

Strategic Approach and Road Map for the Establishment of the Bureau of Energy Efficiency – Part I

On August 18, 2001, the Energy Conservation Bill, 2000 was enacted by the Indian Parliament. The Act, called the Energy Conservation Act, 2000 provides for efficient use of energy and its conservation and for matters connected therewith or incidental thereto

The approval on the Bill has set the stage for the establishment of institutional and legal structures and the mobilisation of market forces to implement energy efficiency programmes in the country. The establishment of the Bureau of Energy Efficiency (BEE) is seen as an important step in this direction. The Act demands that the Central government appoint a Governing Council to direct and manage BEE to achieve the aim of formulating an institutional and policy framework that would result in the planning and implementation of national energy efficiency programmes.

Following the approval on the Bill, energy efficiency is being increasingly seen in India as a viable option that is cost-competitive, supplemental and environmentally sound compared to energy supply strategies. The Bill attempts a balance between regulatory enforcements and voluntary participation, and between market driven methods and governmental mandates. The impact of the Bill lies in its implementation. The establishment of BEE is only the beginning.

BEE – Situation Analysis

Energy efficiency initiatives in India can be traced back to the 1980s. For instance, in 1983 the Inter-Ministerial Working Group (IMWG) on Energy Conservation called for the expanded role of the Centre in planning and directing national energy efficiency efforts. The Petroleum Conservation

Research Association (PCRA) was set up as a consequence. The PCRA, funded by the Oil Industry Development Board, focused on efficient use of petroleum products in key economic sectors, viz industry, transport, households and agriculture. In 1989, the erstwhile Ministry of Energy, Department of Power established the Energy Management Centre (EMC) for the development and planning of electrical energy efficiency programmes.

To fill in gaps, energy efficiency services were promoted by industry associations such as CII (notably in the Southern and Western Regions), the National Productivity Council (NPC), through its network of regional offices in most state capitals and private professional groups such as TERI. From the late 1980s onwards, DFIs such as IDBI, ICICI and IREDA provided funds. Lines of credit offered by the World Bank and the Asian Development Bank to these institutions ensured credit for end-users, particularly industry, to finance energy efficiency projects under the guise of industrial modernisation. Bilateral support came from GTZ, UNDP and USAID in the form of additional grant funds and an opportunity for Indian professionals to be exposed to international best practices in energy management. The mid to late 1990s signalled the growth of private sector energy efficiency services and energy auditors in industrial centres and towns in the country. The recent emergence of a small but growing number of Energy

Service Companies (ESCOs) assured market development.

Since it has been recognised that there is a general absence of well-conceived and directed policies and regulations that prevented the promotion and adoption of energy efficiency, it will help BEE to provide the much-needed focus, leadership and direction. Two important points need to be emphasised here: first, that BEE is the logical outcome of over two decades of a growing, albeit fragmented, industry. Second, and possibly more important, is that BEE must not be perceived as a heavy-handed, government managed and controlled activity that aims at re-introducing the “inspector raj” era of the pre-reform days in the country’s history. It is this central concern that needs to be carefully addressed and misgivings allayed as one seeks to formulate the role and responsibilities of BEE.

Broad Objectives of BEE

The broad objectives of BEE are to:

- exert leadership and provide the policy framework and direction to national energy conservation efforts and programmes;
- interpret, plan and manage the execution of energy conservation (EC) programmes as laid down in the EC Bill;
- coordinate EC policies and programmes among stakeholders;
- establish systems and procedures to measure, monitor and verify EC results in key designated sectors and end-uses;
- leverage multilateral, bilateral donor and private sector support; and,
- administer the delivery of energy efficiency services, as mandated in the EC Bill, through the private and public sectors.

Strategies to Achieve Objectives

The BEE plan is based on a general strategy and a detailed implementation approach, each of which is described in more detail below:

The general strategy

Currently, MoP is focused on defining and formulating laws that will provide the required legal basis, including the establishment of rules and regulations that govern the interpretation and implementation of the EC Act. Once this is achieved, MoP will shift focus onto BEE with a two-pronged approach:

- Develop the legal framework, including rules and regulations governing the Act
- Select and appoint the Governing Council

The general strategy should also include a focus on the role of BEE and the institutional structure that will permit it to fulfill the designated role and mandate.

BEE's mission and governing principles

It is necessary to articulate and share BEE's mission among its stakeholders, hence developing a mission statement must be taken on priority. Adopting certain governing principles would help in defining BEE's organisational structure, which are:

- A lean structure that emphasises team work through an inter-disciplinary approach
- Professional management with stress on administration of contracts

- Strong emphasis on results

The BEE structure

There are six principal issues to be considered while structuring BEE:

Institutional Planning: The key question is whether India has the institutional framework.

