |     |     | Manufacturing  | Iron        |
| 29 | Jindal Praxair Air Separation Plant                                          | Signed |       |                                                   | USEXIM            | 13                              |     |     | Manufacturing  | Chemical    |
| 30 | Industrial Development Bank of India (IDBI) Infrastructure Project Financing | Signed | 300   | 1/22/96                                           | JEXIM             | 300                             |     |     | Infrastructure | multiple    |
| 31 | Private Sector Infrastructure Facility                                       | Signed | 600   | 10/9/97                                           | JEXIM             | 300                             | ADB | 300 | Infrastructure | multiple    |
| 32 | Rajasthan Atomic Power Plant I, II - (RAPP - 1, 2)                           | Signed | 146   | I: 1/1/63;<br>II: 1/1/66                          | I: EDC<br>II: EDC | I:<br>\$37.00<br>II:<br>\$38.50 |     |     | Power          | Nuclear     |
| 34 | Rajmahal Coal Mine                                                           | Signed | 175   | 1/1/88                                            | EDC               | 175                             |     |     | Mining         | Coal        |
| 35 | Srisaillam Left Bank Power Station Project I, II, & III                      | Signed | 560   | I:<br>2/10/88<br>II:<br>2/25/95<br>III:<br>4/6/97 |                   |                                 |     |     | Power          | Hydro-power |