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It is about "Conscience Keeping on Energy Matters"

LEGAL FRAMEWORK FOR ENERGY CONSERVATION

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G.G. Dalal, Prof. Ajay Chandak, Dr. Sunil Somani,

Sunil Sood, and Several Others

From the Editor's Desk...

ENERGY CONSERVATION LAW IN INDIA: PROGRESS AND PROSPECTS



Soon after the two global oil price shocks in mid-1970s and early 1980s, some oil import dependent countries initiated energy conservation laws. The United States of America was the first country to launch an Energy Conservation law in 1975, followed by Japan.

In India, the concept of energy conservation took shape in India in mid-70s after the "Gulf oil shock." It was followed by an awareness programme initiated by PCRA. Later many organizations such as Energy Management Center (EMC), the National Productivity Council (NPC), Tata Energy Research Institute (TERI) and the Confederation of Indian Industry (CII) jumped into the bandwagon for promoting energy efficiency. However, no significant progress was made by these organizations and energy consumption continued to spiral. Therefore, a need was felt to set up a legal framework and the Energy Conservation Act - 2001 was enacted for encouraging energy efficiency.

The 11th Five Year Plan of the Government of India intends to increase energy efficiency by 20% by 2016-17 through the implementation of a set of energy efficiency initiatives. This target is leveraged by the Energy Conservation Act (2001). The Bureau of Energy Efficiency (BEE) is the government's statutory body to facilitate and coordinate such initiatives at both the central and state levels. BEE's main goal is to reduce the intensity of energy usage in the economy. It has a mission to spread national awareness to energy conservation, and provide leadership to the key players involved in the energy conservation movement.

Energy Conservation Act (2001)

This Act provides for the legal framework, institutional arrangement and a regulatory mechanism at the Central and State level to step-up energy efficiency drive in the country. There has been progress in several fronts such as: a pilot phase of programme for energy efficiency in government buildings; development of energy conservation building codes; beginning of a Standards and Labeling Program for energy efficient appliances and equipment; assisting some electric utilities to set up DSM (demand side management) cells; introducing educational programs to increase awareness regarding efficient use of energy resources; and the introduction of the Energy Conservation Awards.

The Act also mandates the Bureau of Energy Efficiency (BEE) to introduce stringent energy conservation norms for energy generation, supply and consumption.

BEE's task is compounded by the fact that the growth in consumers' purchasing power has led to more people buying more energy-consuming products such as air-conditioners and domestic appliances. As a result, energy consumption continues to rise and the gap between energy supply and demand is widening.

As we see, there are tough challenges ahead for the BEE.

As Thomas Fuller said, "Law cannot persuade where it cannot punish." The enforcement of penalties stipulated in the Act have been kept in abeyance. BEE lacks the teeth to punish those guilty of wasting precious energy. Just as there is no stick to punish, there is no carrot either to motivate energy efficiency activities. In today's fast-growing economy, effective marketing is vital in any activity. The law should be reviewed to reflect more of a "market-driven approach." While new building codes, and equipment and appliance standards are necessary, there is still lot of scope for incentives for the development of market-based solutions for energy efficiency.

Energy conservation legislation and regulations should be periodically reviewed and updated to ensure that they are pragmatic and represent government policies in force. There must be quantitative targets and time lines for implementing the law. Right now, there seems to be more reliance on voluntary compliance and self-reporting. Fiscal and non-monetary incentives should be the preferred tools in achieving the desired conservation and efficiency. Many states yet do not yet have a formal energy conservation plan or strategy. Most power utilities are in the red and their capacities to invest in energy efficiency programs is severely limited.

From reports we gather from many energy auditors, it seems that BEE has not provided certificates to those who have passed the required certifying examinations. Due recognition should be given to certified energy auditors. Finally, promotion of energy conservation and efficiency should form an integral part of national energy policy.

Energetically,

S.Subramanian
Editor

IN PRAISE OF BEE

Editor's Note: *Over the past several years, the Indian Government's Bureau of Energy Efficiency (BEE) has done a lot of good work. We are happy to reproduce expressions of appreciation from our readers spread across the nation. .*

1. From Sunil K. Sood, Ranchi, Jharkhand

I will start with one point which I have liked very much and was benefited and got immense satisfaction, recognition and cash prizes! It was during the year 2003-05 when Dr Kaupp; the then Manager of Indo-German Programme used to raise an issue on which the technical papers were invited. This produced many writers amongst us. I get several prizes and hold the record of second highest no of prizes after Mr. Nesari. Many other members from present IAEMP got prizes - Mr GG Dalal, Mr RA Sharma, Prof. Chandak, Mr Dhamangaokar, Mr T.Jayaraman, Mr Arvind Rastogi Mr Prem Kumar are some of the names I can remember. Mr Pandian who is now working with BEE also had got a prize.

Actually, I am very much inspired by Dr Kaupp's writings on energy management issues. In our vision document we have reproduced some of his thoughts. We have also acknowledged that IAEMP is a creation of www.energymanagertraining.com.

I do not know where Dr Kaupp is now. I take this opportunity to thank him and others from BEE who were then doing an excellent work in motivating several of us. Mr KK Chakravarti was also quite responsive to our queries and we were satisfied on that score though we had disagreement on their interpretation of the Act.

When and why, I and many of us became 'activists' is something I would elaborate at the right time.

2. From Vaidyanathan Ramanathan, Jaipur, Rajasthan

HAREDA, the State Development Agency (SDA) for Haryana, has announced a subsidy of Rs. 50000 to the industries which get an energy audit done in their units. It appears the SDA in Rajasthan is also following suit. This is an appreciable act by BEE and its appointed state agencies. I hope other states will also give similar incentives to their state industries for getting the energy audit done in their respective plants.

3. From Prakash Magal, Bangalore, Karnataka

Sometimes we see criticism of BEE in not carrying out their main mission of propagating energy conservation. We don't appreciate their holding painting competitions spending huge amounts when factories are running most inefficiently all over the country wasting so much energy.

But good things need to be noticed at the same time and given credit.

One such thing which I noticed is the recent ad campaign going on TV channels.

“This is the one when an office-going executive gets ready and locks up his house, sits in the car to start and then realises that the fan in his house is not switched off. He comes back, and switches off and returns.

The message is very clear and appropriate for the masses. I saw children in my neighbourhood talking about it and insisting their parents to follow the same. At least to that extent BEE has succeeded in propagating the mission. The action has to start at the grass root levels.”

Hope our members also appreciate this too.

4. From Professor Ajay Chandak, Dhule, Maharashtra

Good initiatives by State Development Agencies (SDAs)!

Suggestion: They should not put brakes by selectively permitting only favored agencies by giving accreditation. They should allow all certified energy auditors to do auditing work.

5. From Subhashis Dey

BEE has been the body who made common man in India energy conscious. For new entrants, BEE does not stop them to collaborate with empanelled ESCOs to do the job and gain experiences. There is more job than the number of empanelled ESCOs. If there is a will there is a way. IAEMP is a great group, how ever we should start criticising less and work more towards proactive programs like IAEMP's Home Energy Efficiency Programs and share the knowledge between ourselves.

And believe me, I have dealt with BEE, MEDA, the Babus there are pretty competent.

A Summary Of India's Legal Framework For Improvement Of Energy Efficiency And Conservation

1. Name of framework

Energy Conservation Act 2001 (Enforcement in March 2002)

2. Purpose of Law

An Act to provide for efficient use of energy and its conservation and for matters connected therewith or incidental thereto.

(a) Establishment of the BEE (Bureau of Energy Efficiency) in the Ministry of Power. BEE's mission would be to promote energy conservation in all sectors of economy.

(b) Clarification of the authority of management of central government, BEE, and state governments, respectively.

(c) Designation of energy intensive industries (Aluminum/Fertilizers/Iron and Steel/Cement/Pulp and paper/ChlorAlkali/Sugar/Textile/Chemicals/Railways /Port Trust/Transport Sector (industries and services)/Petrochemicals, Gas Crackers, Naphtha Crackers and Petroleum Refineries/Thermal Power Stations, hydel power stations, electricity transmission companies and distribution companies/Commercial buildings or establishments). Several obligations (submission of annual report/implementation of energy diagnosis/Possession of certified energy managers and auditors) on the consumers with a connected load of 500 kW or more or contract demand of 600 KVA or more in the above designated industries.

(d) Establishment of Energy Conservation Fund by State Government.

(e) Penalty (April 2007-). If any person fails to comply with the provisions, he shall be liable to a penalty which shall not exceed ten thousand rupees for each such failures.

Below are the examples of the provisions:

Prohibition of manufacture or sale or purchase or import of equipment or appliance not conforming to energy consumption standards/Display of label /Implementation of energy audit/Designation of energy manager/ Submit of report/Compliance with energy consumption norms and standards/Compliance with energy conservation building codes for efficient use of energy and its conservation.

3. Target sector (transport, building, manufacturing, etc.)

Major Economic Sectors (Industries, Transportation, Agriculture, Livelihood)

4. Funds and budget for the measure

6. Results of measures

7. Future tasks

8. Others

9. For further details about measures, please contact:

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Source: BEE website

Energy Efficiency - A Key to Economic Growth

By G. G. Dalal

According to projections of planning commission, the demand for power will soar from the present installed capacity of 150,000 MW to 415, 000 MW, by 2017. It means tripling of generating capacity and requires an annual capacity addition of 20,000 to 40,000 MW as against the below-target capacity addition of 4,000 MW per year over the last 10 years. At this rate of addition, we will end up with huge power deficit of over 70,000 MW by 2017.

