



Confederation of Indian Industry
Since 1895



Report on

Interactive Session on National Mission for Enhanced Energy Efficiency

27 January 2011: New Delhi

Introduction

The confederation of Indian Industry in partnership with Bureau of Energy Efficiency and Ministry of Power organized national level PAT Consultation workshops at New Delhi, Kolkata & Bangalore. The first workshop was being held at New Delhi on Thursday, 27 January 2011.

The Interactive Session was attended by various designated consumers and also by Senior Policy Makers.



Mr P Uma Shankar, Secretary, Ministry of Power addressing the gathering at the Interactive Session on National Mission for Enhanced Energy Efficiency

The National Mission for Enhanced Energy Efficiency (NMEEE) of NAPCC has ushered in a unique programme, Perform, Achieve and Trade (PAT), a market-based mechanism to enhance cost-effectiveness in improving industrial energy efficiency through certification of energy savings that could be traded and will lead to saving of 10 MMT of oil equivalent out of 23 MMT of the total target of NMEEE, said P. Uma Shankar, Secretary, Ministry of Power today in a stakeholders consultation forum jointly organized by BEE and Confederation of Indian Industry (CII) in New Delhi.

PAT will be functional by April 2011 and is likely to result in savings of 9.78 million metric ton of oil equivalent (MMTOE), which amounts to an avoided capacity of 5623 MW over a period of three years and this is going to be a unique mechanism to ensure the efficient consumption of energy in international arena, told Mr. Gireesh Pradhan, Additional Secretary, Ministry of Power

The inclusive success of this of one its kind innovative scheme, lies in the level of involvement and participation from all stakeholders and further aligning of their individual objectives with this national objective, remarked Mr. Ashok Lavassa, Additional Secretary, Ministry of Power.

The Millennium Development Goal (MDG) of "Poverty Alleviation" is one of the basic objectives of NMEEE and PAT will create a sustainable trading mechanism to ensure market based pricing of energy, innovation and adoption of efficient technologies in this domain, added Mr. Banmali Agrawala, ED, Tata Power Ltd and Chairman, CII National Committee on Power.

The MoP has notified 563 Designated Consumers (DCs) in eight industrial sectors thermal power plants, fertilizer, cement, pulp and paper, textiles, chlor-alkali, iron and steel and aluminium. DCs have to comply with the energy conservation norms and prescribed standards as per the EC Act 2001 and need to furnish the reports on their respective total energy consumptions and Specific Energy Consumption (SEC) based on Gate to Gate concept. The mechanism will further call for a setting up of baseline for individual target for saving at plant level and the issuance of Energy Saving



Mr G B Pradhan, Additional Secretary, MoP addressing the gathering at Interactive Session on National Mission on Enhanced Energy Efficiency on 27 January 2011 at New Delhi

Also seen (L to R): Mr Banmali Agrawala, Chairman, CII National Committee on Power & ED, Tata Power; Mr Ashok Lavasa, Additional Secretary, MoP; Dr Ajay Mathur, DG, BEE; Mr Devender Singh, JS, MoP.

Certificates (ESCerts) which will be traded over the counter as well in the energy exchanges and in the event case of default or non-compliance will attract a heavy penalty, shared Dr. Mathur. He also mentioned that the energy efficiency improvement targets would be unit-specific; this means that each DC would be required to reduce its SEC by a fixed percentage, based on its current SEC (or baseline SEC).

BEE is designated as the overall regulator and dispute resolution agency and Energy Efficiency Service Ltd. (EESL) as the process manager in this entire mechanism. The scheme aims to provide incentives to industry to achieve better energy efficiency, beyond the specific energy consumption (SEC) stipulated for each DC. The first cycle of PAT which is going to be started from April 2011 aims to cover eight industrial sectors to achieve higher energy efficiency in a span of three years. The subsequent PAT cycle will include more sectors in addition to these eight. It sets in place a monitoring and verification mechanism for the SEC (including auditing by an accredited verification agency), and the processes for issuing and trading in ESCerts as well as the use of ESCerts across sectors and their synergy with renewable energy certificates.

