A monthly newsletter of
Indian Association of Energy Management Professionals

THE URJA WATCH

March 2009, Vol. II/Issue 9

It is about "Conscience Keeping on Energy Matters"

CLEAN DEVELOPMENT MECHANISM (CDM) AND CARBON TRADING

FOCUS ON
CLEAN DEVELOPMENT MECHANISM (CDM) AND CARBON TRADING

What's inside…

From the Editor's Desk...

CDM AND THE BOOMING CARBON BUSINESS

Dear Readers,

In 1998, when the Kyoto Protocol introduced the innovative concept of Clean Development Mechanism (CDM), very few realized that it will open up a new era of green economy around the globe. Ten years later, we have witnessed an amazing growth in CDM projects and a booming business in carbon credits.

So far, Indian industry has responded positively to the CDM initiative and has attracted global attention with an enviable number of green projects. In 2008, one third of the total CDM projects registered with the UN FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC) were from India. Globally, trading in carbon credits that are the CDM's currency more than doubled last year. Estimates indicate that the global carbon trading is likely to touch $150 Billion by 2012. Judging by current trends, India seems well-placed to play a key role in CDM and carve a large slice of the CDM pie.

The number of CDM projects that have come forward for vetting and approval by the UNFCCC is staggering. According to a press release from UNFCCC in February'09, there were1390 (more as of now) registered CDM projects in 53 developing countries, and about another 3000 projects in the project registration pipeline.

Why are we doing so much work on CDM projects and how do we benefit economically from them?

Green projects help to combat global climate change. Many of them offer attractive paybacks to the investor. Under the CDM, projects that reduce greenhouse gas emissions in developing countries can earn saleable Certified Emissions Reduction (CER) credits. These CERs can then be globally traded like company shares and used by countries with an emission reduction commitment under the Kyoto Protocol to meet a part of that commitment. The CDM is expected to generate more than 2.9 billion CERs by 2012, each CER being equivalent to one tonne of carbon dioxide.

In short, engaging in CDM projects makes economic sense considering the rewards of carbon credits and the possibility of creating more jobs.

However, winning the rewards from CDM is not an easy job. Proposals for CDM emission reduction projects must first qualify through a system of registration and issuance process. The process is designed to ensure that the emission reductions are additional to what would have occurred without the project. The mechanism is overseen by the CDM Executive Board.

The National Clean Development Mechanism Authority, constituted by the Central Government, receives project proposals for evaluation and approval as per the guidelines and general criteria laid down in the relevant rules and modalities pertaining to CDM. Until mid-February'09, Indian government had cleared 1,174 projects while 748 were pending for registration with the international agency.

So far, so good. How does the future look like for CDM?

The CDM process is already burdened with bureaucratic delays – presumably because of the unexpected high volume of projects. About 29 percent of projects that are registered or undergoing review are idling, the International Emissions Trading Association said in its 2008 *State of the CDM* report. In the recent past, the period for registration of carbon credit has gone up from six months to about two years in the recent past. With such long delays, projects costs are likely to escalate and make the CDM less attractive to investors.

CDM controls are tightening. The rate of rejections for CDM projects in India is over 40 percent - one of the highest in the world.

In recent months, CDM project investors are uneasy over falling prices of carbon credits, possibly caused by the economic slowdown around the world.

Given the changing circumstances around the world, CDM may have to transform itself through appropriate reforms to continue its successful journey into the future. I welcome your thoughts.

Energetically,

S.Subramanian
Editor

Letters to the Editor

Dear Editorial Team,

SUB: MY APPRECIATION FOR URJA WATCH FEBRUARY' 2009

I appreciate and congratulate the editorial team for a good work done. From editorial to upcoming events, all are nicely written and presented with good contents.

Shri R.V. Simha's Article gives in depth Mathematical treatment. Information on Air conditioned shirt and bed adds to latest information in India.

Checklist has added good beauty. Congratulations to the team and authors.

R.A.Sharma
Managing Director, Master Consultancy & Productivity Pvt. Ltd.
Certified Energy & Safety Auditor, Hyderabad

Dear Mr. Subramanian,

It was a pleasant surprise to see one of my articles "High Delta T Chilled Water Systems" in the February 2009 issue of The Urja Watch - the issue dedicated to Air Conditioning. Yesterday, I also saw a mail from one of the members of IAEMP, who had noticed it. It will be interesting to find out if there will be anyone else taking notice of the article.

On 21-22 February 2009, I presented a paper at AcreConf-2009, an International Seminar, organized by Delhi Chapter of ISHRAE in association with ASHRAE India Chapter. I have attached the paper and presentation. Conditions close to air conditioning comfort can be achieved by the Evaporative Cooling at lower cost but even more importantly at energy penalty which would be over 70% lower is its obvious attraction for energy professionals in particular.

Let me express my appreciation of your (and Mr. Sood's) gesture in including my article in your vibrant and esteemed Journal.

Regards,

R.V.Simha

PROCEDURES FOR REGISTRATION OF A PROPOSED CDM PROJECT ACTIVITY (Version 02)

Editor's Note: Readers might find the following information useful. It is reproduced from http://cdm.unfccc.int/Reference/Procedures/reg_proc01_v02.pdf with thankful acknowledgment to UNFCCC.

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1. In accordance with paragraph 40 (f) of the CDM modalities and procedures (CDM M&P), the request for registration of a proposed CDM project activity shall be in the form of a validation report which includes the project design document, the written approval of the host Party and an explanation of how the Designated Operational Entity (DOE) has taken due account of public comments received on the CDM-PDD.

2. A designated operational entity shall submit its validation report using the "CDM project activity registration and validation report form" (F-CDM-REG) (attached to these procedures) to request for registration of a proposed project activity.

3. In order to ensure transparency and efficiency of the registration process:

(a) A request for registration will only be processed after the secretariat has determined that all information and documentation requested in the registration form has been provided by the DOE;

(b) The date of receipt of a request for registration is the date when the deposit of the registration fee indicated in the registration form has been received by the secretariat;

(c) A request for registration" (as defined in paragraph 40 (f) of the CDM modalities and procedures) shall be made publicly available through the UNFCCC CDM web site (either by a link to the DOE web site or by being directly posted) for a period of eight (8) weeks.

The secretariat shall announce a request for registration of a proposed CDM project activity on the UNFCCC CDM web site and in the CDM news facility. The announcement shall specify where the request for registration can be found, the name of the proposed CDM project activity and the first and last day of the eight-week period. The secretariat shall notify the DOE requesting a registration when and where the request for registration is posted.