The expert committee on energy estimated India's power needs at 960,000 MW by 2032. Considering a GDP growth of 6 % & energy growth of 9 % which is very optimistic, it will leave huge power gap of 2,40,000 MW by 2032 that is far higher than India's entire installed capacity.

Despite the 1,50,000 MW capacity currently available in India, only 96,000 MW is usable & the rest 36 % or so disappears in losses and thefts. With present acute shortage of 12 to 15 % in peak & 9 % in energy, and non-availability of electricity to 300 Million people daily for 8 to 10 hrs, every one jumps on adding new power generating capacity into the bottomless reservoir of energy thefts & losses. No one seems to recollect that the 'Energy Conservation Act' enacted eight years before, can improve energy use efficiency by reducing energy waste. However, the Act is not implemented since 2001.

Relevance of adding power becomes sensible only when energy waste is curbed, as new capacity addition is not meant for feeding the losses, continued misuse & waste of energy. "Failure to boost energy saving" is bound to make India "major energy importer." 'Tsunami of Energy Inefficiency' is daunting & unnerving to tackle, in absence of effective implementation of EC Act, 2001.

Economic growth depends on energy growth, which in turn depends on improvement of distribution efficiency and containing the misuse & waste of energy that ought to have become a single main player for moving India into higher growth orbits. Reduction in losses by 10 % can save 25 Billion Units per annum. Unless distribution efficiency is improved, no matter how much generation capacity is added, getting a secure & affordable power will always remain a pipe dream. Most grudgingly, few would get short-lived security through unaffordable Inverters, forced by usual constraints.

62 years before, India fought for self-governance; today it is for good governance; Poverty was biggest pollutant then, now the poor progress is. India needs energy for sustained economic growth but unfortunately it is getting sustained energy losses for wiping out the growth. Cost of one unit (Kwh) of “unserved-power” results in a loss of output to economy ranging from Rs. 15 to Rs. 25, i.e. 5 times the cost of available power. One unit of energy saved at the consumption level avoids 2.5 to 3 times the fresh capacity addition. Realizing the need for statutory measures to encourage efficient utilization of energy, the Government of India had initiated drafting of a law in the year 1999.

The draft legislation was introduced as Energy Conservation Bill in the Parliament in the year 2000 and passed as ‘The Energy Conservation Act, 2001 in Sept’ 2001. It received Presidential consent on 29th Sept.’01 and was notified on 1st Oct’2001 with laudable objectives. The Act was virtually non-effective till 1st March’2002 when section 1 to 29 and 46 to 62 were notified and concurrently Bureau of Energy Efficiency (BEE) was established under Ministry of Power (MoP) to oversee the implementation of the Act. The important sections 30 to 45 are still not notified even after more than eight years, rendering the act most ineffective and the primary goal of the country to reduce the “energy intensity” i.e. energy consumption per unit of GDP, in the economy is not being accomplished.

Recently, India's economic growth is projected as 7.4 % (during 2007-12), which would require "commensurate growth" for commercial energy. Considering present "energy intensity" as 1.5 the requirement of ‘energy growth’ would be 12 % as against, actual ‘energy growth’ of less than half of this. Some over-enthusiasts say: “India's energy intensity has improved in the recent years”, which clearly indicates that we are not on the right track. In this backdrop, there is an urgent need to introspect, and to have a look at our progress and the possible solutions for a more sustained growth.

Against the objective for energy saving of 25 Billion Units/per year to offset the backlog of energy shortfall, our average saving is less than One B.U./year. Implementation of end-use efficiency & demand side management measures were estimated to yield a potential for saving 25,000 MW, however so far, country has not set up matching targets, due to policy of ‘voluntary actions’, that barely addresses any of the grim problems of energy efficiency improvement.

In order to improve implementation of important programs to ensure that large part of the intended benefits reach the needy for creating opportunities for development of ‘Aam Adami’, the Government of India enacted EC Act in 2001. Similar acts for rational use of energy came into force & were implemented successfully with significant benefits, many

years before in the US (1975), Japan (1979), Germany (1995), and France (1996). Most of the technological breakthrough originated in the advanced countries and belatedly India woke up in 2001 to enact the "EC Act". Ours is a unique country, waiting for alarming rise in costs & crises, ultimately to bear heavy price for neglecting capital-intensive & crisis-ridden issues of energy! Continuous delay in implementing EC Act will cost a fortune in handling backlog of inefficiencies & substandard capabilities.

To what astronomical scale the energy is being wasted, misused & lost irreversibly across the country in absence of EC Act implementation is difficult to judge. Acts & Laws are always with carrot & stick tools. With statutory mandates, it was possible to achieve significant quantum of energy saving by avoiding waste & inefficient utilization, which in no case would have been a guaranteed disaster for the country. No one should therefore be surprised if the power supply companies compete by out-pricing electricity by their inferior or deficient performance.

The National Action Plan on Climate Change with eight national missions includes, Mission on "Enhanced Energy Efficiency". It is beyond doubt that "Energy Inefficiency", is a proven threat to "Energy Security" and when there is no "Energy Efficiency" in the country, due to non-implementation of Energy Conservation Act, since 2001, will not the mission on "Enhanced" Energy Efficiency, be like putting the cart before the horse?

Important issue of Climate Change cannot be superficially addressed by voluntary intentions but by committing to mandatory norms on fuel & energy efficiency, which only could lead to 'actual mitigation' & help avoid eternal nightmare.

Voluntary energy saving schemes cannot avoid perpetual energy waste on monumental scale. Only possible outcome would be that of virtually very little energy saving but a significant dent in economic growth. Such soft peddling of voluntary choices could be out of patronage or misplaced compassion for designated consumers.

In the absence of law, every improvement or retracting could remain 'voluntary' that might erode the credibility of policy intent.

EC Act has vast potential of unlocking many secrets of energy misuse & waste, as well, improving energy use efficiency. So far, there is no "zero tolerance" for continual misuse & energy inefficiency, as a result, the common people, to a greater extent will continue to face prolonged energy poverty.

There is famous & often-repeated slogan, "energy is life, conserve it", however, unless voluntary misuse is stopped, it is like, asking people to conserve energy when they have no access to energy! It is also glaring to note that there was no mention about the significant benefits of "Energy Conservation" in any of the last eight Budget speeches related to even some of the soft areas like:

1. Lowering of house tax for energy efficient buildings.
2. Start of mandatory energy audit of high-rise Buildings where energy recovery potential stands at 30 %.
3. Start of energy audit for at least government public utility services.
4. Giving incentive by government to use energy-efficient public transport.
5. Incentives for complying with mandatory fuel efficiency norms for vehicles etc.

Why cannot the Government productively spend on schemes that create usefulness, opportunities and assets?

It appears that after the most enlightening & effective tenure of great visionary Dr. A.P.J. Kalam, as Hon'ble President of India, no one supported the cause of "energy independence, by 2030" that was initiated by him. Unfortunately it seems to have gone into oblivion, since neither seasoned Parliamentarians nor technical luminaries in power sector are assertively chasing this pivotal issue.

Dr. Kalam, on the occasion of 59th Independence day called for "Energy Independence by 2030" and made the following remarks:

“A mission mode programme can be created for energy conservation. We have to set yearly target of 25 billion units per year from the present 3.2 billion units, so that we can wipe out the shortage within next four years”.

The EC Act, 2001 enacted eight years ago for stopping waste & making efficient use of energy still remains un-implemented, although a singular state like Gujarat has made great strides in improving energy efficiency to act as a powerful economic driver. Gujarat has boosted the energy saving by implementing its state energy saving act since 2000 i.e. before the national EC Act, 2001 was enacted.

Non-implementation of energy conservation act, 2001 to a large extent is leading to continued waste & misuse of the scarce energy resources, thus resulting into extended power cuts across the country with attendant people's suffering.

Apart from adding generation capacity, quick actions are necessary to avoid power shortfall due to waste & inefficient use of power.

Energy thefts and pilferage siphon off, what could otherwise generate output to economy, employment & growth. Improvement in 'energy efficiency' lowers the 'energy intensity' by preserving resource base, however this beneficial attribute is not made a "National Priority" neither it figures in any national public debate. Instead of subsidising energy efficiency, the government is subsidizing energy & oil prices. Energy inefficiency is the greatest proven threat to energy security of the country. To reverse the energy waste, EC Act was enacted, and now to reverse the energy saving, EC Act is kept on hold by giving it a slow death.

In USA, it is reported that mandated motor efficiency standards pushed efficiency for electric motors much more than in India, which is using voluntary standards. Motor efficiency standard in US is having more than 80% penetration, while in India it is less than 5%, since improvement program being on voluntary basis.

In the backdrop of deficient monsoon in the country this year, there is drastic slowdown, leading to further trimming of economic growth forecasts. Power shortage is already crippling the development of the country and therefore Central & State governments need to play crucial role, for saving energy. The "Energy Conservation act, 2001", that has all ingredients to improve energy efficiency improvement needs to be respected & honored in true spirit, with sense of purpose & urgency before it is too late. Delaying the implementation of EC Act will be to the detriment of public interest, and too costly for the Nation.