PROGRAMME

1000 – 1100 Hrs		INAUGURAL SESSION
1000 – 1005 Hrs	<i>Invocation & Lighting of lamp</i>	
1005 – 1015 Hrs	<i>Welcome Remarks</i>	Mr Banmali Agrawala Chairman, CII National Committee on Power & Executive Director, Tata Power Company Ltd
1015 – 1025 Hrs	<i>Opening Remarks</i>	Dr Ajay Mathur Director General Bureau of Energy Efficiency
1025 – 1040 Hrs	<i>Address</i>	Additional Secretary Ministry of Power, Government of India
1040 – 1055 Hrs	<i>Address</i>	Mr Gireesh Pradhan Additional Secretary Ministry of Power, Government of India
1055 -1100 Hrs	<i>Vote of Thanks</i>	Mr Devender Singh Joint Secretary Ministry of Power, Government of India

1100 – 1115 Hrs	Tea / Coffee Break
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1115 – 1330 Hrs:		Technical Session
1115 – 1145 Hrs	<i>Presentation on National Mission for Enhanced Energy Efficiency</i>	Mr Kapil Mohan Deputy Director General Bureau of Energy Efficiency
1145 – 1155 Hrs	<i>Address</i>	Mr P Uma Shankar Secretary Ministry of Power
1155 – 1215 Hrs	<i>Presentation on PAT Methodology</i>	Mr S P Garnaik Energy Economist Bureau of Energy Efficiency
1215 – 1235 Hrs	<i>Presentation on Trading Mechanism ES-certs</i>	Mr Saurabh Diddi Energy Economist Bureau of Energy Efficiency
1235 – 1320 Hrs	<i>Interactions over the PAT consultation Document</i>	
1320 – 1330 Hrs	<i>Summing up & Concluding Remarks</i>	Dr Ajay Mathur Director General Bureau of Energy Efficiency

1330 Hrs	Lunch & Close
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Interactions

Type - General

Question

How the price discovery is going to happen and if it is going to happen within the same cluster how the price discovery is going to happen because what I saw here is I know the clustering exercise is not over but firms with a similar SECs may be placed within the same cluster. But the marginal cost of each of those industry is to achieve their targets even if they have similar SECs would be different. How is the price discovery going to happen because that is going to depend a lot on the marginal cost for achieving the target? I do see a lot of technology analysis but I don't see a lot of cost analysis.

Answer

Taking the cue from you what we decided was that trading can occur across all designated consumers. That will help price discovery to occur. As far as price is concerned that cost analyses we did a fair bit of a cost analysis. It is true of technology also but much more with cost. There is a huge the information asymmetry. There is almost no way that anybody outside the plant can actually figure out what are the opportunities as the technology part and what are the costs. Given this information asymmetry the only way is to enable a market to occur. To answer your central question trading can occur amongst any 2 of the 568 designated consumers.

Question

There was one statistics quoted that 45% of consumers account for only 4% of energy. Has it been found efficacious to touch all the eight sectors or limited to four or five sectors only where 96% of the energy consumption is there because 55% consumers are consuming 96% while 45% consumers are just 4% of energy intensity. Secondly, under this mechanism there would be bunching of the trade at the end of the trading cycle. Unlike CDF which is ongoing process but as the human tendency that we don't like to pre-plan that I am not going to achieve the targets so I buy it today. It is only at the end of the three year cycle all of a sudden all certificates will come into the market or all demands will come to the market. It will not be a kind of an ongoing market but a bunched up market at the end of each trading cycle.

Answer

There has been a huge amount of debate on the 96% versus eight sectors. The point is that even though in numbers there is a domination of four sectors or rather actually one sector, power sector, it is as important for the other factors to do it even though they are dwarfed in size. But the point remains that these are sectors which are energy intensive where growth occurs and where there is a huge independence both on internal as well as imported fuel. That is why a conscious decision has been taken that yes, it does mean that we are expanding it; (b) there is a declining marginal utility. but for the country as a whole it makes sense for the sectors.

You raised a very good question as far as bunching together is concerned. Whenever I look at other trading mechanisms which have been put up anywhere else in the world whether it is the EU ETS or the US sulphur or the US nitrogen oxide in the first period especially there is a tendency to do bunching towards the first compliance date and that is for the reason you said. Is there a way to minimize if not completely have some kind of a uniform trading, we are open to suggestions. This is an

area which exercises all of us greatly. Saurabh in his presentation mentioned it and I would like discussions on it today or even later if you want to send us an e-mail. What was talked about was something called obligation trading. Supposing if we don't talk about energy saving certificate but only about obligation everybody has an obligation. If you feel that you can achieve your obligation or more than that you sell it to somebody else or you can actually buy somebody else's obligation if you feel you can do more. It would be the inverse actually. He would pay you to buy his obligation. If you can feel that you can do it to do that. That may allow early trading to occur and early price discovery.