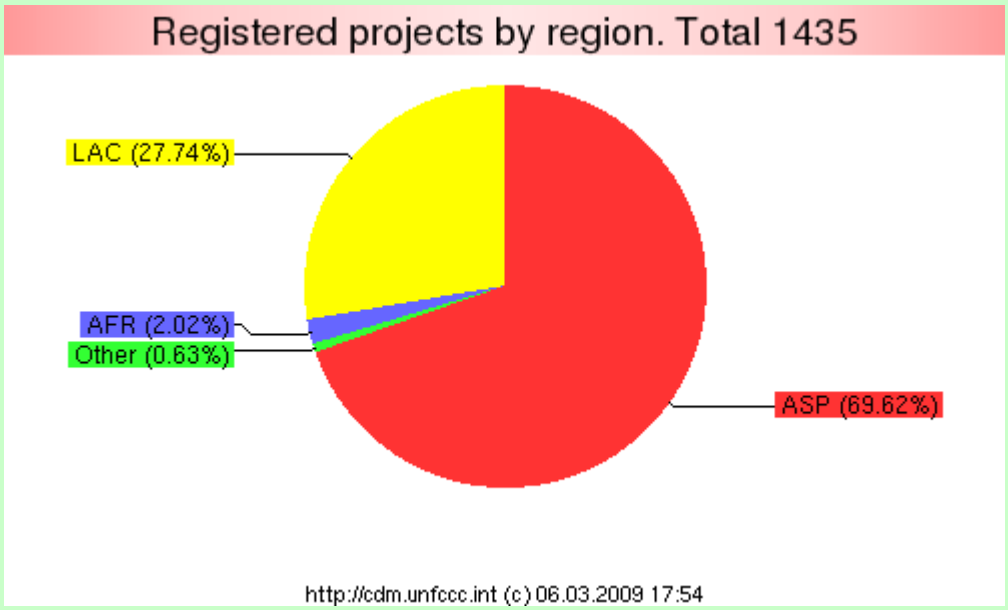
(d) Unless there is a request for review, a request for registration shall, after eight weeks, be marked in the UNFCC CDM web site as "registration completed" and the corresponding proposed CDM project activity and related public documents recorded/displayed as registered.

CDM Statistics (As on March 06, 2009)

Editor's Note: The CDM statistical information is reproduced with thankful acknowledgment to UNFCCC/CDM website: http://cdm.unfccc.int/Statistics

	Annual Average CERs*	Expected CERs Until end of 2012**
CDM project pipeline: > 4200 of which:	N/A	> 2,900,000,000
--1435 are registered	267,917,339	> 1,480,000,000
--56 are requesting registration	6,721,239	> 20,000,000

** Assumption: All activities deliver simultaneously their expected annual average emission reductions*
*** Assumption: No renewal of crediting periods*



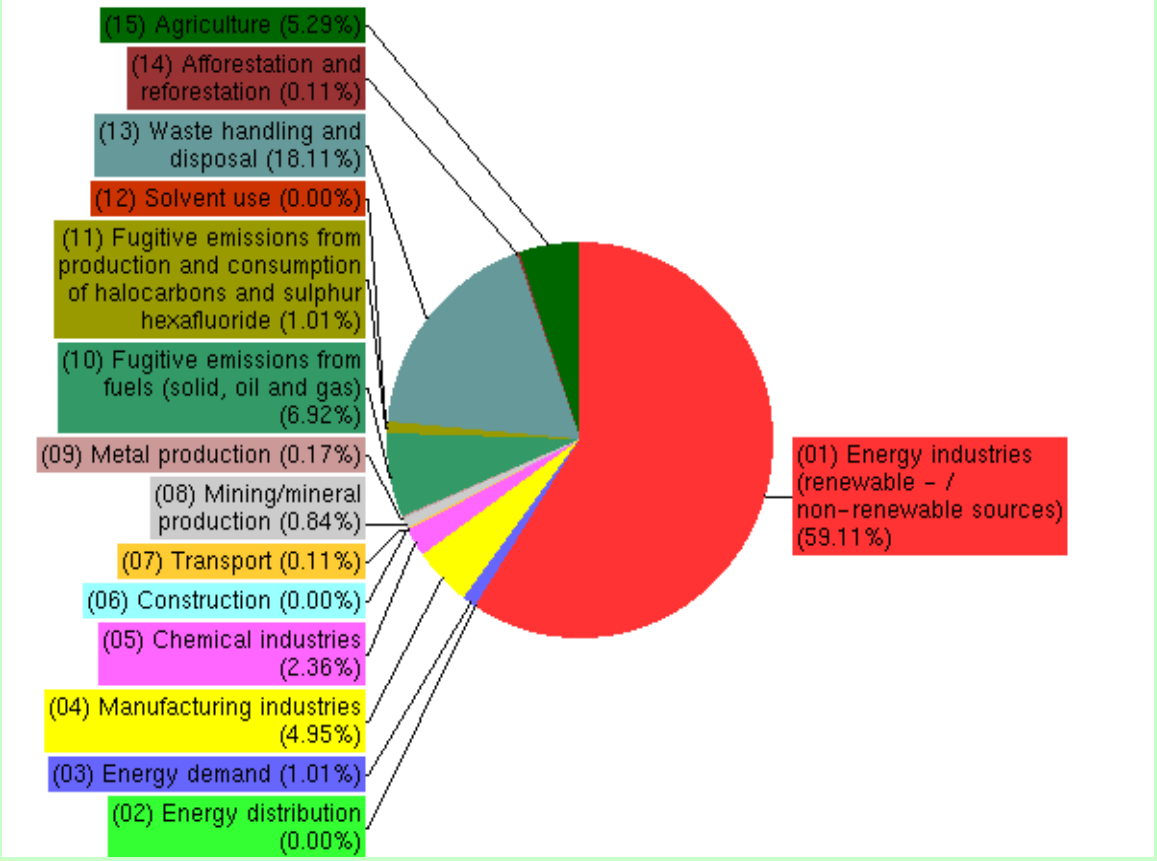
Region	Number of projects
NAI-Africa	29
NAI-Asia and the Pacific	999
NAI-Other	9
NAI-Latin America and the Caribbean	398