Renewable Fuel Saving Specifications. Innovative Mechanisms Suggested For Inclusion In EC-Act.

By Prof. Ajay Chandak and Dr. Sunil Somani

1. Introduction

All energy requirements of human beings can be broadly fulfilled through electricity (power) and fuels. Even though fuels constitute to more than 55% of our energy requirement, majority of renewable energy development efforts are directed towards power production. All the governments give high priority for electricity generation through renewable sources than using RE for fuel requirements and even common people have great attraction for renewable power than fuel. In fact renewable energy offers great solutions for fuel needs of human beings. Most of the RE technologies, except wind, have not yet matured to generate electricity at rates competing with fossil fuel based power. An effort is required to evolve policies in such a way that renewable energy applications are developed to reduce power consumptions and to replace fossil fuels. These approaches can be financially viable and socially acceptable. An integrated approach is required for renewable energy and conventional energy sources, where the conventional energy sources are to be taxed more and renewable energy sources are to be discounted. RFSS (Renewable Fuel Saving Specifications) which is one of the most innovative policy measure suggested by authors, which needs serious attention by the policy makers and be included in EC Act.

2. RPS (Renewable Power Specifications)

RPS has been introduced by many state electricity commissions and it has fixed responsibility of generating a fixed percentage of power through renewable sources. This responsibility is fixed on the power producing and distributing company. This share of renewable energy is increasing every year as shown in the next table, applicable to Maharashtra. There are penal provisions as specified in the last column.

<i>Financial Year</i>	<i>Renewable Purchase Specifications (RPS)*</i>	<i>Penal rate for shortfall in Rs./kwh</i>
2006-07	3%	NIL
2007-08	4%	5
2008-09	5%	6
2009-10	6%	7

**Percentage RPS denotes Minimum Quantum of procurement of electricity by eligible persons from renewable energy sources.*

Such measures can bring in time bound promotion of renewable power and corresponding increase in share of renewable power in energy mix of the state. Credit of RPS is a tradable commodity and such mechanism brings in accountability and commitment for promoting renewable power. This policy document mentions only renewable power policies and not for renewable fuels. There are no policies framed for substituting fossil fuels with renewable fuels on the same lines as that of RPS. Authors have proposed unique concept of RFSS (Renewable Fuel Saving Specifications).

3.0 New proposals for RFSS (Renewable Fuel Saving Specifications)

3.1 Need for RFSS: Issue of fossil fuels and renewable fuels is dealt by too many ministries. Ministry of petroleum and natural gas is primarily responsible for providing LPG, Kerosene and similar fuels for common use. These fuels are normally subsidized. Competing technologies like solar cookers, biogas, biomass technologies etc. are dealt by Ministry of New and Renewable Energy. MNRE has onus of cleaning up the emissions caused by petroleum and natural gas ministry. MNRE has no control on this powerful ministry of petroleum and natural gas and there is no way that MNRE can come up with mechanisms to reduce fossil fuel consumptions substantially. There is big contradiction in principle that one ministry is allowed to do what so ever emission they want and there are no limits on how much petroleum products this ministry allows to sell in the country. On the other hand this miniscule ministry, MNRE is given a daunting task to reduce emissions by all means. It definitely makes more sense that on the lines of RPS the onus of reducing fossil fuel consumption or promotion of renewable fuels should be fixed on petroleum and natural gas ministry and not on MNRE. On the same lines as that of RPS, fixed percentage of fuel consumption (or saving) should come from renewable sources and such responsibilities are to be fixed on the fuel manufacturing/selling companies. Initially 5% of the domestic fuels requirement should be supplemented by renewable energy gadgets like solar cookers and biogas plants and the contribution should go up to 10% in next 3 years. Promoting right kind of technologies will be responsibility of fuel saving companies. Similar to RPS new specifications for fuel savings need to be evolved. Authors propose 'RFSS' (Renewable Fuel Saving Specifications). This innovation of RFSS is a rational idea because it puts the responsibility of cleaning the mess (because of fossil fuel burning) on the companies, who are responsible for it. This is on the similar lines as that of Kyoto protocol, which has put onus of cleaning the earth on developed annex-I countries, who are responsible for global warming. One proposal of RFSS is suggested herewith.

<i>Financial Year</i>	<i>(RFSS)Renewable Fuel Saving Specifications</i>	<i>Penal rate for shortfall per kg of kerosene/LPG</i>
2009-10	5%	NIL
2010-11	6%	Rs. 60
2011-12	8%	Rs. 70
2012-13	10%	Rs. 80

Percentage RFSS denotes Minimum Quantum of fuel savings/supplement by eligible persons from renewable energy sources.

It will be responsibility of the fuel selling companies, like Indian oil and Bharat Petroleum, to promote RE technologies so that RFSS targets are met. In case RFSS targets are not met then the penalties realised from these companies should go to a 'Green Fund' and MNRE/ PCRA should use this fund to achieve RFSS targets.

4.0 Conclusions

There are too many agencies dealing with fuel conservation and promotion of renewable fuel technologies. None of the existing ministries like MNRE and departments like PCRA, CII, TERI etc. has accountability towards achieving measurable savings in fossil fuel. The innovative concept of 'RFSS' needs to be incorporated in EC-Act and fix onus of promoting green fuels or reducing consumption of conventional fuels on the fossil fuel manufacturing and selling companies like Bharat Petroleum, Indian Oil, Reliance petroleum limited etc. Those companies need to be given responsibility of cleaning up the emission. Such innovative measures can bring in measurable and targeted emission savings and more accountability for the same. Inclusion of such RFSS measures in EC-Act will give legal teeth to such measures.

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"The Startling Story of EC-Act: Start to Sorry Status."

By Sunil Sood

(Excerpts from the information received from BEE under RTI Act,2005)

How the decisions were taken on important issues related to the 'Implementation of the EC Act,2001. The important points from the Minutes of Meetings of first 12 meetings of the Executive Committee of BEE are reproduced in the following paragraphs. As per the section 4 of the EC Act,2001, the management of BEE was vested to a 'Governing Council' comprising of not less than twenty, but not exceeding twenty six members. The Governing Council (GC) has till date met only 4 times and in the first meeting of the GC it was decided that a Executive Committee comprising of 9 members would be set up to help the GC for all matter of general and administrative nature. But from the minutes of the meeting ; the important points of which are reproduced here it is clear that the Executive Committee was not only taking administrative decisions but was also taking decisions on serious matters which had direct implications on the right implementation of the EC Act. The list of participants reveals that on several occasions only 4-5 members were taking important decisions while in some other meetings outsiders were recorded as present which clearly reveals the presence of the influential lobbies.

Minutes of the 1st meeting of the Executive Committee of Bureau of Energy Efficiency (BEE) held on 7th March 2003 at 5.0 p.m in the chamber of Secretary(Power),Ministry of Power,S.S.Bhawan,New Delhi.

List of Participants in the first meeting of the Executive Committee of the Bureau of Energy Efficiency(BEE) is at Appendix I

In his opening remarks, Secretary(Power) and Chairman of the Executive Committee extended a warm welcome to all the members of the Committee. The Executive Committee thereafter took up the agenda items for discussions.

Item No. 1: Investment of Corpus Fund (Rs 50.00 crores) as Fixed deposit with Financial Institutions/Banks/Central Public Sector undertaking.

Director General, BEE & Member Secretary informed the Executive Committee members that the corpus fund of Rs.50.00 crores sanctioned by the Government has been received and the same is kept in a short term deposit in a Nationalized Bank. The Executive Committee after analyzing various option of deposit to ensure highest interest

returns, including preferential share of National Thermal Power Corporation (NTPC), suggested that the fund should be deposited with a financially sound user company, which can offer at least the same interest rate at which it raises money from the market. After consulting NTPC and Power Grid Corporation of India Limited (PGCIL), which offered 9.00% and 8.5 % interest rates respectively, it was decided that the Corpus fund of Rs. 50.00 crores be lent for long term to NTPC, which offered highest interest rate of 9.00 % p.a. and that NTPC is financially a very sound Public Sector Company.

Item No.2: Proposal for conducting a national level certification examination and preparation of course material for energy managers & energy auditors by National Productivity Council under Energy Conservation Act.

The Executive Committee members were informed that the Governing Council of the Bureau in its first meeting held on 7th July, 2002 had approved National Productivity Council as National Level Certifying Agency, to conduct the National Level Certification Examination and certify Energy managers and Energy Auditors under the aegis of BEE. In pursuance of the decision, NPC has now submitted a proposal for the conduct of National Level Certification examination and preparation of course material. The estimated expenditure for conduct of the examination by NPC and preparation of course material are rs 16.53 lakhs (plus service tax) per examination and rs 6.5 lakhs (Plus service tax) respectively. In addition, for printing of 2000 copies of each course material/manual (total 8000 copies for 4 papers) estimated expenditure would be Rs 30 lakhs. Also, an estimated budget of rs 3 lakhs per examination would be required for release of advertisement on announcement of the examination in various dailies. In order to make the entire system of conduct of certification examination self-sustaining, certain fee structure was also proposed.

While approving the proposal in toto, the Executive Committee suggested that fee structure for the candidates writing the examination should be such that the programme becomes self-sustainable.

