



ESCO Strategies, Policy & Program

Presentation at Asia ESCO Conference,
14-15 January, 2010, New Delhi

Dr. Y P Abbi &
Priyaranjan Sinha

Energo Engineering Projects Limited
A-57/4, Okhla Industrial Area, Phase II, New Delhi- 110020,
India



Introducing Energo Engineering Projects Limited

Energy Services

- Energy Audit of Industries & Power Plants

- RLA study of Boilers and Steam Turbines

- PG Tests for Power Plant Equipment

- IGEA of Municipalities

(to be implemented through ESCO route)

EPC of BOP of Thermal Power Plants

Electricity Capacity Addition

- ❑ India's plan is for 8-9% of GDP growth; which would require corresponding growth in electricity generation
- ❑ Coal based electricity generation capacity is 52.5% by March 2009(77,649 MW out of total of 147,965 MW)
- ❑ By 2030,it may reach around 450,000 MW
- ❑ This would lead to
 - ❑ Huge Investment needs
 - ❑ Depletion of natural resources (coal & water)
 - ❑ Higher emissions to environment

What we can do

- Renewable Sources of Power Generation
- Energy Conservation
 - Supply Side
 - Generation Plants
 - Transmission & Distribution
 - Demand Side Management

What we can achieve

- More Energy Conservation and thus less carbon intensity
- Addition of new thermal power plants is reduced
- Energy Efficiency activities will have economical benefits for the final users

Energy Conservation potential in thermal power generation

❖ Problems

- ❖ High Auxiliary Power Consumption
- ❖ Poor Plant Heat Rate as compared to design
- ❖ More O&M Expenses
- ❖ Reduced Profitability

❖ Solutions

- ❖ Regular Energy Audit & Diagnostic Studies
- ❖ Implementation through ESCO route

Energy Conservation Potential in T & D

Problems

- Average T & D loss in India :35%
- Enormous loss in monetary terms

Solutions

- Energy Audit Study
- Implementation through ESCO route

Energy Savings at the Users End

- Flattening of Load Curve through DISCOM

- Awareness Level
 - Thanks to BEE for its various initiatives

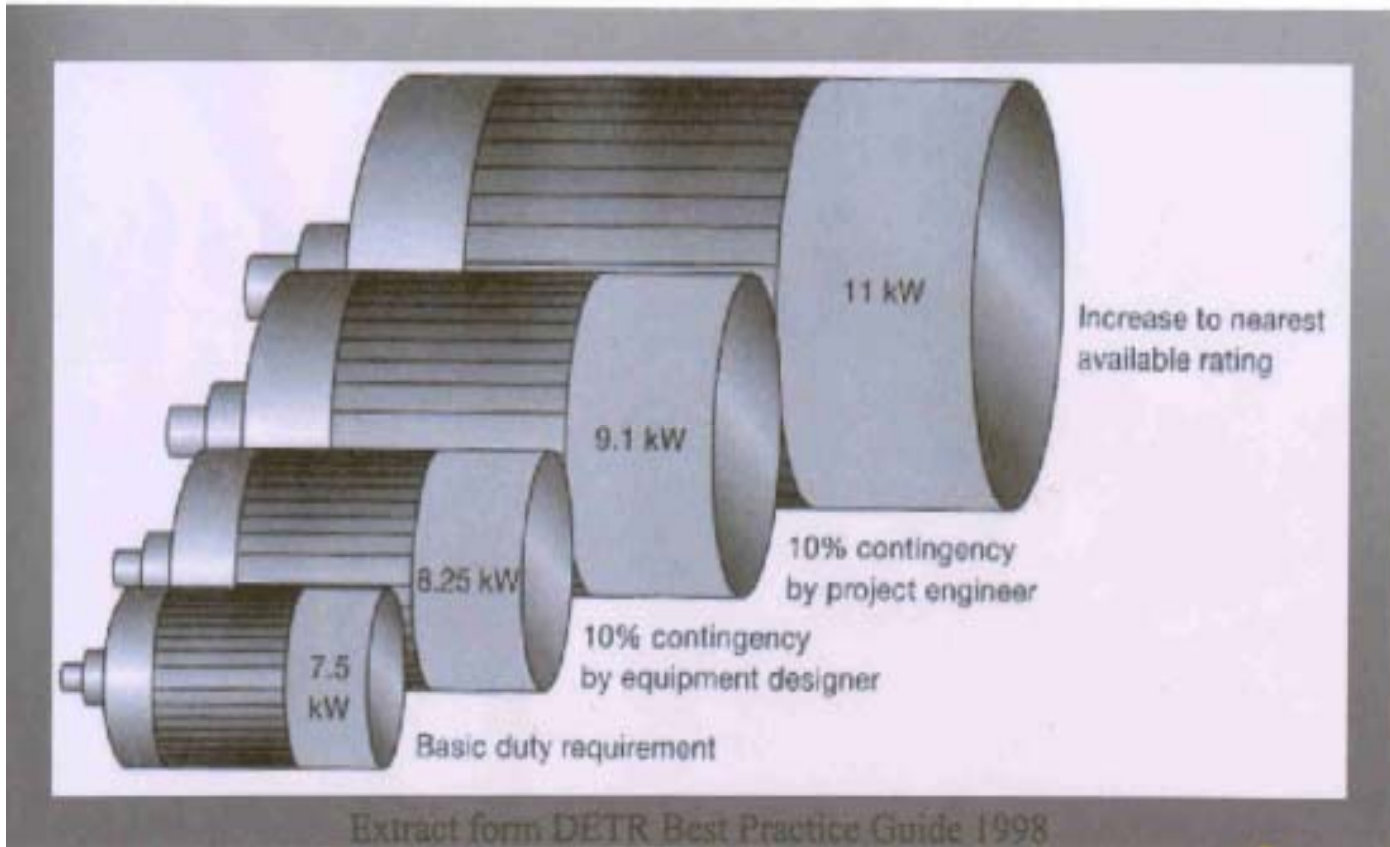
 - Should be part of school level curriculum

 - Involvement of the industry chambers and associations

 - Target should be to educate to everyone

Energy Savings at the Users End

Savings is inevitable as per present practices being followed



ESCO:

Practical Approach to Energy Savings

- Only Energy Auditing is not a practical method to achieve energy savings potential
- Need to convert the technical efficiency opportunity to practical efficiency opportunity
- ESCO Guarantees Energy Savings

ESCO:

Since 1990s in Asia, But.....

- Still not popular in India
 - Less confidence
 - Poor awareness level in India
 - Not substantial demonstrable projects
- Low number of multi-tasking capacity organizations

Steps Required for an ESCO Project

- Preliminary or walk-through audit
- Assessment of energy conservation potential (quantitative) and its cost/benefit analysis
- Financing of Project by
 - Owner of the plant
 - ESCO company through its own balance sheet
 - Financial Institutions /Banks (through a tripartite agreement)
 - Monitoring & Verification of energy saved

To make ESCO a reality

- ❑ Work done by BEE in empanelment of ESCO companies is a very good step forward
- ❑ Need for change in policy of financial Institutions/Banks for financing projects
- ❑ Need for State and Central government policies to allow government agencies to take loans through tripartite agreement (authorization for signing loan agreement)
- ❑ Evolve fool-proof method of monitoring and verification of energy and cost saved

Concluding Remarks

- Evolve policies of financial institutions and government for ESCO work

- Create model projects in both private and government sectors

Thank you

Contact us at:

abbi.yashpal@energoindia.com

sinha.priyaranjan@energoindia.com