Distribution of registered project activities by scope

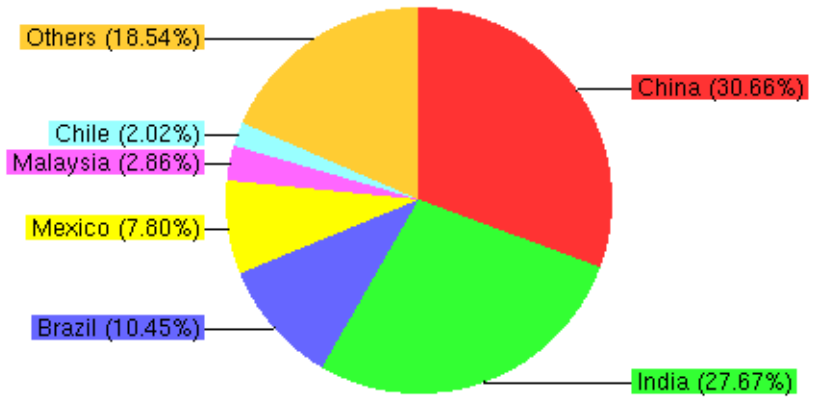
Sectoral Scope*	Registered Projects
(01) Energy industries (renewable - / non-renewable sources)	1051
(02) Energy distribution	0
(03) Energy demand	18
(04) Manufacturing industries	88
(05) Chemical industries	42
(06) Construction	0
(07) Transport	2
(08) Mining/mineral production	15
(09) Metal production	3
(10) Fugitive emissions from fuels (solid, oil and gas)	123
(11) Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	18
(12) Solvent use	0
(13) Waste handling and disposal	322
(14) Afforestation and reforestation	2
(15) Agriculture	94

** Note that a project activity can be linked to more than one sectoral scope*

Distribution of registered project activities by scope



Registered project activities by host party. Total: 1,435



Registered project activities by host party

Country	Number Of Projects
Argentina	14
Armenia	4
Bangladesh	2
Bhutan	1
Bolivia	2
Brazil	150
Cambodia	3
Chile	29
China	440
Colombia	14
Cuba	1
Costa Rica	6
Cyprus	2
Dominican Republic	1
Ecuador	13
Egypt	4
El Salvador	5
Fiji	1
Georgia	1
Guatemala	8
Guyana	1
Honduras	14
India	397
Indonesia	23
Israel	13
Jamaica	1
Jordan	1
Kenya	1
Lao People's Democratic Republic	1
Malaysia	41
Mexico	112
Mongolia	3
Morocco	4
Nepal	2
Nicaragua	3
Nigeria	2
Pakistan	2
Panama	5
Papua New Guinea	1
Peru	16
Philippines	20
Qatar	1
Republic of Korea	24
Republic of Moldova	4
Singapore	1
South Africa	14
Sri Lanka	4
Thailand	13
Tunisia	2
Uganda	1
United Republic of Tanzania	1
Uruguay	3
Viet Nam	3
Total	1435

IAEMP NEWS

Press Coverage of "Business Interaction Meet on Energy Efficient & Renewable Energy Products and Services" and 4th AGM of IAEMP held at Bhopal on 14th and 15th March'09 is reproduced below along with some photographs of the event

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2 Hindustan Times Live Bhopal Monday, March 16 2009

Energy saving gadgets displayed at meet

HT Correspondent
Bhopal, March 15

BHUPAL SINGH from Ghaziabad was unanimously elected new national president of the Indian Association of Energy Management Professionals (IAEMP) on the concluding day of two-day business interaction meet on 'Energy Efficient and Renewable Energy Products' at Ravindra Bhavan here on Sunday. During the first session of the concluding day, several energy saving products and gadgets were demonstrated.

The body held its annual general meeting during the seminar and elections to the new executive body were also conducted. Sunil Sood, ex-president, welcomed the new body and its members. Besides Singh, S Khandekar was elected vice-president and Sunil Biswal secretary, along with new central council of members.

Post elections, the executive committee members reviewed various byelaws. Certain amendments and introductions were also reviewed, a press release said.

PHOTO/HT

Newly elected office-bearers of the Indian Association of Energy Management Professionals.

पत्रिका 21

रविवार, 15 मार्च, 2009

शनिवार को रवीन्द्र भवन में कार्यशाला में भाग लेते विशेषज्ञ।

एनर्जी सेविंग के तरीकों पर चर्चा

जस्ट रिपोर्टर

भोपाल। इंडियन एसोसिएशन ऑफ एनर्जी मैनेजमेंट प्रोफेशनल्स की ओर से आयोजित दो दिवसीय कार्यशाला की शुरुआत शनिवार को हुई। रवीन्द्र भवन में आयोजित कार्यशाला के पहले दिन एनर्जी एफिसिएंट एंड एनर्जी प्रोडक्ट्स सर्विस विषय पर चर्चा की गई। कार्यशाला में सौर ऊर्जा से चलने वाले वाटर हीटर, लाइट्स व गैजेट्स के बारे में बताया गया। आईएईएमपी के अध्यक्ष सुनील सूद ने बताया कि बिजली से चार्ज होने वाले गैजेट्स में सौर ऊर्जा का प्रयोग किस तरह किया जा सकता है। उन्होंने एनर्जी कन्जर्वेशन एक्ट - 2001 को लागू करने के लिए प्रतिवेदन भी प्रस्तुत किया। कार्यशाला में ऊर्जा विकास निगम के मुख्य अभियंता वीके पटेल ने राज्य शासन की विभिन्न योजनाओं के बारे में जानकारी देते हुए बताया कि संगठित रूप से एनर्जी ऑडिटर्स एण्ड एनर्जी मैनेजमेंट केन्द्र, राज्य के स्थानीय निकाय व ऊर्जा उपभोक्ताओं के बीच किस प्रकार से सामंजस्य स्थापित कर काम करता है।

राज्य में 44 प्रतिशत बिजली हो जाती है बरबाद

पीपुल्स समाचार, भोपाल।

अक्षय ऊर्जा के उत्पादन को बढ़ावा दिया जाए, तो प्रदेश में बिजली संकट के कारण उत्पन्न मांग और आपूर्ति के अंतर को कुछ हद तक कम किया जा सकता है। मप्र विद्युत नियामक आयोग के अनुसार अभी प्रदेश में विद्युत हानि 44 प्रतिशत है। अगर जिले स्तर पर छोटे-छोटे सौर ऊर्जा के संयंत्र लगाए जाए, तो इससे स्थानीय स्तर पर रोजगार भी उपलब्ध हो सकेगा।

ये बात मप्र ऊर्जा विकास निगम के मुख्य अभियंता भुवनेश पटेल ने कही। इंडियन एसोसिएशन ऑफ मैनेजमेंट प्रोफेसनल्स द्वारा शनिवार को राजधानी में आयोजित दो-दिवसीय संगोष्ठी में बोलते हुए श्री पटेल ने ग्रामीण क्षेत्र में गैर-पारंपरिक प्लांट लगाए जाने पर जोर दिया। इससे सुदूर अंचल में, जहां तक बिजली नहीं पहुंच पा रही है, वहां बिजली मिल सकेगी और ट्रांसमीशन में होने वाली हानि भी नहीं होगी।