The Executive Committee further considered that though the proposed system of conduct of National Level certification examination was appropriate for candidates already employed with industry, there is a need to evolve a long-term system which can provide a sustained stream of qualified energy managers and auditors. In this connection, after detailed discussions, the following decisions were taken:

- (i) A student passing the B.E./B.Tech or equivalent with specialization in energy conservation and M.E./M.Tech or equivalent with specialization in energy conservation, will be entitled to certification of energy manager and energy auditor respectively and will be exempted from writing the national level certificate examination. Requisite duration of field experience should be made part of the curriculum itself.
- (ii) BEE should attempt to get introduced optional subject of suitable duration on Energy Conservation for the engineering course.

- (iii) BEE should prescribe uniform syllabus for all the engineering colleges/institutions which intend to conduct such courses.
- (iv) The syllabus for energy managers and energy auditors should be separate, as knowledge level for energy auditors is required to be higher than that of energy managers.
- (v) Syllabus for energy managers should be integrated with B.E./B.Tech or equivalent courses and for energy auditors it would be integrated with M.E./M.Tech or equivalent courses. In other words, the minimum qualification for an energy manager would be B.E./B.Tech or equivalent and the minimum qualification for energy auditors would be M.E./M.Tech. or equivalent with specialization in energy conservation. Syllabus for both level to be prescribed by BEE.
- (vi) All the engineering colleges/institutions intending to run such energy conservation specialization course (one year as optional subject) as part of BE or equivalent and ME or equivalent would need to get the curriculum modules and syllabus approved by BEE.
- (vii) BEE will draw up a scheme in consultation with educational institutions/Universities in the next one or two months and write to all the leading engineering colleges/institutions urging them to run specialized courses on energy conservation, given the fact that coming years are like to witness a very significant upsurge in the demand for energy managers/energy auditors.
- (viii) BEE will also write to All India Council for Technical Education (AICTE) in order to inform all the engineering colleges/accordingly.
- (ix) All the institutions which are already running long term energy management course (more than one year of duration or above) could also be eligible to participate in this scheme provided their syllabus and the curriculum modules are approved by the BEE.

The Executive Committee considered that an enabling Rule to EC Act, 2001 and arrangement as decided above would help in developing a sustainable pool of specialist in energy conservation.

Item No.4: Draft Regulation on Energy Manager Certification

The Committee Members discussed the draft Regulation and felt that the proposed regulation on “Revalidation of Certification of Energy Managers” should be deleted. The Certificate once awarded to a candidate should be for life time and should not be cancelled until and unless the person is found to be indulging in un-professional/un-ethical practices. The provision of under going short-term refresher training by a Certified Energy Manager once in a 5 year period should become a part of the mandatory duties and responsibilities of Certified Energy Manager under the EC Act. The Accredited Energy Audit firms while conducting mandatory vis-a vis the mandatory duties & responsibilities including periodical exposure to refresher course. In case of self employed individual Certified Energy Managers, they need to submit the information to Bureau once in a 5 year regarding attending refresher training and compliance of this

duty. In case of non-compliance by such persons, action can be taken against them under the provisions of the Revocation of Certificate (S.No. 7 of draft regulation)

The Executive Committee approved the agenda with the above-proposed amendments.

Item No.11: Other agenda items with the permission of Chair

The Executive Committee members were informed that the Bureau has initiated the process of accreditation of energy auditing firms as required under the Energy Conservation Act. So far 90 firms have applied for accreditation. Bureau has also compiled the basic technical information regarding their professional work done so far. member-Secretary sought the advice of Executive Committee regarding the experts who should be members of the Accreditation Council and on the recommendation of which the Bureau would be able to award accreditation to the energy auditing firms.

Considering the fact that accreditation of the energy audit firms is one of the important provisions of the EC Act, the Executive Committee directed the BEE to prepare, in consultation with certain experts, an evaluation & accreditation criteria with different weightage. The criteria and weightage thus prepared should be submitted to the Executive Committee for approval within one month's time. Further, the Executive Committee decided that the Accreditation Council could consist of people of high rank and standing like ex-Secretary-Ministry of Power, ex-chairman-CEA and of such persons having demonstrable credibility.

The meeting ended with a vote of thanks to the Chair

List of Executive Committee Members who have attended the 1st Meeting of Executive Committee of Bureau of Energy Efficiency (BEE)

Date & Time: 7th March 2003 at 5.00 p.m.

Venue: Chamber of Secretary(Power), Ministry of Power, S.S.Bhawan, New Delhi

1.	Shri R.V.Shahi, Secretary (Power) Ministry of Power	Chairman
2.	Shri H.L.Bajaj, Chairman	Member
3.	Ms. Leena Mehandale, Executive Director PCRA	Member
4.	Shri M.Sahoo, JS & FA Ministry of Power	Member
5.	Shri Shashi Shekhar, Director General Bureau of Energy Efficiency	Member-Secretary

Minutes of the 2nd Meeting of the Executive Committee of Bureau of Energy Efficiency(BEE) held on 23rd May,2003 at 4.00 PM in the Chamber of Secretary(Power),Ministry of Power,Shram Shakti Bhawan,New Delhi

List of participants in the second meeting of the Executive Committee of the Bureau of Energy Efficiency(BEE) is at Annex.

Action item No.5: Certification of Energy manager/Energy Auditor

The Executive Committee was informed that the above Agenda is for the information purpose only. The members were further informed that the Bureau will be working out the syllabus and other parameters of the curriculum to be integrated with both the existing curriculum of B.E./M.E. as well as stand alone courses. The parameters would inter-alia include the minimum number of classes required for covering the entire syllabus: qualification of faculty; minimum duration of field training; minimum number of classes in each semester required separately for Energy managers and Energy Auditors certification etc. During discussion it was felt that the All India Committee of Technical Education(AICTE) would need to be associated with this exercise from the outset as their concurrence would be required for implementation.

Agenda Item No.7 Approval for Evaluation and Accreditation Criteria of Energy Auditors and constitution of Accreditation Committee.

The proposal contained in the agenda item was approved with the provision that the composition of the Accreditation Committee be settled by the Chairman of the Executive Committee Secretary (Power) and Chairman, CEA

Agenda Item No.8: Energy Efficiency Improvement in Indian Industrial Sector under Indian Industry Programme for Energy Conservation (IIPEC)- Request for allowing deputation from Indian Corporate Sector to BEE

The proposal was not approved

Agenda Item No.9: Draft Notification for Certification of Energy Manager Regulation,2003

Consideration was deferred.

Agenda Item No.11: Energy Conservation Building Codes

The proposal was approved.

The Executive Committee desired that USAID should not be the only mode for undertaking this activity. Other Indian institutions including the School of Planning and Architecture may be involved using BEE's own resources.

Agenda Item No. 12: Deputation of a Senior Technical Official (in the Category ‘A’ Post) from Bureau of Indian Standards (BIS) to BEE to coordinate Standards & Labeling Program.

The proposal as contained in the Agenda item No.12 was approved by the Executive Committee.

Supplementary Agenda item No.15: Building Energy Efficiency Awareness in School Children.

The Executive Committee approved the proposal of an estimated cost of Rs.15lakhs and retaining the services of The Energy and Resources Institute (TERI) to execute the project. Director General, BEE was also authorized to finalise the various project components as well as to negotiate the project cost with TERI within the approved estimated cost.

Resolution of the 3rd Meeting of the Executive Committee of Bureau of Energy Efficiency (BEE) held on 21st July 2003 at 12.00 Noon in the Chamber of Secretary (Power), Ministry of Power, Shram Shakti Bhawan, New Delhi.

List of Participants in the third Meeting of the Executive Committee of the Bureau of Energy Efficiency (BEE) is at Annex.

Agenda Item No.1: Energy Conservation Awareness in School Children

The Proposal to create energy conservation awareness in school through curriculum interventions and sensitization programmes” to be implemented by hiring out service of The Energy & Resources Institute (TERI), New Delhi was approved at a total cost of Rs. 12.50 lakhs plus (Service Tax as applicable).

Regarding the proposal for extension of the project to all the major towns in the country, the Executive Committee advised that a detailed proposal, containing various activities, locations and cost involved be submitted to the Executive Committee for decision.

Agenda Item No.4: Approval of Draft on the “Procedures for the conduct of business of the Governing Council Regulations, 2003”

The Executive Committee approved the Draft Regulations subject to the following changes:-

- i) The Governing Council shall meet at least once a year (instead of twice a year as proposed) – Reference Item-3 (1);

- ii) 7 days clear notice of every meeting of the Governing Council shall be sent (instead of 21 days as proposed) – Reference Item 4 (1);
- iii) The quorum necessary for transaction of business at the meeting of the Governing Council shall be 3 Nos. (instead of 9) – Reference Item 5 (14);

Agenda Item No.8: Project completion and evaluation report of Indo-German Energy Efficiency Project (IGEEP) Phasel

The Executive Committee expressed its satisfaction on the project completion and evaluation report of Indo-German Energy Efficiency Project, Phase I, which was launched in May 1995 and completed in September 2000. The Executive Committee directed a detailed feedback from the Industry where 29 comprehensive Energy Audits were carried out during the project period. The Executive Committee further desired that a brief report on the impact created by 16 industries specific energy audit manuals, prepared under the project, to be placed before the Executive Committee.

