

## **Clean Development Mechanism: Application to the Power Sector in India**

*Report to the Ministry of Power*

In recognition of the fact that the power sector has a predominant share in the CO<sub>2</sub> emissions from India and there are significant opportunities to mitigate these emissions, this project examined select interventions which could be developed as CDM projects.

The two options that were examined related to an advanced power generation technology (super critical thermal power plants) and renovation and modernization.

The analysis of the super critical thermal power plant clearly establishes the improved efficiency and consequently emission reduction potential. The additionality issue is addressed by establishing the fact that the Internal Rate of Return (IRR) of the advanced technology is lower than that of conventional technology, and may be a deterrent to investors. Hence, the project may not happen under normal circumstances. With an additional investment of Rs 1660 million, a reduction of 654 000 tonnes of CO<sub>2</sub> is possible.

The renovation and modernization of an old thermal power plant will help not only to improve efficiency but also the plant load factor. It also proffers a remedy in a power-starved situation, in a shorter time frame compared to Greenfield projects. While R&M has been regarded as an important option by power planners, and incentives have been given for such investments, the drive has not been particularly successful due to a lack of capital and fiscal incentives. This situation could be altered by CDM revenues.

While these two options are significant for the power sector in the country, there is hesitation in the international scenario for purchasing credits from coal based power plants—even though they represent a relatively “clean technology”. This being the case should the Government encourage Public Sector Units (PSUs) in the country such as the National Thermal Power Corporation (NTPC) to develop CDM projects in such areas? What should be the underlying objective - to test their case with the Executive Board for approval of methodologies? to develop a portfolio of such projects and take early advantage if and when the market desists from cherry-picking projects?