संगोष्ठी में मप्र सहित अन्य प्रदेशों के विशेषज्ञ, सौर ऊर्जा उपकरणों के उत्पादक भाग ले रहे हैं, जिसमें विशेषज्ञों ने अपने प्रजेंटेशन भी दिए। सभी ने अक्षय और सौर ऊर्जा तथा इससे जुड़े उपकरणों के अधिकतम उपयोग और प्रचार किए जाने की वकालत की। एसोसिएशन के अध्यक्ष सुनील सूद ने कहा कि संगोष्ठी के माध्यम से गैर परंपरागत और सौर ऊर्जा से जुड़े विशेषज्ञों, इसके उत्पादकों, उपकरणों के आपूर्तिकर्ताओं को एक प्लेटफार्म प्रदान करने का प्रयास किया गया है।

> अक्षय ऊर्जा का प्रचार और उपयोग आज बहुत जरूरी है। लोगों में जागरूकता के साथ इस दिशा में प्रयास होना चाहिए। साथ ही अपशिष्ट पदार्थों के द्वारा भी ऊर्जा बनाए जाने की दिशा में पहल होनी चाहिए।
>
> - एसआर अवस्थी, विशेषज्ञ गैर-परंपरागत ऊर्जा, नई दिल्ली।

> पन्नी और पॉलीथीन बैग का उपयोग पूरी तरह खत्म होना चाहिए, क्योंकि इससे 100 साल तक भूमि की उर्वरता प्रभावित होती है। हैदराबाद में कचरा बीनने वालों से पन्नी इकट्ठी कराकर इसका उपयोग ऊर्जा बनाने के लिए इस्तेमाल किया जा रहा है।
>
> - एफ़ठी कानपुरवाला, इन्वायरमेंट सरर्टेस सेंटर, हैदराबाद।

... तो 2022 तक ऊर्जा में होंगे आत्मनिर्भर

इंडियन एसोसिएशन ऑफ मैनेजमेंट प्रोफेसनल्स का मानना है कि अगर शासन स्तर पर ऊर्जा बचत को प्रोत्साहन दिया जाए तो देश 13 साल बाद 2022 तक इस क्षेत्र में पूरी तरह से आत्म निर्भर हो जाएगा। ऊर्जा संरक्षण के क्षेत्र में काम करने वाली इस संस्था के अध्यक्ष सुनील सूद ने कहा कि प्रत्येक व्यक्ति छोटी-छोटी सावधानी से बिजली बचत कर सकता है। उदाहरण के लिए टीवी को रिमोट से न बंद कर मेन स्विच से बंद किया जाए तो एक माह में कम से कम पांच यूनिट बिजली बचेगी। इसी तरह मोबाइल चार्जर, पंखा, प्रेस, फ्रिज सहित घरेलू उपयोग की अन्य मशीनों से प्रत्येक घर में 25 से 30 यूनिट बिजली की बचत हो सकती है।

'Govt to encourage energy efficiency'

HT Correspondent
Bhopal, March 14

A TWO-DAY convention on "Energy efficient and renewable energy products and services", organised by Indian Association of Energy Management Professionals (IAEMP), was inaugurated at Ravindra Bhavan on Saturday.

Addressing the gathering, chief engineer, MP Urja Vikas Nigam, BK Patel gave details of initiatives being taken by the State government for the implementation of E C Act, 2001. He said that the government would require the services from more than 300 energy auditors and energy managers in the next two years. Adding further, Patel said that more commercial and industrial units would be brought under the purview of the Act to encourage energy conservation and efficiency.

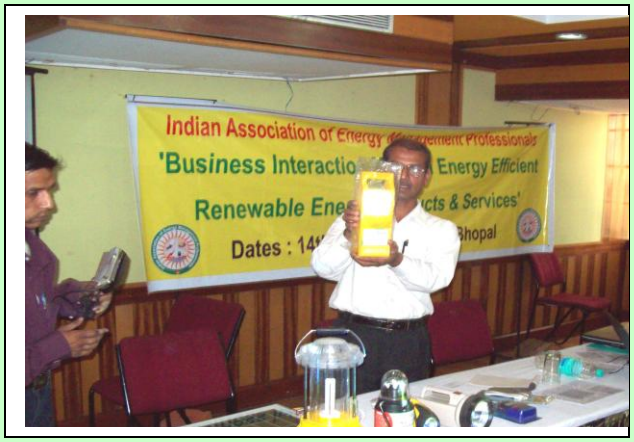
The president of IAEMP, SK Sood gave a presentation on "Home energy management programme" to be launched by the Association under the guidance of Bureau of Energy Efficiency, Ministry of Power, government of India.

Prof. Ajay Chandak from Dhule, gave a presentation on "Business opportunities in renewal energy sector". Several innovative energy efficient products were also demonstrated during the convention.

The convention was participated by prominent engineers, energy management professionals and officials from central and state government organisations.

A speaker addressing a convention on 'Energy efficient and renewable energy products and services' organised by Indian Association of Energy Management Professionals at Ravindra Bhavan on Saturday.


Indian Association of Energy Management Professionals
'Business Interaction Meet on Energy Efficient
and
Renewable Energy Products & Services'


Indian Association of Energy
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ENERGY AUDIT IN CDM PROCESS

THE 100 WATT BULB STORY

By Ravi Shankar

An understanding of how energy is used in a process is essential to determine the extent of carbon emissions. This is a small story that illustrates the energy audit approach to estimate GHG emissions.

How much coal is required to run a 100-watt light bulb 24 hours a day for a year?

We'll start by figuring out how much energy in kilowatt-hours the light bulb uses per year.

We multiply how much power it uses in kilowatts, by the number of hours in a year. That gives 0.1 kW x 8,760 hours or **876 kWh**.

The thermal energy content of coal is 6,150 kWh/ton.

Although coal fired power generators are very efficient, they are still limited by the laws of thermodynamics. Only about 40 percent of the thermal energy in coal is converted to electricity.

So, the electricity generated per ton of coal is:

0.4 x 6,150 kWh or **2,460 kWh/ton**.

To find out how many tons of coal was burnt for our light bulb we divide 876 kWh by 2,460 kWh/ton.

That equals 0.357 tons. Multiplying by 2,000 pounds/ton, we get **714 pounds** (**325 kg**) of coal.

That is a pretty big pile of coal, but let us look at what else was produced to power that light bulb.