List of Executive Committee Members who have attended the 3rd Meeting of the Executive Committee of Bureau of Energy Efficiency (BEE)

Date & Time: 21st July 2003 at 12.00 Noon

Venue: Chamber of Secretary (Power), S.S. Bhawan, New Delhi.

- | | | | |
|----|--|---|------------------|
| 1. | Shri R.V. Shahi, secretary (Power),
Ministry of Power | - | Chairman |
| 2. | Shri M. Sahoo, JS & FS
Ministry of Power | - | Member |
| 3. | Shri B. Mandan
Representing E.D., PCRA, Member | | |
| 4. | Shri Shashi Shekhar, Director General
Bureau of Energy Efficiency | - | Member-Secretary |

Minutes of the 4th Meeting of the Executive Committee of the Bureau of Energy Efficiency held under the Chairmanship of Secretary (Power) On 9th July 2004 in the Conference Room, Ministry of Power, New Delhi

- 1. The list of participants is attached at Annexure.
- 2. While welcoming the members of the 4th Executive Committee meeting, Director- General, Bureau of Energy Efficiency (BEE) made a brief introduction of the agenda being put-up before the Executive Committee. Therefore, a detailed

presentation was made on the agenda for consideration of the Executive Committee.

Agenda item-3 Approval/ratification of Board of Examination recommendations/ decision on the National level Certification Examination for Energy Managers and Energy Auditors

The Executive Committee approved recommendations of the Board of Examination on honorarium for Paper Setters; moderator, Evaluators, Panel Members, etc., as proposed in the agenda. However, the Executive committee did not approve the other recommendations of the Board which are given below:

- a) to grant Energy Manager Certification, if the candidate appears for Energy Auditor Examination and fails in the EA-4 “Energy Performance Assessment for equipment and utility systems” and viva-voce,
- b) proposal for one center at New Delhi instead of 4 centres and associated TA provision for candidates
- c) reframing of the Board and deletion of the one Member name (Dr. K. Subramanian, Member (PG & Admm.) of AICTE
- d) increase the percentage (%) from the existing level of 50% to 75% for the second examination as proposed by the Board of Examination. In this case, however, the Executive Committee that the degree of difficulty could be increased in the papers/interview appropriately to ensure that only the capable candidates pass the examination.

The Executive Committee directed that for the next year’s examination, the three papers i.e. ‘General Aspects of Energy Management & Energy Audit; Energy Efficiency in Thermal Utilities and Energy Efficiency in Electrical Utilities’ should be made common for Energy Manager and Energy Auditors. Any candidate, passing these three papers will be eligible for award of Energy Manager Certification. For Energy Auditor certification, the candidate has to clear the Paper-4, i.e. Energy Performance Assessment for equipment and utility systems [open book examination] and the Viva-voce as well. The degree of difficulty in this paper should be made higher than the first three papers. Also, the relevant portions of the syllabus of first three papers would be included in the fourth paper to cover the increased difficulty level in the first three papers for Energy Auditors Examination.

Agenda Item No.4: Approval of the revised cost for conducting a national level certification examination for Energy managers & Energy Auditors by National Productivity Council under the Energy Conservation Act, 2001.

The Executive Committee approved the proposal as given in the Agenda. The Executive Committee expressed concern over the fact that BEE has been overstretching its thin resources in the conduct of the examination despite giving a turnkey job to NPC. The Executive Committee desired that for future, BEE should ensure that the entire work be handled by NPC or any other agency given the job, so that it not loss focus of its core activities assigned.

Agenda Item No.5: Approval of the recommendations of the Accreditation Committee on Accreditation of Energy Auditors

The Executive Committee approved the 62 names of the Energy Auditing agencies, whose names have been proposed by the Accreditation Committees, constituted by the Bureau of Energy Efficiency. The Chairman desired that a detail list of such agencies to be prepared, highlighting their capabilities, expertise, past experience, etc. before Notification of the list of Accredited Energy Auditing agencies.

Agenda Item No.11 Status of inadequate manpower available at BEE and filling up of the vacant post of Energy Economists

The Executive Committee directed BEE to arrange interviews for expeditious filling up of vacant posts.

Agenda Item No.14 Cooperation between BEE and BIS

The Executive Committee noted the resolutions taken regarding cooperation between BEE and BIS in the area of standards & labeling and Energy Conservation Building Codes.

Annexure

List of participants

- | | | | |
|----|--|---|-------------------------------|
| 1. | Shri R.V.Shahi, (Power)
Ministry of Power
Shram Shakti Bhawan, Rafi Marg
New Delhi | - | Chairman |
| 2. | Shri H.L. Bajaj, Chairman
Central Electricity Authority
Sewa Bhawan, New Delhi | - | Member |
| 3. | Shri Gireesh Pradhan
Joint Secretary (EC)
Ministry of Power
Shram Shakti Bhawan, Rafi Marg
New Delhi | - | Invitee |
| 4. | Shri Balwant Rai, Deputy Director General
Bureau of Indian Standards
New Delhi | - | Member |
| 5. | Mr. Saurabh Kumar, Deputy Secretary (F)
Ministry of Power
Shram Shakti Bhawan, Rafi Marg | - | Representing
JS&FA (power) |

- New Delhi
6. Shri V.S. Verma, Director- Genaral
Bureau of Energy Efficiency - Member-Secretary
New Delhi
-

Minutes of the 5th Meeting of the Executive Committee of the Bureau of Energy Efficiency held On 30th June 2005 at Ministry of Power,

List of participants is attached at Annexure

Agenda Item No. : Approval of introducing voluntary labeling scheme and budge estimates

The Agenda item was discussed and Secretary (P) decided that the proposed voluntary labeling scheme may be revised to make it voluntary and self- regulatory without any requirement for requirement for regular verification an inspection by the Central or State Government Agencies. In order to authorize a manufacturer for fixing energy label, he is require to undertake a test of his products in a registered laboratory.

It was decided that the technical details for products to be undertaken for labeling programme including energy conservation building codes may be sent to BIS for their review and comments to be received within two weeks and there is a need to develop the star rating of the products in coordination with BIS.

Agenda Item No. 5: Approval of the Project Cost for conducting 23rd National Level Certification Examination for Energy Managers and Energy Auditors by National Productivity Council

The Executive Committee approved the project cost as proposed in the agenda, for conducting 3rd National Level Certification Examination for Energy Managers and Energy Auditors by National Productivity Council.

Agenda Item No. 7: Approval of Budget for National Campaign on Energy Conservation – 2005

The Executive Committee advised that budget for the National Campaign be discussed along with common annual budget of the Bureau.

ED PCRA information that several clippings regarding Energy Conservation had already been developed through PCRA's efforts. These could be seen by BEE, if these could be utilized for the awareness programme of BEE.

Agenda Item No. 9 **Proposal on conduct of “Organization Study in Bureau of Energy Efficiency (BEE)” by Administrative Staff College of India (ASCI)**

The Executive Committee approved the proposal for engaging the services of ASCI to carry out an organization study of the Bureau which would include among other things a regular cadre structure, personnel policies and service Rules & Regulations, keeping in mind the future shape of the organization, commensurate with the EC Act requirements, at a proposed cost of Rs.10,000/- (eight lakhs ten thousand only) plus Service Tax. The study should preferably be completed within three months of the assigning of the contract.

Agenda Item No. 10 & 11: Development of Accelerated Ageing Test procedure for Tubular Fluorescent Lamps to ERDA Baroda, at a cost of Rs. 9.0 lakhs

Study on review of Energy Efficient Equipment for Depreciation Benefits to M/s. Nitcon at a cost of Rs. 3.47 lakhs

The above work have already been awarded by BEE. The Committee granted ex-post-facto approval for the above.

Agenda Item No. 14: Recommendations of the Accreditation Committee on accreditation of Energy Auditors

The Executive Committee accepted the recommendations of the Accreditation Committee on Temporary Accreditation of-

- i) PHD Chamber of Commerce & Industry, New Delhi;
- ii) Petroleum Conservation Research Association (PCRA), New Delhi; &
- iii) Dinesh Rathi & Associates, Nagpur.

Agenda Item No. 18: Status of Thrust Areas of Action Plan of BEE (2002 to till date)

The action taken on thrust Areas Plan of BEE till date was placed before the Committee.

Chairman, Executive Committee desired that the Executive Committee Meeting should be held more frequently and could be held co-terminus with the QPR Meetings, Chairman also desired that the Governing Council of the Bureau which has not been held for the last 2 years should urgently be convened in the month of August, 2005

The meeting ended with thanks to the Chair.

MINUTES OF THE 6TH MEETING OF THE EXECUTIVE COMMITTEE OF BUREAU OF ENERGY EFFICIENCY HELD ON 25TH JANUARY, 2005 AT SHRAM SHAKTI BHAWAN, NEW DELHI

List of participants is attached at Annexure.

Item No. 1: Action taken on the 5th meeting of the Executive Committee.

The minutes of the 5th Meeting of the Executive Committee were considered and approved. Chairman desired that future agenda of the Executive Committee Meeting should include the Minutes of the previous EC. Meeting.