Organisational Design: Should be flat, with emphasis on organising the office along no more than five or six functional lines, to begin with. While no more than two would be administrative in nature the balance would be programme related. The suggested functions are:

- General management to include the office of the DG, BEE; Personnel office; Accounts
- Contract administration to include the office of the Secretary, BEE

Power and Functions of BEE

- The Bureau shall effectively coordinate with designated consumers, designated agencies and other agencies, recognise and utilise the existing resources and infrastructure, in performing the functions assigned to it by or under this Act.
- The Bureau may perform such functions and exercise such powers as may be assigned to it by or under this Act and in particular, such functions and powers including the function and power to:
 - recommend to the Central government the norms for processes and energy consumption standards required to be notified under clause (a) of section 14;
 - recommend to the Central government the particulars required to be displayed on label on equipment or on appliances and manner of their display under clause (d) of section 14;
 - recommend to the Central government for notifying any user or class of users of energy as a designated consumer under clause (e) of section 14, having regard to intensity or quantity of energy used by it;
 - take suitable steps to prescribe guidelines for energy conservation building codes under clause (p) of section 14;
 - take all measures necessary to create awareness and disseminate information for efficient use of energy and its conservation;
 - arrange and organise training of personnel and specialists in the techniques for efficient use of energy and its conservation;
 - strengthen consultancy services in the field of energy conservation;
 - promote research and development in the field of energy conservation;
 - develop testing and certification procedure and promote testing facilities for certification and testing for energy consumption of equipment and appliances;
 - formulate and facilitate the implementation of pilot projects and demonstration projects for promotion of efficient use of energy and its conservation;
 - promote use of energy efficient processes, equipment, devices and systems;
 - promote innovative financing of energy efficiency projects;
 - give financial assistance to institutions for promoting efficient use of energy and its conservation;
 - levy fee, as may be determined by regulations, for services provided for promoting efficient use of energy and its conservation;
 - maintain a list of accredited energy auditors as may be specified by regulations;
 - specify, by regulations, qualifications for the accredited energy auditors;
 - specify, by regulations the manner and intervals of time in which the energy audit shall be conducted;
 - specify, by regulations, certification procedures for energy managers to be appointed by designated consumers;
 - prepare educational curriculum on efficient use of energy and its conservation for educational institutions, boards, universities or autonomous bodies and coordinate with them for inclusion of such curriculum in their syllabus;
 - implement international cooperation programmes relating to efficient use of energy and its conservation as may be assigned to it by the Central government; perform such other functions as may be prescribed.

- Standards and labeling
- Energy auditing, training, M&V
- Market transformation
- International cooperation

Transitioning: This pertains to the transfer of assets and existing staff from EMC to BEE.

Networking: Given the lean structure of BEE, much of its work will be implemented through a system of formal networks of energy efficiency and related areas currently active. This network will include all the stakeholders, principally industry associations, key corporate end-users, government agencies, electrical, gas and water utilities, manufacturers of efficiency equipments, vendors, energy efficiency service providers – energy consultants, auditors, ESCOs, bilateral/multilateral agencies, etc.

Contract Administration: BEE will recommend the policy instruments and directives including regulatory support to MoP, which will be responsible for the facilitation and enforcement of efficient use of energy. In the pursuit of its goals and objectives, BEE will work with the private sector. The procurement mechanism, a key role for BEE, for the selection of the private sector to render

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technical, advisory and/or a range of consultancy and training services will be through competitive bidding. Guidelines and procedures will have to be evolved consistent with Gol procurement rules.

Enlisting Donor Support: It is likely that the BEE budget can be leveraged by donor support, both bilateral and multilateral. Discussions are underway between MoP and GTZ under the IGEEP project. It is planned to partially restructure and expand the IGEEP project to assist in the implementation of the Act. A near-term possibility could be hiring programme managers, including the positioning of a long-term expatriate advisor. Similarly, USAID's ECO project provides technical assistance and training in energy efficiency and has the mandate to support BEE in policy planning and development. Other key donors include multilateral banks such as the World Bank and ADB who have lines of credit with Indian DFIs. The World Bank's support to states in planning and implementing power sector reforms also allows BEE to support concurrently DSM strategies and programmes.

Management of BEE

The day-to-day management will be vested with the Office of the DG with principal support from the Secretary's office which will form the administrative secretariat. The underlying philosophy will be to adhere to a flat organisational structure and keep staff support and administrative functions to the barest minimum. The use of computers and office management software to support the functions of general administration, finance, accounting and personnel will be accorded the highest priority.

It is envisaged that BEE's head-office will be located in New Delhi and, in course of time, expanded to include a key metropolitan city such as Mumbai. Presence in both these cities will enable BEE to discharge its policy and regulatory functions in close association with the Centre as well as pursue market-driven energy efficiency programmes with the support of private and commercial entities.

Energy Efficiency Lab to Test Consumer Products

A new laboratory for comparative testing of energy efficiency of electrical appliances was inaugurated at the Consumer Education Research Centre (CERC) in Ahmedabad on January 19, 2002. The Rs 1.38 crore (\$25,000) lab, funded by the US Agency for International Development (USAID), fulfills the need for testing the energy consumption and efficiency of air-conditioners, refrigerators, fans and tube lights among others.

Richard Edwards, Director of USAID's Office of Energy, Environment and Enterprise, declared the laboratory open in the presence of other dignitaries including B.M. Oza, Member of the Gujarat Electricity Regulatory Commission and Prof Manubhai Shah, Managing Trustee of CERC.

The new laboratory enhances CERC's ability to rate appliances for energy efficiency. Findings are released in its consumer magazine *INSIGHT*.

CERC has influenced the Bureau of Indian Standards (BIS) to upgrade electrical standards for irons, plugs, immersion water heaters, etc, and is now advocating with BIS to include energy efficiency parameters for all high-energy consuming products in India.

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(Part II in the next issue will contain The Bureau of Energy Efficiency – Institutional Planning and Location Issues, and the article Energy Efficiency – Vision to Visibility and Beyond)

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