A typical 500 Megawatt coal power plant produces 3.5 billion kWh per year.

That is enough energy for 4 million of our light bulbs to operate around the year. To produce this amount of electrical energy, the plant burns 1.43 million tons of coal.

The power plant also produces:

Pollutant Sulfur Dioxide - Main cause of acid rain

Total for Power Plant 10,000 Tons
One Light Bulb-Year's Worth 5 pounds

Nitrogen Oxides - Causes smog and acid rain

Total for Power Plant 10,200 Tons
One Light Bulb-Year's Worth 5.1 pounds

Carbon Dioxide - Greenhouse gas suspected of causing global warming

Total for Power Plant 3,700,000 Tons
One Light Bulb-Year's Worth 1852 pounds

It also produces smaller amounts of just about every element on the periodic table, including the radioactive ones. In fact, a coal-burning power plant emits more radiation than a (properly functioning) nuclear power plant!

Unless and until we make measurable reports through complete energy audit we cannot determine the exact results obtained on the contribution on reduction on Global warming.

We can achieve the desirable results provided the available data are precise and genuine since all data's are to be treated as TOOLS.

This will apply to all industrial sectors and one simple example on 100 WATT bulb may be deployed horizontally on all avenues.

About Author:

Mr. N. Ravishankar is a BEE Certified Energy Auditor having vast experience in projects execution related to Petro Chemicals, Fertilizer Industries. He can be reached at ravishankar_nagarajan@yahoo.com Or ravishankar_energyauditor@yahoo.co.in

Bachat Lamp Yojana Launched

The majority of lighting needs of the households in the country is met by incandescent bulbs which are extremely energy inefficient as 95% of the electricity is converted in heat and just 5% is used for lighting. Lighting accounts for about 20% of electricity consumption and has a significant potential for reduction of the load without compromising on the lumen output by use of energy efficient lighting in place of incandescent bulbs. CFLs provide that energy-efficient alternative to the incandescent lamp by using one-fifth as much electricity as an incandescent lamp to provide the same level of illumination. Government's efforts for promotion of CFLs are having the desired impact on the market with the sales of CFLs in India having grown from about 20 million in 2003 to around 200 million in 2008. However, the penetration of Compact Fluorescent Lamps (CFLs) in household sector remains low at about 5% -10% largely due to the high price of the CFLs, which is 8-10 times the cost of incandescent bulbs. The Bachat Lamp Yojana focuses on this first cost barrier to reduce the cost of CFLs to that of incandescent bulbs

The scheme was launched by the Union Minister of Power, Shri Sushil Kumar Shinde in New Delhi on 25th February, 2009

The Bachat Lamp Yojana promotes replacement of inefficient bulbs with Compact Fluorescent Lamps (CFLs) by leveraging the sale of Certified Emission Rights (CERs) under the Clean Development Mechanism (CDM) of the Kyoto Protocol. The scheme provides a unique platform for a robust public-private partnership between the Government of India, Private sector CFL suppliers and State level Electricity Distribution Companies (DISCOMs) and provides a the framework to distribute high quality CFLs at about Rs.15 per piece to the households of the country. Under the scheme only 60 Watt and 100 Watt incandescent Lamps have to be replaced with 11to15 Watt and 20 -25 Watt CFLs respectively. BEE will undertake monitoring of each project area as required under an approved methodology of CDM. For this purpose, BEE has developed

smart meters based on GSM technology that are fitted between the socket and the CFL in sample households (around 200 in each project area). The GSM based meter collects the data on hours of use and energy consumed by sending SMS to the central server. An independent agency to undertake this job has already been selected and meters have been installed in Vizag and Yamunagar and are under installation in several other areas like Jaipur, Himachal Pradesh, etc.

Given the high transaction cost of preparation and registration of CDM projects and the fact that public sector in India do not possess adequate capacities to undertake them, BEE has developed a Programme of Activities (PoA) which would serve as an umbrella CDM project, once registered with the CDM Executive Board. The individual projects, designed to be in conformance with the umbrella project, would be added to the umbrella project as and when they are prepared. The development of the PoA is a voluntary action on the part of BEE and it would not seek any commercial revenues from the PoA. On the other hand, it will on behalf of the Government of India take the responsibility of monitoring of all project areas after the DISCOMs and the CFL suppliers have entered into a tripartite agreement (TPA) with BEE. This will be the largest PoA to be submitted to the CDM Executive Board by anyone in the world. Alongwith the PoA, BEE has also prepared model project documentation in accordance with requirements of the CDM to enable states and other private investors to take them up

How "clean" will be the Clean Development Mechanism. Give teeth will bite !

(From Dr A.Kaupp's Corner in web site www.energymanagertraining.com)

One decisive first step and key requirement for a CDM project is the development of a Project Design Document (PDD). A PDD describes what the project is doing, what impact it has in terms of greenhouse gas mitigation and to what extent the project contributes to the sustainable development in the host country. Those who think this is another form of a detailed project report or bankable paper where some additional thoughts are spent on how the project mitigates greenhouse gas emissions are dead wrong and may be up for a surprise.

The term "clean" may be and should be viewed with respect to the different layers of the national and international approval procedure before the project can be registered as a CDM project. The three crucial components are legal, social and environmental cleanliness. In the protracted negotiations about who actually checks these aspects that have an important link to good governance issues of a CDM project, it was finally decided that this is the responsibility of the host country. It is therefore the responsibility of India and her Designated National Authority(DNA) to define what is a "clean" project in terms of sustainability, social fairness and perhaps good governance. The international CDM Executive Board will thus just accept the host country approval as proof that there are no problems concerning these issues. CDM projects tabled for approval by the CDM Executive Board will be put on the Internet for public comment and therefore the entire world including all real and self-styled experts, NGOs and whoever in India knows more about the project than what is written in the PDD, may fill out a form and point out deficiencies or inaccuracies.

This highly transparent process is of course critically viewed depending on what site of the fence you are, developer or morally high-flying climate change / development watchdog. As it stands of now, most if not all projects would have difficulties to pass the five layers of scrutiny, i.e. check of the PDD by financial institutions, host country approval, validation, registration by the CDM Executive Board and public opinion.
The "quick and easy" project developers will therefore argue that going through such an extremely transparent and cumbersome process is not attractive as it only achieves a marginal increase in the rate of return, given that CDM credits currently just fetch 3 Euro and may be 15 Euro per tonne of CO2 equivalent reduced in the future.