Chairman (ECB) directed that the study on review of Energy Efficient equipment for depreciation benefits given to NITCON Ltd. should be expedited. The first part of the recommendations should be obtained by the first week of march' 2006 so as to enable Ministry of Power to take up the matter suitably with the Ministry of Finance.

It was also decided that the TERI's School programme be replicated in other cities on an urgent basis and NCERT be requested to intimate the progress for inclusion of material related to Energy Conservation in the School text books.

It was decided that the Executive Committee meeting would be held at least once in every quarter and preferably in combination with the OPR meeting. The OPR meeting could be held shortly before the Executive Committee meeting.

Item No.5: Approval of Budget Estimates (B.E.) of the bureau of Energy Efficiency for the year 2006-07

The Executive Committee further desired BEE should come out with a comprehensive paper justifying the need for additional funds for effective implementation of the Energy Conservation Acts through regulatory measures and awareness generation campaigns such as Consumer Rights Awareness Programme undertaken by Ministry of Consumer Affairs. The Bureau may also formulate a scheme to engage involvement of NGOs in then above exercise. Based on this, the Ministry of Power could move a note for enhancement of corpus to Rs. 150-Rs.200 crore.

The revenue from the interest earnings from then corpus could be supplemented by other streams of income. In this context, it was decided that BEE shall change appropriate labeling fee for each appliance. The scheme for Refrigerators & FTL shall be accordingly modified. Advertisement supports from other power sector PSUs / manufacturing associations / consumer associations shall also be appropriately obtained. The approved scheme of government support to the Ministry of Consumer Affairs could be annexed with the above proposal as a supporting document. The budget for the year 2006-07 may then be suitably revised based on the programmes and requirements of BEE, if required.

Item No.6: Issues relating with expenditure in connection with approved budget of Bureau of Energy Efficiency.

The Committee agreed to the proposal to authorize DG (BEE) to incur their expenditure under the overall limit of budget approved by Executive Committee. The expenditure may later be granted ex-post-facto approval by the Executive Committee.

Item No.7: National Certification Examination of Energy Managers and Energy Auditors – Request for approval / simplification of certain existing provisions.

The Executive Committee discussed the three sub-sectors as listed in the agenda and approved only sub-proposal No. (ii) – up gradation of Energy Manager Certification to Energy Auditor Certification for those candidates who fulfill eligibility criteria for writing energy auditor certification as per the guidelines as laid in the proposal. However this will be applicable for Certified Energy Manager candidates of the examination 2005 and onwards.

Item No.8: 3rd National Certification Examination for Energy Managers and Energy Auditors 2006 – Approval for registration of candidates other than Indian nationality.

It was proposed that Ministry of Power may write to Ministry of External Affairs for their concurrence on the issue of registration of candidates other than Indian nationality in the National Certification Examination for Energy Manager and Energy auditors, being conducted by BEE. It was suggested that BIMTEC only could be included in this. BEE would permit the candidates from these countries only after the approval of MEA is obtained.

Item No.9: Organisation of International Conference on Energy Efficiency.

The Executive Committee approved the proposal of organizing international conference of Energy Efficiency by BEE in the month of October, 2006. BEE will initiate action on this accordingly.

Item No.13: ERDA's proposal on "Accelerated Ageing Study of Compressor Used for Domestic Refrigerators and Air-Conditioners" – Request for approval.

Annexure

LIST OF PARTICIPANTS

Ministry of Power

1. Shri R.V. Shahi, Secretary, Ministry of Power - Chairman

2. Shri Gireesh. B. Pradhan, Joint Secretary, Ministry of Power – Member
3. Shri Mrutunjay Sahoo, Joint Secretary & Financial Advisor, Ministry of Power

Other PSUs/ Ministries

4. Shri Rakesh Nath Chairman, CEA - Member
5. Shri R.K. Dus, Director, PCRA
6. Shri S.C. Bose, Director I/C PCRA
7. Shri P. Saxena Director, MNES

Bureau of Energy Efficiency

8. Shri V.S. Verma, Director General, Bureau of Energy Efficiency & Member (Planning), CEA – **Member Secretary**
9. Shri Akesh Taneja, Secretary, Bureau of Energy Efficiency
10. Shri Satish Sabharwal, Energy Economist, BEE
11. Shri K.K. Chakarvarti, Energy Economist, BEE
12. Shri G. Pandian, Energy Economist, Bureau of Energy Efficiency
13. Shri Arun Kumar Saigal, Finance & Accounts Officer, BEE
14. Shri S.S. Talwar, Consultant, IGEN
15. Shri S. Ramaswamy, Thrust Area Manager, BEE

Minutes of the 7th Meeting of the Executive Committee of Bureau of Energy Efficiency held on 1st May 2006 at 5.00 P.M. at 1st Floor Conference Room, Shram Shakti Bhawan

1. List of participants is at annexure.
2. While welcoming the members of the 7th Executive Committee meeting, Director-General-Bureau of Energy Efficiency (BEE) informed the Committee that BEE has been successful in convincing Miss Sania Mirza, Ace Tennis player to endorse the Energy Conservation Campaign free of charge, The two sports which were prepared by M/s. Super Ads were shown to the Committee. The Committee expressed its appreciation on the same. Chairman, Executive Committee desired that the name of Miss Sania Mirza should also figure in the advertisement. It decided to begin telecast of the advertisement on various TV channels immediately upon approval & incorporation of the amendments suggested.

Agenda Item No.5: Conservation in schools

Awareness Programme on Energy

The Committee approved the proposal given by TERI for replication of pilot project in different zones in India to be implemented at an estimated cost of Rs. 48.24 lakhs in 10 cities which would be completed in 15 months.

Agenda Item No.10: Multi Media Publicity – Instructions from DAVP

It was decided that BEE would bring out the difficulties experienced in releasing its advertisements through DAVP. In case, the advertisements are to be issued at short notice, the BEE would engage the services of empanelled advertising agencies at DAVP rates.

Agenda Item No.17: Bureau of Energy Efficiency (the form and manner for submission of report on the status of energy consumption by the Designated Consumers) Rules, 2006.

The draft Rules were approved by the Committee.

Agenda Item No.18: National certification examination for Managers and Energy Auditors – Proposal for retaining services of National Productivity Council.

The proposal to retain services of NPC for conducting National Certification Examination for Energy Manager and Energy Auditors, for a further period of 3 years w.e.f. Examination-2007 was considered and approved by the Committee.

Annexure

List of Participants in the 7th Minutes of the Executive Committee of the Bureau of Energy Efficiency held on 1st May 2006 at 5.00 P.M. at 1st floor Conference Room, Ministry of Power Shram Shakti Bhawan, New Delhi.

- | | | | |
|----|--|---|------------------|
| 1. | Shri R.V. Shahi Secretary (Power) | - | Chairman |
| 2. | Shri Rakesh Nath, Chairperson, CEA | - | Member |
| 3. | Shri Gireesh B. Pradhan, JS (EC), MOP | - | Member |
| 4. | Shri M. Sahoo, JS & FA, MOP | - | Member |
| 5. | Shri P. Saxena, Director, MMES
(Representing Shri Sunil Khatri, JS, MNES) | - | Member |
| 6. | Shri R.C. Bose, General Manager, PCRA
(Representing Executive Director, PCRA) | - | Member |
| 7. | Shri V.S. Verma, DG, BEE | - | Member-Secretary |

Special Invitees

1. Shri D.C. Srivasvata, Director (EC), MOP
2. Shri Akesh Taneja, Secretary, BEE
3. Shri Satish Sabharwal, Energy Economist, BEE
4. Shri K.K. Chakarvarti, Energy Economist, BEE
5. Shri G. Pandian, Energy Economist, BEE
6. Shri K. Vasudevan, Under Secretary, MOP
7. Shri S.K. Tyagi, Sr. Manager, BEE
8. Shri A. Freitas, F&AO (Offg.), BRR
9. Shri S. Ramaswamy, IGEN
10. Shri S.S. Talwar, IGEN
11. Shri Tanmay Tathaghat, UNDP-IIEC

Minutes of the 8th Executive Committee Meeting of Bureau of Energy Efficiency(BEE) held on 19th December 2006 at 4.00 P.M. at Committee Room, Shram Shakti Bhawan, New Delhi.

1. List of participants is at Annexure.
2. At the outset, Secretary (Power) & Chairman, Executive Committee advised that BEE should adopt a methodology for assessing the savings in energy and to give a presentation on methodology for saving. It was also decided that unit-wise data on energy consumption trends in specific sectors should also be prepared..

Agenda No.2 Work Plan of BEE and manpower requirement.

The Executive Committee approved the following additional posts for BEE and noted the BEE work Programme 2007-08.

1. Senior Energy Economist	-	01
2. Energy Economist	-	03
3. Asstt. Energy Economist	-	03
4. Public Relation/Media Officer	-	01
5. Administrative Assistant	-	01

Agenda No.5 National Level Certification Examination for Energy Managers and Energy Auditors – Proposal for Constitution of Board of Examination.

The proposal was approved and it was decided that DG, BEE to write to Chairperson, CEA for nominating one member to the Board of Examination.

Agenda No.6 Proposal for conduct of Viva Voce for Energy Auditor Examination.

It was decided to abolish the process of viva voce examination for supplementary as well as fresh candidates registering for energy auditor examination. Accordingly, Bureau may take necessary action and issue corrigendum/public announcement in this regard.