What is legally enforceable is what will be in the rules and regulations. What is in the rules and regulations is what we agree by discussions here. There is nothing in the Act which prohibits this particular concept. What we want to do is something that gives flexibility to industry on one hand and on the other hand enables early price discovery so that decisions can be made early on rather than only at the end of the period. Again I would repeat that this is an area in which we are looking for suggestions.

Early price discovery is a desirable objective. Your suggestions are welcome.

Question

The target setting would be done in terms of say, a million tons of oil equivalent and in the meantime you increase your capacity which so often happens that you de-bottleneck as well as improve the efficiency. So you are producing 20% more at the end of three years so your energy in absolute terms will go up but the specific energy will be lower. I hope that is not the objective that it should be in the specific energy consumption.

Answer

This is something that has exercised us a great deal because we don't want to make it a burden. Therefore, there are two things that have been separated. The first is what are you legally held accountable for? You are legally held accountable for the specific energy consumption. If you have increased your production the specific energy consumption will be calculated on the increased or the total production in the year 2013–14. That is one part. Supposing that you have not met the SEC target, you have not met through certificates then there is issue of penalty. As far as the penalty is concerned the penalty would be calculated on the basis of the baseline year consumption. Baseline year consumption multiplied by the specific energy consumption in that year that will be used to calculate the loss, not the actual production in that year.

Question

It means if you don't meet your specific energy consumption and if you produce more at the same time you will be penalized more?

Answer

No.

Question

Let's say, you have a 1 million done baseline production. You have X specific and energy consumption norms and you are giving 1% saving target. You save only half a percent. But at the same time instead of 1 million and you produce 1.1 million ton. If you had produced 1 million ton and achieve only half a

percent target then you will still be penalized, let's say you don't buy the certificates. But if you produce 1.1 million tons and your specific energy consumption target is also you achieved only half a percent that means your penalty will be higher?

Answer

Your penalty will be 1 million tons into the specific energy consumption not met. What we have decided is that both for the purposes of incentive i.e. energy savings certificates and of penalty – for both of them the baseline energy consumption would be used as the number to calculate.

Question from Udit Narayain, World Bank

The trading boundaries for e-cert – will it be confined only to the designated consumers or will the external player be allowed to intervene to increase incentives for enhancing efficiency may be in the subsequent terms for the PA mechanism?

Answer

As far as we are concerned at the end of the first cycle period each industry has either to show that it has met its targets and or show certificates which are equivalent to the target reduction. Once they give us the certificates in lieu of making their compliance those certificates are extinguished. Supposing there are excess certificates in the market we are allowing them to be banked for one cycle. If supposing designated consumer A wishes to sell it to somebody else and it disappears from the system it is really something I don't have any control over. They may tell me and I would very much like them to tell me. But as far as I am concerned he has banked it I will wait for it till the end of the second cycle and if it is not presented it is automatically extinguished. That is what the Indian law will say. I cannot come into the way of a deal between an Indian designated consumer and an international organization which wants to buy those energy savings certificates.

Question

Since the e-certs will be tradable in the market the basic purpose of the incentive given for achieving energy efficiency will again be a market driven force. We will be looking into the profit motive rather than the basic purpose of saving on energy and how this will be reflected in the balance sheet of the company? Even if we have been energy efficient and earned e-certificates but the market value is, say, in the negative will it not be a disincentive in a way?

Answer

The market trading mechanism is only to find the most efficient way of getting the energy efficiency. I do not foresee a negative value for e-certs ever. That is not possible. On the balance sheet side if it is penalty it would be shown on the negative side, the valuation of how many e-certs you have banked and all would depend on the accounting practices which you on a particular closing day you will value like any other shares and all. That is the way it is done. I hope that answers your question.

Question

The feasibility of e-certs becoming negative is definitely there. This is basically to motivate the designated consumers to achieve energy efficiency. Hypothetically, supposing most of the people achieve that and they earn e-certs then there would be no buyer. Then it would be negative value.

Answer

In that case the value will be zero and that is why we are allowing them to be bank for the next cycle period.