Let us not worry about such project developers. If you have to hide deficiencies with respect to the “clean” issues it is not worthwhile to apply as a CDM project because the procedure may not only result in rejection as a CDM project. The transparent procedure th at also involves public hearings and documentation what was decided and said may endanger the entire project because opposition to it will become focused and very much public.

In particular the CDM Executive Board is not a Board. It is a court. A verdict is given. Reference cases are established. Rules and regulations are developed as case law and thus in a rather fluid state. There is no Supreme Court to come back to and reverse decisions. You need to know what you say and write. It can be taken against you.

A “Gold Standard” standard is coming up that will be even tougher to meet than the CDM Board’s standards. For some it is a bad development and they complain that at the end we have no CDM projects at all. Others - and I belong to them - favor to keep the process as “clean” as possible. It is the first internationally recognized approval procedure where serious attempts are made to also define what sustainability actually means and what project specific criteria should be applied to prove it.

There will be a fast learning curve. After the first 100 CDM projects have been rejected for various reasons, better ones will come up. Those who are CDM skeptics implicitly argue that there are only bad projects out there anyway and the process, if kept open, will only confirm this. In my opinion so far too many workshops only presented CDM to investors as another scheme to improve investment profits and did not tell them the dark site of CDM:

These additional revenue streams must be really earned and may be hard to get. But if you get them, your reputation and business opportunities will grow. Of course there are a few other organizations in India hat will be very happy if you finally get the CER. They like to tax you on it.

A final word. It is obvious that as so many we are interested in large projects that may yield several hundred thousands of CER annually. Small is not always beautiful because we need to watch transactions costs and reflect on buyers demand.

The art of messing up CDM

(From Dr A.Kaupp's Corner in web site www.energymanagertraining.com)

For all those who have not yet caught up with Climate Change. CDM stands for Clean Development Mechanism and not Corporate Development Management of the international CDM-Executive Board. This "corporation" called CDM-Executive Board is in charge of deciding what is a CDM Project and what not.

One may in a very simplistic way characterize a CDM measure as an investment that is somewhat new, not mainstream and not particularly financially attractive. A few other conditionality such as clean, sustainable and helpful to combat climate change are as well asked for. In other words "business as usual" measures will not qualify. There are several so called checks to what extend a measure is additional and therefore qualifies as CDM. The owner of such a CDM Project is entitled to sell "avoided tons of CO2, equ"(CER's) similarly to other firms selling tons of sugar. Energy efficiency measures (EE) in industry reduce CO2 emissions by burning less coal, oil or gas for the same output. They could significantly reduce CO2 emissions. However the bulk of this measures are neither involving new technology nor know how. Many are mainstream, run-of-the-mill measures, and almost all of them are financially attractive in India. Consequently EE-projects hardly qualify as CDM measures. On the other hand, the market potential for investments in energy efficiency measures is very large and presently only captured by about 20% in India. Consequently one could argue that energy efficiency measures are not business as usual. However this argument does not find favor with the CDM-Executive Board and its technical committees. One could therefore further argue that those lobbying and defending CDM and its set of additionalities may be responsible for increasing CO2 emission instead of mitigating it.

One may explain this by a simple business model. View the CDM-Executive Board as a firm that manufacturers ceramic dogs and cats. The profit from sales of cats is US$3 while profit from dogs is only US$1. Small firms rarely analyze manufacturing costs item wise but look only at the end of the month's profits from sales of cats and dogs. Lost opportunities in profit making are therefore not discovered. As a business advisor I would certainly recommend to the firm to increase the sales of cats and accordingly reduce the sales of dogs if the market can absorb it. View EE-measures as the cat business which generates per US$ life cycle cost large amounts of "tons of CO2 mitigated" because most measures are highly profitable. View many (but not all) renewable energy projects as the dog business where US$ life cycle costs yield

much less “tons of CO2 mitigated”. Consequently all efforts to increase the market for dogs implies increasing CO2 emissions, as long as the market for cats is not better covered. In other words there is no difference between a CDM-Executive Board and a small cats and dogs business when it comes to rational decision making to increase profits i.e. “tons of CO2 mitigated”. Both enterprises overlook basic principles of allocation efficiency of investments.

Whenever I discuss this analogy there is bound to be one objection which I accept. Diversification of measures and market acceleration of newer and cleaner technologies are important as well. However I usually have the final laugh by arguing: “If someone is so convinced that CDM is a tool for market acceleration of newer and cleaner technologies and concepts, why being so hypocritical and superficial about it. Tell the world by how many days or years the market was accelerated by a CDM approved newer and cleaner technology”. At least that would take out the steam of arguments that CDM is another scheme to promote high cost/ low impact measures and there is no serious concern to mitigate GHG emissions in a most allocation efficient way.

My final argument why one should approve most EE-measures under CDM, addresses a non-monetary angle. Those who invest in EE-measures are usually not so interested to apply for CDM because at an IRR of 30% and present market rates of CER’s the IRR may increase from 30% to 31%. Therefore why bother and go through the trouble. On the other hand any CDM approved EE-measure by the very nature of the CDM process of monitoring and verification of tons of CO2 mitigated, provides to the investor an internationally recognized methodology and strategy to monitor and verify energy consumption reduction. This M & V tool by itself is very useful for all EE-advisors or clients who are involved in EE-measures implemented under an ESCO contract. An ESCO contract is a contract where a firm specialising in energy conservation will identify, plan, design, finance, implement and maintain an energy efficiency investment over a certain period of time at their own risk. In such a scenario it would tremendously help the ESCO firm to be backed by the M & V protocol of CDM.

Why a good CDM needs additionality determination

Axel Michaelowa

Imagine you are picking up a 20 € bill lying on the sidewalk – and then you go on claiming an extra payment from your bank for bringing this bill back into circulation. This is the impression I get from Dr Kaupp’s corner contribution “The art of messing up CDM” where he calls for

abolishing the additionality test for projects that generate greenhouse gas emissions reduction certificates through the Clean Development Mechanism (CDM).
Or to take Dr. Kaupp's own example of the cats and dogs manufacturer: The profitable product (cats) will find the way to the market by itself. The dogs would not be able to make it to the market. However, the dogs bring an added benefit by scaring away thieves. So there a subsidy is warranted to increase sale of dogs and to increase overall security in the country.

Similarly, there are two types of energy efficiency projects: those that make it to the market on their own and those that are left aside due to longer payback periods, unavailability of capital or other barriers. The first type is not acceptable under the CDM. It does not reduce emissions compared to business-as-usual. The second type will pass the additionality test as it can show that barriers prevented its implementation. This may even be the case at high financial rates of return if for example it can be shown that alternatives such as expansion of production have a higher return. So the CDM does accept profitable projects, it does only not accept the most attractive of all realistic alternatives. So if you can sell cats, dogs or frogs, the most profitable alternative defines the baseline – in our case it will be the cats. The key challenge is now to find good criteria for determining the difference between cats and dogs. The CDM Executive Board has defined guidelines for this and independent validators will check whether the arguments are consistent.