Agenda No.7 Energy Manager Certification to the candidates who were registered in 2004, and have been declared passed in the first 3 paper of Energy Auditor Certification Examination.

The proposal was not approved.

Agenda No.8 Proposal for 2nd phase of Accreditation of Energy Auditors

The proposal for initiating the second phase of accreditation of energy auditors was approved as contained in the agenda. It was further decided that DG, BEE would put up the proposal of constitution of the accreditation committee, i.e. Chairman, Members and terms of reference of the committee for approval of the Chairman, Executive Committee.

Agenda No.9 Strengthening of Selected State Designated Agendas (SDAs)- Financial assistance from GTZ-IGEN to Bureau of Energy Efficiency (BEE) for onward transmission to selected SDAs.

It was decided that the criteria for proposed selected, and the short-listed proposals of the State Designated Agencies should be put up before the proposal screening committee at the earliest.

Minutes of the 9th Meeting of the Executive Committee of Bureau of Energy Efficiency held on 26th April, 2007 at 10 AM in CR First Floor. Shram Shakti Bhawan

1. List of participants is at the Anenxure.

2. **Agenda Item No. 1: ATR on the 8th Meeting of ECB**

Director General informed the progress on the decisions taken in the last EC meeting and that no action is pending with regard to the implementation. The same was noted by the Executive Committee.

7. **Agenda Item No.6: Engagement of Consultant for Setting up of energy Conservation Information Center (ECIC)**

The proposal was noted by the Executive Committee. It was decided that the two step process proposed may be compressed into one with the bidders being asked to prevail about the architecture as well as the cost. The need for a Consultant to prepare a RfP document may be done away with. The technical proposals may be evaluated by a technical committee with experts from IIT Delhi and other organizations having experience in the field of IT.

10. Agenda Item No. 9: MoU between BEE and PCRA

The proposal was noted by the Executive and was agreed to in principle. The EC directed DG, BEE and ED, PCRA to work out the detailed terms of such engagement.

13. Agenda Item No. 12: In principle approval to study the possibility of corporatisation of BEE.

The proposal was approved by the Executive Committee with the direction that a legal opinion be first taken from a reputed legal agency on the legal position about the corporatisation of BEE. The Executive Committee may be apprised of such opinion for proceeding further on this matter.

14. Agenda Item No. 13: Conduct National Level Certification Examination for Energy Managers and Energy Auditors twice a year.

The proposal was approved by the Executive Committee.

15. Agenda Item No. 14: Constitution of Accreditation Committees (2nd Phase)

The proposal was considered by the Executive Committee and was decided that a panel of experts be formed by the BEE of the names proposed in the agenda. Committee for accreditation may be formed keeping in view the fact that there should not be any conflict of interest. Further, appropriate level of representation from the proposed organisation may be decided in advance.

Annexure

List of Participants in the 9th Executive Committee Meeting of Bureau of Energy Efficiency held on 26th April 2007 at 10.00 A.M. at Committee Room, Shram Shakti Bhawan, New Delhi.

- | | | | |
|----|--|---|----------|
| 1. | Shri Anil Razdan, Secretary (Power) | - | Chairman |
| 2. | Shri Harish Chandra, Senior Advisor, MOP | - | Member |
| 3. | Shri V.S. Verma, Member (Planning), CEA | - | Member |

- | | | | |
|----|--|---|---------|
| 4. | Shri M. Sahoo, JS & FA, MOP | - | Member |
| 5. | Shri Ravi Sapoor, Joint Secretary & ED, PCRA | - | Member |
| 6. | Shri V.K. Bhargava, Director (PS)
(Representing Executive Director, PCRA) | - | Member |
| 7. | Dr. R.N. Sawant, Director, MNRE
(Representing JS, MNRE) | - | Member |
| 8. | Dr. Ajay Mathur, Director General, BEE
Secretary | - | Member- |

Special Invitee

9. Shri D.C. Srivastava, Director (EC), MOP
10. Shri Saurabh Kumar, Secretary, BEE
11. Shri K.K. Chakarvarti, Energy Economist
12. Shri G. Pandian, Energy Economist

Minutes of the 10th Meeting of the Executive Committee of Bureau of Energy Efficiency held on 16th July, 2007 at 3 PM in CR First Floor. Shram Shakti Bhawan

1. List of participants is at the Annexure.

2. Agenda Item No. 1: ATR on the 9th Meeting of ECB

Director General informed the progress on the decisions taken in the last EC meeting and that no action is pending with regard to the implementation. The same was noted by the Executive Committee. It was advised that BEE and PCRA must initiate exercise for standards and labeling for vehicles with particular emphasis on fuel efficiency norms for idling of engine. Also, defence production agencies, like Ordnance Factories need to be sensitized about fuel efficient vehicles. Issues like kerosene efficient fuel stoves, double walled cooking vessels that PCRA is already engaged in, must be included as part of the MoU between BEE and PCRA.

3. Agenda Item No. 2: Hiring of Independent Agency for Monitoring and Evaluation (IAME)

The Executive Committee perused the recommendations of the Evaluation Committee set up by it during the last meeting comprising of DG, BEE, JS&FA (Power) and ED, PCRA and approved the hiring of M/s. RITES Ltd. as IAME under the Standards & Labeling Programme.

4. Agenda Item No. 3: Hiring of Media Consultant (MC)

The Executive Committee perused the recommendations of the Evaluation Committee set up by it during the last meeting comprising of DG, BEE, JS&FA (Power) and ED, PCRA and approved the hiring of M/s. Span Communication as MC under the Standards & Labeling Programme.

5. Agenda Item No. 4: Bachat Lamp Yojana (BLY)-Preparedness and next steps

The issue was deliberated at length and the road map proposed was approved. It was suggested that in preparation of the project document, it must be made unambiguous that this is for lamps to be sold under the project and that too for non-private use. The proposed road should be scheduled after the project document is validated by DOE. Efforts to involve other private distribution retail chains must also be explored along with post offices, oil sector networks, school (through the State Education Departments) particularly for rural areas etc. The logistics of sale, distribution and monitoring mechanism must be finalized within a week and the meetings with two states i.e. Haryana and Andhra Pradesh must be convened soon thereafter.

12. Agenda Item No. 11: Deliverable Action Plan of BEE for 2007-08

The progress made by BEE with regard to the deliverable action plan was noted with

satisfaction by the Executive Committee. Under the S&L programme, consumer satisfaction feedback must be added in the programme. Also, data regarding the penetration of labeled products in the market must also be collated. BEE must encourage the manufactures to attach energy meters in high energy consumption devices under the S&L programme.

14. Agenda Item No. 13: Energy Manager Certification for 2004 candidates.

The Executive Committee considered the agenda and decided that the matter may first be examined in consultation with the Ministry of Law.

Annexure

List of Participants in the 10th Executive Committee Meeting of Bureau of Energy Efficiency held on 16th July 2007 at 3.00 P.M. in the 1st Fkoor Conference Room, Shram Shakti Bhawan, New Delhi.

1. Shri Anil Razdan, Secretary (Power) - Chairman

- | | | | |
|----|---|---|---------|
| 2. | Shri V.S. Verma, Member (Planning), CEA | - | Member |
| 3. | Shri Gireesh B. Pradhan, JS (ES), MOP | - | Member |
| 4. | Shri Rajesh Verma, JS & FA, MOP | - | Member |
| 5. | Shri S.M. Bhatia, Deputy Director General (T)
Bureau of Indian Standards | - | Member |
| 6. | Dr. R.N. Sawant, Director, MNRE
(Representing JS, MNRE) | - | Member |
| 7. | Dr. Ajay Mathur, Director General, BEE
Secretary | - | Member- |

Special Invitee

9. Shri D.C. Srivastava, Director (EC), MOP
10. Shri Saurabh Kumar, Secretary, BEE
11. Shri K.K. Chakarvarti, Energy Economist
12. Shri G. Pandian, Energy Economist

CORRIGENDUM

This has reference to minutes of the Tenth Meeting of the Executive Committee of the Bureau of Energy Efficiency circulated vide BEE's letter of even number dated 24.07.2007. The following points, which have been left inadvertently, may also be read with Agenda Item No. 1 and 10:

1. Agenda Item No.1 – The matter regarding hovering of Aero-planes over airports due to non-availability of landing permission on account of Air traffic congestion may be taken up with the Airport Authority of India for re-scheduling the flights so as to avoid fuel wastage. Study of idling-stop device for improving energy efficiency in vehicles should be taken for promoting of its wise spreading use.
2. Agenda Item No.10- Not more than 3 multilateral / bilateral agencies should be involved in a particular field for international cooperation. Various types of buildings should be given to different agencies for energy efficiency under international cooperation.

Minutes to the 11th Meeting of the Executive Committee of Bureau of Energy Efficiency held on 21st November, 2007 at 11AM in CR First Floor, Shram Shakti Bhavan

1. List of participants is at the Anenxure.

4. Agenda item No.3: Hiring of Retainer Consultant for Ag. DSM

Scheme

The Executive Committee perused the recommendations of the Evaluation Committee and approved the hiring of M/s. Price Waterhouse Coopers as retainer consultant for Ag DSM at a lumpsum rate of Rs.96.46 lakhs for a period of two years form the date of signing contract.

