

2008 Alliance to Save Energy “Stars of Energy Efficiency” Awards Nomination for

Elpro Energy Dimensions Pvt.Ltd.

Background, Global Significance and replication potential

In all developing countries especially India, due to growing urbanization, the demand for electricity as well as infrastructure are increasing. The total connected load of the 4378 cities based on class of city is estimated to be in the region of 4737 MW which amounts to an annual consumption of 21 billion kWhrs(Kilo watt hours) and resulting in a CO₂ emission of 15.56 million tonnes CO₂ per annum. For the same level of services, there is tremendous potential to reduce this consumption(6.25 billion kW hrs per annum and a corresponding 4.1 million Metric Tonnes of CO₂ abatement) through the use of advanced technologies for energy management of the street lighting systems.

M/s Elpro Energy Dimensions Pvt. Ltd, an Indian company, has pioneered the technology called ETRACS-Energy tracking. It is a computer based WIRELESS energy monitoring and control system for controlling and monitoring streetlights. The day-to-day transactions (switching on/off) of the loads, Dimming of lights during non-peak periods, energy usage data, Energy Theft monitoring, status of glowing hours and health of Street Lights can be monitored and contributes to a great extent in taking timely and strategic decisions in the areas of Power Control, Load Profiling, Demand Side Management etc., thus greatly cutting down ENERGY WASTAGE & POWER BILLS.Elpro Energy has for the first time in ASIA installed and commissioned a Municipal Street lighting Energy Efficiency project for the Bangalore Development Authority(BDA) on a 40 mile stretch of ring road in Bangalore city in the South of India. The project is executed under a performance contract under which the ESCO M/s. Elpro Energy has installed the ETRACS system without any upfront capital investment from the BDA. The total load of Street lighting of the entire road is 1100 KW. The project involved setting up of a central control station from which the entire Ring Road lighting of BDA is monitored and controlled using a wireless system that is built around the next generation CDMA/GSM wireless communication. The project aims at overall reduction in the energy consumption and demand required to provide municipal lighting services without affecting the quality of lighting level. This project has led to reduced GHG (Greenhouse Gas) Emissions. The annual CO₂ reductions for the estimated period of 10 years are about 10 840 MT i.e. 1084 MT per year (CEF @ 0.75 kg/kWh.)

Contribution of project activity to sustainable development:

The savings of electric power resulting from this project can be used by the municipalities to expand and improve their service to low income consumers and inhabitants. **The proposed project has a high degree of replication in other municipalities in the country and colonies**, the main social and economic benefits of this project activity are:

- Reduction in coal and other fuel consumed to generate electricity and all of the associated emissions: carbon dioxide, carbon monoxide, SO₂, NO_x, mercury and particulates.
- The project creates awareness on the efficient use of electricity and the positive result of proper energy management effects on the environment.

The proposed project/technology complements the Govt. Of India efforts by creating public-private partnerships to comprehensively prove the benefits and feasibility of increasing energy efficiency, while emphasizing performance, investment, and technology. The project also envisages to create conditions for the emergence of independent ESCOs(Energy Service Company) as a viable business model by creating a simplified ESCO model which augments the capacity of cash strapped Municipal Governments in India to implement large scale Energy Efficiency upgrades and proposes to build capacities to replicate future such project/technologies . This is in line with India’s plans to support the development of Energy Service Companies and to build new and strengthen existing capacities in the Government bodies and to conserve the environment. The project/technology has the potential to save an estimated 535300 MT of Oil equivalent per annum.

In conclusion, Elpro Energy has demonstrated outstanding leadership in the Municipal energy sector and demonstrated that private sector participation in the Municipal energy area can leverage national development activities. The BDA project executed by Elpro was selected under the World Bank sponsored National Strategic Study (NSS) as a model project for CDM PDD development. For its **Outstanding contribution to the Energy Efficiency Sector in India**, Elpro was also awarded by the Ministry of Petroleum ,Govt. Of India the BEST ENERGY SERVICE COMPANY (ESCO) AWARD for the current session. It has also received the Prestigious National Award for successful commercialization & implementation of indigenous technology (ETrACS) from the President of India His Excellency **Dr. A.P.J. Abdul Kalam** on the 11th of MAY 2007 at New Delhi and this award has been instituted by the Ministry of Science & Technology, Govt. of India.