At the end of his article, Dr. Kaupp gives a nice example for the CDM as an instrument that overcomes barriers. If the barrier to energy efficiency projects is the absence of credible verification of savings, the CDM is a perfect way to overcome this barrier. Again – the barrier test is part of additionality determination and these projects will qualify for the CDM.

A brief tentatively final word

by Albrecht Kaupp

The comparison with the "20 € Bill pick up" is exactly the central issue. However there is no legal requirement for the owner of a CDM project to prove, certify and preferably state under oath that he would have not done the project without CDM benefits from future sales of CER's. This would at least employ a few more lawyers to clearly prove and provide documentary evidence that many projects would have been implemented anyway with or without CDM. If there would be such a legal requirement where one may get caught most projects would not even make it to the Board. In other words it is my suspicion that most of these approved CDM projects are picking up 20 € bills and bring it back into circulation

anyway. For them it is “icing on the cake”. This is fine with me. Let them have icing on the cake. However in such a scenario it would make perfectly sense to introduce an impact indictor such as allocation efficiency in terms of mitigation effect.

The art of misunderstanding the CDM

By Holger Liptow

We all like to see the CDM maturing and it is making good progress. Some issue were easier to solve other are still taking its time. Dr. Kaupp is concerned that energy efficiency projects are loosing in the CDM while other options like renewable projects are treated more favorable. I don’t concur with his view, since he is likes to see more and foremost energy efficiency projects in the CDM that seem to be economically more favorable than other. If they are economically so attractive as he claims and, additionally, the CDM does not make much of a difference to their internal rate of return, why are they not implemented anyway. Dr. Kaupp can explain the reasons for the low 20 % market share of the potential energy efficiency projects much better than myself. Therefore, it is difficult for me to understand why he is putting so much blame on the CDM Executive Board (EB) for stopping “his” energy efficiency projects.
My understanding of a CDM project is that it should be economically attractive to the investor including the income from the sales of CER. If the investor can not achieve an expected IRR including all transaction costs like PDD development, validation, registration and verification he should better invest in something else or give his money to a bank. Of course the investor has to meet the rules of the game set by the Kyoto-Protocol, the Marrakesh Accords and the EB and can not only apply the rules of business as usual. Part of the CDM game is the additionality test which in simple terms say: No additional benefit for the global environment, no extra Rupees or Euros for the CDM-project. As the quality of sugar is checked, when I sell it, the quality of the CERs are checked, in the later case by the designated operational entity (DOE) along the rules of the games overseen by the EB. The key question asked is not, does the CDM project apply standard or new technologies but would the project have taken place without the incentives of the CDM. The issue whether a standard or new technology is applied may be helpful in finding the overall answer on additionality but it is not the only criteria to be used.

Energy efficiency is therefore not at an disadvantage per se but it has its intrinsic problems. E.g. the energy savings and the corresponding cost savings that are achieved by an energy efficiency projects may already result in high profits so that the income from the sales of CERs may be

hardly worth the effort of the CDM game. This make CDM unattractive for energy efficiency projects. But one can not put blame on the EB on this speciality of energy efficiency projects. It is not the business of the EB to check whether a business is worthwhile, but observe strongly that the environmental integrity of the Kyoto Protocol is fully met. The EB is not forbidding to sell cats but to sell false cats being worth nothing.

I follow Dr. Kaupp in his final laugh in as far as I see the CDM not as an instrument to support any specific technology. This has too frequently been the understanding of many who had hopes that CDM will bring Renewable Energies and Energy Efficiency to a much greater application. We have many other instruments to assist these two options to find a wider and broader response; the CDM should give first priority to emission reduction, other intentions have to follow if economic thinking prevails.

Finally, let me say that I support Dr. Kaupp in his intention to give energy efficiency projects a wider application in the CDM. But we need to avoid misunderstanding the CDM as an instrument for or against a certain technology or approach.

IAEMP NEEDS PROFESSIONALS/ ORGANISATIONS TO HEAD SECTOR WISE EXPERT GROUPS

IAEMP is in the process of formation of sector wise expert groups. There is already one working on Data Centres which is headed by Ms.Shaheen Meeran MD of M/s Schnabel.

Such groups would be working under the banner of IAEMP and would be nominated for representations in Conferences, Training programmes, nominations in expert committees etc. They would be authorized to start their own yahoo groups.

Individuals/Organisations interested in heading such expert groups are invited to send their consent with details of expertise.

Pl. send your consent with details of the expertise to :

INDIAN ASSOCIATION OF ENERGY MANAGEMENT PROFESSIONALS
Golden Square,102,Eden Park,20,Vittal Mallaya Road,Bangalore-560001

UPCOMING EVENTS

U.S. Solar Energy Trade Mission to India March 22-27, 2009
http://www.buyusa.gov/pacificsouth/indiatrademission.html

ENERGY & LIGHTING EXPO-2009, Bangalore, India April 9 – 14, 2009
Palace Grounds, Bangalore
www.energy-09.com

WINDPOWER 2009 Conference & Expo, Chicago, USA May 4 -7, 2009
Organized by American Wind Energy Association
www.windpowerexpo.org

Clean Technology 2009. Houston, Texas, USA May 3-7, 2009
Energy, Water and Environmental Technologies
http://www.csievents.org/Cleantech2009/

World Renewable Energy Congress Bangkok, May19-22, 2009
WREC 2009 Asia, Thailand.
www.thai-exhibition.com/wrec2009asia/

PV America Conference & Exhibition, Philadelphia, USA June 8-10, 2009
Pennsylvania Convention Center,
www.seia.org

17th European Biomass Conference and Exhibition June 29-July 2, 2009
Conference Centre, Hamburg, Germany
www.conference-biomass.com

3rd Renewable Energy India 2009 Expo, New Delhi. August 10-12, 2009
Pragati Maidan, New Delhi, Organized by Exhibitions India Pvt. Ltd.
Supported by Ministry of New & Renewable Energy, Government of India
www.renewableenergyindiaexpo.com

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Are you interested to work for IAEMP designed 'Home /Commercial Energy Management Programme as 'Trainer/Faculty member? If yes, pl. join IAEMP and you will receive a CD containing complete information with Power Point Presentation which can be used for all types of audiences. Pl. fill-up the application form given in the following pages and send with requisite fee as per the instructions given in the form.