6. Agenda item No.5: Status of Bachat Lamp Yojana

The proposal was considered by the Executive Committee. With regard to the appointment of monitoring agency, it was stated that the L1 party must be asked to provide detailed test results from an accredited laboratory. The party must be asked to ensure replacement of failed meters during the five years of operation. Further, another party that has indicated providing meters in 2000000000 weeks must be called and asked to reduce the time period. In case they agree to this, their financial bid may also be opened. The Executive Committee noted that this is for the first time that such an exercise has been undertake in India. The BIS representative confirmed that they still do not have a standard for SSIM card based meters. Given that the first two pilots in Hatayana and A.P. are likely to be ready by end December,we have to accept proposal of L-1, namely M/S. Joshi Electronics Ltd. However, the second party should be asked to match the price of L-1 (In case it is higher), if it agrees to supply meters as per our requirements. BEE must make efforts to ensure that other players must also become capable of providing such meters as the programme has to be replicated all over the country. The Executive Committee capabilities of the vendor, to satisfy itself of the capacity to deliver 800 meters that are required for the first two pilots in the timelines indicated. Formal contract with them may be signed only after such satisfaction has been duly recorded.

Annexture

List of Participants of the 11th Executive Commotee Meeting of Bureau of Energy Efficiency held on 21st November 2007 at 11.00 AM. in the 1st Floor Conference Room, Shram Shakti Bhawan , New Delhi.

- | | | | |
|----|--|---|----------|
| 1. | Shri Anil Razdan, Secretary (Power) | - | Chairman |
| 2. | Shri V.S. Verma, JS(DS), MOP | - | Member |
| 3. | Shri Devender Singh ,JS &FA, MOP | - | Member |
| 4. | Ms. Gairi Singh, Joint Secretary
Ministry of New & Renewable Energy | - | Member |
| 5. | Shri. Ravi Kapoor, Executive Director
P.C.R.A. | - | Member |
| 6. | Shri P.K.Mukerjee , | | |

- (Representing Dy. Director Genetal, BIS) - Member
7. Dr. Ajay Mathur, Director General, BEE - Member-Secretary

Special Invitee

8. Shri Rajeev Verma, Director(Fin), MOP
9. Shri Saurabh Kumar, Secretary BEE
10. Shri. K.K. Chakarvarti, Energy Economist, BEE
11. Shri. G.Pandian, Energy Economist, BEE
12. Shri. Sanjay Seth, Energy Economist BEE

Minutes to the 12th Meeting of the Executive Committee of Bureau of Energy Efficiency held on 12th March, 2008 at 3PM in NPMU Second Floor, Shram Shakti Bhavan

2. List of participants is at the Anenxure.

4. Agenda Item No. 3: Setting up of BEE Service Ltd.

The Executive Committee perused the agenda and desired that legal opinion may be sought in the issue of possible conflict of interest, and between the role of BEE as a quasi regulatory and facilitating agency and also implementing agency (through BEESL). The suggestions of CPSUs may also be obtained regarding structure and business model of BEESL.

5. Agenda Item No. 4: Rating of ESCOs by CRISIL/ ICRA

The issue was deliberated at length and it was decided that BEE must take up accreditation of ESCOs by these agencies to begin with. The accreditation process must be inclusive so as to attract new entrant ESCOs as well. The weightage for technical capabilities must be increased for this purpose and that of track record, maket position etc. could be reduced. The accreditation may be done by agencies like CRISIL, ICRA, Fitch or CARE by calling for financial proposals from them on a competitive basis. Rating exercise may be taken up after a year of accreditation. The agenda may be resubmitted to the Executive Committee in the next meeting.

5. Agenda Item No. 5: Guidelines for support for ESCO based energy efficiency in Government project in Government sector

The proposal was considered by the Executive Committee and approved subject to the following modifications:

- (a) The coverage of government buildings must include large buildings which are visible and can have a demonstrative impact- like large not exceed 2% of the annual electricity bill of the building.

9. Agenda Item No. 8: Status of Standards & Labeling (S&L) Programme

The status of the S&L programme was noted by the Executive Committee. It was desired that geysers and foam heaters may also be added to the list of equipments to be covered under the scheme.

12. The Executive Committee also desired that quarterly physical and financial targets including megawatt and / or units of energy saved be fixed for next year and for the XI Plan period at the earliest.

BEE should sign a MOU with MOP and SDAs be asked to sign MOUs with BEE for next year before end of April, 2008.

Annexure

List of Participants of the 12th Executive Committee Meeting of Bureau of Energy Efficiency held on 12th March 2008 at 3.00 P.M. in the 2nd Floor Conference Room, Shram Shakti Bhawan , New Delhi.

- | | | | |
|----|---|---|---------|
| 1. | Shri Anil Razdan, Secretary (Power) | - | Chirman |
| 2. | Shri V.S. Verma, JS(DS), MOP | - | Member |
| 3. | Shri Devender Singh ,JS &FA, MOP | - | Member |
| 4. | Shri. Rajesh Verma, JS &FA, MOP | - | Member |
| 5. | Shri S.P. Goel, Director (I/charge) | - | Member |
| | and Shri Kapil Mathur, Addl. Director(FA) | | |
| | Representing Executive Director PCRA | | |
| 6. | Shri P.K.Mukerjee , | | |
| | (Representing Dy. Director Genetal, BIS) | - | Member |

7. Dr. Ajay Mathur, Director General, BEE - Member-Secretary

Special Invitee

13. Shri A.A.Tazir, Deputy Secretary (EC), MOP

14. Shri Saurabh Kumar, Secretary BEE

15. Shri. K.K. Chakarvarti, Energy Economist, BEE

16. Shri. G.Pandian, Energy Economist, BEE

17. Shri. Sanjay Seth, Energy Economist BEE

18. Shri. K. Vasudevan, US (EC),

IAEMP NEWS

IAEMP presents RDB-09

An Event on “Go Green” on Oct 25, 2009 in Bangalore.

Rang De Basanti-09, is an initiative to reach out to common man and to inspire each and everyone to take up Go Green initiatives. It will be a platform where Energy Experts from different Circles will share the Opportunities and Initiatives that can be taken in Go Green. Objective is to involve people and the youth in taking Action for Going Green.

As we see, many people talk about Go Green, however they are not sure what action is to be taken. Rang De Basanti 09 is an opportunity for everyone to express their Creativity by means of Sketches, Drawings and Colours. This is to bring clarity, focus and involvement by each of the participants. Creativity, Innovation and Entrepreneurship are the key words to summarize it all.

Event details:

- Event Name: Rang De Basanti 09 (Paint it Green)
- Date: 24 October 2009, Saturday
- Occasion: International Day of Climate Action
- Activity 1: Panel Discussion on Green Business Opportunities
- Activity 2: Introduction of HEMP, Home Energy Management Program of IAEMP
- Activity 3: Poster Drawing Competition
- Speakers: Experts from TiE CleanTech SIG, IAEMP & Industry
- Other Activities: Presentations and Display by Sponsors and NGOs
- Target Group - Young Professionals, Post Graduate and Under Graduate Students

For details, contact: Vinod Durge - +91 9845 292 557
vinoddurge@gmail.com

We invite all of you to join hands by contributing and participating in Rang De Basanti 09 to make it a big success.

UPCOMING EVENTS

**Second Data Centre Green Tech Conference & Expo and
the fourth Data Centre Strategics Conference & Expo
at**

Leela Palace, Bangalore

November 6, 2009.

www.dcstrategics.com

www.dcgta.com

**Conference on “Gas in India: New Market Dynamics, E&P and
Regulation”**

November 17-18, 2009

Hyatt Regency, New Delhi.

Email: conferencecell@indiainfrastructure.com

Balance of systems and Balance of plants Conference and Expo

San Diego USA

December 3-4, 2009

www.newsolartoday.com/bosbop

EUEC 2010: 13th annual energy and environmental conference and
expo.

February 1-3, 2010

Phoenix, AZ, USA

www.euec.com

Rewnewable Energy World Conference & Expo North America 2009

Austin Convention Center, Austin, TX, USA

February 23-25, 2010

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Share your experience

Do you have an area of expertise in energy management? Have you solved a difficult problem or have an interesting case study? Do you want to share a joke with others? Or just have a word of appreciation for this issue. Share your knowledge with others and promote yourself too, by writing to **The Urja Watch**.

You may also tell us about upcoming energy-related events in your area. Be sure to mention the title of the event, organizers, dates, venue, city, and contact information to get more details of the event.

Please note the following points while making your submissions:

- ❖ Articles must be original, in electronic version, 500 words or less. If you are using material from external sources, please acknowledge them.
- ❖ Please include contact information (full name, title/organization, phone numbers, and email ID) with your submission.
- ❖ Articles should be in MS word, single spaced, with easily readable font, preferably Arial size 12. Photos should be of high resolution.
- ❖ Please e-mail your submissions to The Editor, “The Urja Watch” at tellsubi@gmail.com
- ❖ There are no deadlines for submissions. You may submit articles anytime.
- ❖ We reserve the right to edit, rewrite or reject any article.

We Need Your Feedback Too!

Please write your views and suggestions to the editor at: tellsubi@gmail.com
Letters must include the writer’s name, address, phone and email ID.

We appreciate your feedback and thank you for your support.

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