



EE Services Public Procurement - India

World Bank Public Procurement Training
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National Mission on Energy Efficiency (NMEE)

Mission Goals:

- Market-based approaches to unlock energy efficiency opportunities, estimated to be about INR 740,000 million (16,444 million US\$)
- By 2014-15:
 - Annual fuel savings in excess of 23 million toe
 - Cumulative avoided electricity capacity addition of 19,000 MW
 - 98 million tons of CO₂ emission reductions per year

NMEE – Four New Initiatives



1. A market based mechanism to enhance cost effectiveness of improvements in energy efficiency in energy-intensive large industries, through certification of energy savings that could be traded. **(Perform Achieve and Trade)**
2. Accelerating the shift to energy efficient appliances in designated sectors through innovative measures. **(Market Transformation for Energy Efficiency)**
3. Creation of mechanisms that would help finance demand side management programmes in all sectors by capturing future energy savings. **(Energy Efficiency Financing Platform)**
4. Developing fiscal instruments to promote energy efficiency **(Framework for Energy Efficient Economic Development)**





Institutional set up for Public Procurement

- Ministry of Finance, DGS&D and CVC provide institutional framework.
- Ministry of Finance (Nodal Ministry) establishes general rules and procedures for procurement and contract management.
- Directorate General of Supplies and Disposal (DGS&D) in the Central government and Public Works Department (PWD) in the states lays down the purchase policy and procedure.
- DGS&D enters into long term rate contract agreements for items which are commonly used by the Government agencies. This is similar and functionally equivalent to the [Framework Agreement](#) that is prevalent in Europe and the USA.
- [Central Vigilance Commission](#) is the governance body.





Opportunity

- The total public procurement in India is of the order of \$100 billion, representing 13 % of the national budgets and over 20 % of the Gross Domestic Product (GDP) in the year 2002.
- Government of India's total planned annual energy-related procurement for 2007-08 was **\$15.75 billion**.
- Exemplary government energy-efficient procurement of goods and services can lead to significant cost savings
- An International workshop on promoting energy efficient public procurement in government purchases was organised at New Delhi
- As a follow up of the recommendations of the workshop, the ministry of power had set up a working committee on Energy Efficiency in Public Procurement.



Recommendations of the Working Group

- Working committee with members from various stakeholders had recommended to prepare Guidelines for energy efficient public procurement:
 - Mandatory procurement of 3 STAR as specifications for BEE labeled equipments.
 - Use of energy efficient lighting in all government offices
 - Mandating ECBC in all new constructions
 - Energy audits and its implementation through performance contracting.
 - Adoption of life cycle cost analysis in contracts or procurement
 - review of General Financial Rules, CVC guidance
- The Committee of Secretaries met on 28th July, 2009 and directed the recommendations of the working committee be implemented at the earliest and the Ministry of finance is likely to issue directions covering the above shortly.

Promotion of Energy Efficient Building



- **New buildings**
 - new buildings to be constructed under the Government shall be compliant with the Energy Conservation Building Code (ECBC), from 1st March, 2010.
 - BEE to provide architectural support for energy efficient building design concepts compliant with the ECBC
- **Existing buildings**
 - All government buildings to undertake energy audit by June, 2010 to identify energy savings.
 - A time bound action plan for implementation of the viable energy saving measures through performance contract model.
 - BEE to provide support in implementation of energy saving measures.





Issues with ESCO in India

- **General**
 - Lack of awareness ESCO business model by clients and financiers
 - Credibility of ESCOs
 - Conflict of interest of facility managers (Government)
- **Technical Issues**
 - Baseline and adjustments
 - Clear M & V protocols
- **Finance Issues**
 - Lack of non recourse financing
 - Most banks require collateral of 100% of loan value

Energy Efficiency Financing Platform (EEFP)



- Main objective of EEFP
 - Creation of risk guarantee fund to provide commercial banks with partial coverage of risk exposure against loans made to energy efficiency on new performance contracting business models.
 - Guarantee would support, credit risk and build capacity in commercial banks
- Institutional set up:
 - EESL, an implementing agency has been set up to work together with BEE to test various financing and business models including M & V (IPMV) with corpus from 4 power sector PSUS.





Market creation

- Demonstrated 10 EE projects using the shared saving concept... moving to other contracting models including energy supply contracting.
- Creation of DPR on public buildings, **Municipal pumping system**, Public street lighting, agricultural pump set energy efficiency improvements (over 500 studies have been completed)
- Hand holding in preparing RFP, tendering, evaluation of proposals, securing finance and demonstration of implementation through new business models to create credibility of ESCO to FI and the clients



Mandatory use of energy efficient lighting and appliances



- New buildings
 - use CFL or LED in place of incandescent lamps.
 - use T-5 tube light in place of T8 and T12 lamps.
- Existing buildings
 - replace fused incandescent lamps only by CFL or LED.
 - replace fused 40 watt electromagnetic ballast with either a T-8 36 watt electronic ballast or a T-5 28 watt
- Government Agencies to source only 3 star and above BEE labeled equipment and appliances. DGS&D to enter into rate contract for 3 star, 4 star and 5 star BEE labeled products.
- Using the Life cycle Costing tool developed and made available in the BEE web site, public procurement agencies can procure L1 product as per life cycle analysis tool.



Approach to LCCA Tool

- A study was carried out to
 - Map the current institutional structure
 - procurement process
 - Comparison with international practices
 - Identify gaps in the current practices
 - Identify products to be taken up
- Take up two public sector units for pilot demonstration.
- Prepare a life cycle cost analysis tool and train the procurement officials.
- Get the policy commitment in translating the intent through policy directions.
- hand-holding of procurement officials to assist them at right from preparation of tender specification, criteria for selection of the bidder and verify the sourced products meet the energy criteria and save energy.
- Document the results and carry out an extensive campaign on training.



Life Cycle Costing Analysis for Air-Conditioners

Enter data into all green shaded cells				
Scroll down to view results				
INPUTS				
Usage	No of days of operation	180		
	Hours of operation per day	6		
Electricity Price	(Rs/KwH)			
No of options		3		
		Option1	Option2	Option3
Bidder's Name		ABC	XYZ	123
Manufacturer	CLICK ON THE NEXT CELL TO DISPLAY DROPDOWN LIST	Carrier	LG	Samsung
Type	CLICK ON THE NEXT CELL TO DISPLAY DROPDOWN LIST	Split	Split	Split
Capacity	CLICK ON THE NEXT CELL TO DISPLAY DROPDOWN LIST	1.5	1.5	1.5
Model Number	CLICK ON THE NEXT CELL TO DISPLAY DROPDOWN LIST	ESTRELLA 018	LSA5ZB4NTY1	AS18ETA
Life	In Years	7	7	7
Purchase Cost	In Rs	25000	24000	23000
Annual Maintenance Cost	In Rs	1500	1500	1500





<u>Predefined</u>				
Star Rating		4	4	3
Power Consumption		1696	1785	1790
EER (W/W)		3.17	2.96	2.88
Cooling Capacity (W)		5375	5275	5150
<u>Result/Output</u>				
NPV (@25yrs)		108092.216	109951.0755	108753.8523
Model		ESTRELLA 018	LSA5ZB4NTY1	AS18ETA
Make and Type		CarrierSplit	LGSplit	SamsungSplit
<u>Best Option</u>				
	Make and Type	CarrierSplit		
	Model	ESTRELLA 018		
	NPV	108092.216		





THANKS