I A E M P

INDIAN ASSOCIATION OF ENERGY MANAGEMENT PROFESSIONALS

Regd. Office:*7,Tirumala Commercial Complex,Paradise Circle,*
Near Kamath Hotel,S.D.Road,Secunderabad -500 003,A.P.,Ph.27810214,27818831
Admn.Office*: Golden Square,102,Eden Park,20,Vittal Mallaya Road,Bangalore-560001*
Ph.09241778871,09901911910,e-mail: sunilsolar@yahoo.co.in**,**Web Site: www.iaemp.org

APPLICATION FOR INDIVIDUAL MEMBERSHIP

Please Paste Your photo Here

State / Local Centre Name

MEMBERSHIP APPLICATION FOR: -

(a) Student/ *Member Life Member*
(b) Upgradation from _____to _____

Name: - _____ _____ _____
(Surname) (*First* Name) (Middle Name)

Father's Name _____
Date of Birth _____
Business Address _____
_____
_____ Pincode: _____

Telephone with STD Code _____ Fax_____
Mobile Phone *Email*_____

Home Address _____
_____
_____ Pincode: _____

Telephone with STD Code _____ Fax_____
Brief Description of Specialisation
Preferred Mailing option _____*Email/ Business Address/Home Address*

Educational Record: (Pl. attach separate sheet if required)

Course	Name of Institute/ University	Location (City/Town)	Period (From-To)

Employment Record: (Pl. attach separate sheet if required)

Period(From-To)	Name and Address of Employer	Designation	Specific Duties

(Sheet 1 of 2)

REFERENCE (Preferably by IAEMP member)

I know the applicant by_____(personal/business) association for approximately _____ years. To the best of my knowledge, the above information is correct and as such. I recommend the applicant to be elected to membership, Additional comments: _____

Reference Name /Address: -_____

Membership Number: -_____ Signature:_____Date: _____

CERTIFICATE BY APPLICANT

I solemnly affirm and declare that the information furnished above is true and correct. I hereby undertake that if admitted as a member of the Association, I shall be bound by the Rules and Regulations and Bye-laws made there under and as amended from time to time and shall abide by such bye-laws, rules, standing orders, directions, conditions or guidelines as may be laid down by the Association and made applicable to me from time to time.

Witness my hand this…….day of ……year…….

Signature of the Applicant…… Place …….

FEE STRUCTURE

	Admission Fee	Annual Fee
1. Student Member (studying at university)	Rs 300	Rs 200
2. Member	Rs 1000	Rs 500
3. Life Member	Rs.6000 (One time)	

MODE OF PAYMENT

Demand Draft payable at Bangalore or any where banking cheque of ICICI, HDFC , SBI etc. in favour of " Indian Association of Energy Management Professionals" .Filled-in application along with cheque / DD may be sent to :

Indian Association of Energy Management Professionals
Golden Square, 102, Eden Park,
20, Vittal Mallya Road,
Bangalore-560001

Application form may also be sent by e-mail to sunilsolar@yahoo.co.in .The Fee may be deposited electronically to IAEMP SB account no. 0883101060759, Canara Bank,Sarakki Layout Branch,Bangalore. The fee may also be deposited in the local branches of Canara Bank.

Payment Details

Cheque/Draft Number: -_____ Amount: -_____

Drawn on : -_____ Date : -_____ Signature & Date

For office use: Admit ☐ Reject ☐	Membership grade: Membership No:
Remarks :	(Processed by) (Approved by)

(Sheet 2 of 2)

I A E M P

INDIAN ASSOCIATION OF ENERGY MANAGEMENT PROFESSIONALS

Regd. Office:*7,Tirumala Commercial Complex,Paradise Circle,*
Near Kamath Hotel,S.D.Road,Secunderabad -500 003,A.P.,Ph.27810214,27818831
Admn.Office*: Golden Square,102,Eden Park,20,Vittal Mallaya Road,Bangalore-560001*
Ph.09241778871,09901911910,e-mail: sunilsolar@yahoo.co.in**,**
Web Site: www.iaemp.org

APPLICATION FOR ORGANISATION MEMBERSHIP

Please Paste Your logo Here

State / Local Centre Name

Name of the organization

Works Address _____
_____
_____ Pinco

Telephones with STD Code _____
Web site *Email*_____

Office Address _____
_____
_____ Pincode: _____

Telephones with STD Code _____ Email _____

Area of Specialisation / brief description of services provided/products manufactured

Details of nominees

Sl.No.	Name	Designation	Mobile No.	e-mail ID
1				
2				
3				

REFERENCE (Preferably by IAEMP member)

I know the applicant by_____(personal/business) association for approximately _____ years. To the best of my knowledge, the above information is correct and as such. I recommend the applicant to be elected to be elected as organization member, Additional comments: _____

Reference Name /Address: -_____

Membership Number: -_____ Signature:_____Date: _____

CERTIFICATE BY AUTHORISED SIGNATORY

I solemnly affirm and declare that the information furnished above is true and correct. I hereby undertake that if admitted as a organization member of the Association, we shall be bound by the Rules and Regulations and Bye-laws made there under and as amended from time to time and shall abide by such bye-laws, rules, standing orders, directions, conditions or guidelines as may be laid down by the Association and made applicable to me from time to time.

Witness my hand this……day of ……year…….

Signature of the Applicant…… Place …….

FEE STRUCTURE

	Admission Fee	Annual Fee
1. Organisation Member (2 nominees)	Rs 10,000	Rs 1,000
2. Additional Member	Rs 1000	Rs 500

Note: Annual fee for the first year is payable along with the admission fee.

MODE OF PAYMENT

Demand Draft payable at Bangalore or any where banking cheque of ICICI, HDFC , SBI etc. in favour of " Indian Association of Energy Management Professionals" .Filled-in application along with cheque / DD may be sent to :

Indian Association of Energy Management Professionals
Golden Square, 102, Eden Park,
20, Vittal Mallya Road,
Bangalore-560001

Application form may also be sent by e-mail to sunilsolar@yahoo.co.in .The Fee may be deposited electronically to IAEMP SB account no. 0883101060759, Canara Bank,Sarakki Layout Branch,Bangalore. The fee may also be deposited in the local branches of Canara Bank.

Payment Details

Cheque/Draft Number: -_____ Amount: -_____

Drawn on : -_____ Date : -_____ Signature & Date

For office use: Admit ☐ Reject ☐	Membership grade: Membership No:
Remarks :	(Processed by) (Approved by)

(Sheet 2 of 2)

We Need Your Active Participation…

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 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.