Question

Ultimately it all belongs to the national action plan on climate change. Hazardous waste recycling, municipal solid waste recycling are components which qualify. That way they qualify for this.

Answer

It was the prime minister's point.

Question

I would like to add that these are being certified by state pollution control board and the permission is granted. So it would be verifiable.

Answer

I would request to talk to Mr. Garnaik and see how we add it. Send him an e-mail with your suggestions. We will be very open to that.

Question from Mr Ravi Agnihotri

The whole exercise is derived from technology. If we have the technology available for reducing the energy consumption in a particular sector, so to say. Do we have sufficient number of companies who will be able to take care of the industry as a whole sector-wise for giving recommendations and then funding like that? How BEE is taking care of that aspect?

Answer

Mr Kapil Mohan had mentioned that in the month of February the baseline audit will start. That would tell us what the configuration of your plant is. It will also allow us to give plants at least an initial picture of what is the kind of consumption they have, how does it compare with the rest.

On technology supplies, the technology that you need and the technology that he needs may be different. I, as an outsider would feel very uncomfortable saying you should use the same technology. We have been through that in this country. I think that the government should stay away from technology. I think that every sector has suffered because government tended to be over prescriptive in the kinds of technology. I would rather say that the plant itself figures out what makes sense. It will also lead to innovation. I must confess that as an approach we tried to keep ourselves out of it because to me it would distort the market.

Sector - Pulp & Paper

Question by Ballarpur Industry

Due to market condition (you know there are varieties of paper and varieties of GSM produced in the paper machine) I am going to produce the paper which is having the higher SEC in that period. Then how this thing will be captured in this phenomenon.

Related to this one if I am having two machines one is having lower GSM production and the other is having higher GSM production the year in which I will make the lower GSM production much more that year overall SEC will be more. There can be a possibility that individual machines target that I may achieve but if I will combine both then I may not achieve. How these things will be addressed? I take targets for my two machines individually which is in the same plant premises for the target given by the BEE. If BEE has given 1% target I may take the target 1% for my higher GSM machine, 1% target for my lower GSM machine not combined together. Whether this flexibility will be with the consumer and at the end of the story he may add or he may not add. What is your comment?

Answer

Already in my presentation I highlighted about the product mix or the quality of the different product which influences the energy consumption. At the same time also I explained the concept of what we're talking as gate to gate concept. This is total plant energy consumption (SEC) we are taking. It is not the individual process or the individual machine for the individual subcomponent. For the baseline year if we have defined the boundary and the specific energy consumption has been calculated at the same methodology will be followed at the end of three years. I agree with your point that some of the machines may be producing quality products and so more energy consumption is there. But the same variable factors have been taken already at the baseline year and the same will be taken target year as well. I don't think we will be considering the individual equipment-wise and all these things. Same situation also if you take the case of thermal power plants. It is not there every unit we are going to have the individual targets and all. It is totally station as a whole we are taking.

Question

...market conditions I am going to produce the GSM paper next year which is having higher SEC then how I should be penalized?

Answer

Some normalization needs to be given in this particular case that you are suggesting. We will consider that.

Sector-Aluminum

Question

The question relates to the point that Mr. Kapil Mohan told in the presentation that there will be stricter targets in later years of the process. We want to understand the very rationale of this concept because the targets relates to the opportunities available to the industry in terms of available technology, in terms of process innovations. So to say that it will be stricter in later years we want to understand the rationale behind that.

As per the presentation of Mr. Garnaik he has put one example for aluminum industry and he has bifurcated the energy consumption of 68% to aluminum smelter against 32% of refinery. What will be the basis for this bifurcation? Will it be based on the entire global scenario for it would be based on the industry to industry bases?

Answer

My only intention of making that remark was saying, I should have said tighter targets instead. One has seen that technology changes always. I do not see that in the past ever the technology change has been such that we have started consuming more energy. It has always been in the positive. We would be looking for targets, if you take the three year cycle there will be further reduction on this. That would be an ongoing target on the stricter side. It was the intention. It would be ongoing target in a secular direction. Let us keep an optimistic note on that.

Regarding your second question on 62% and 38% in the analysis I had shown about 11 designated consumers. The apportionment of energy consumption of 62% and 38% has been done the way they consume. Out of the total energy consumed these six smelters consume 62% and the rest five 38%. That was the concept here.

Sector- Railways

Question

The first presentation from you showed commercials and services constitute 43% of energy and industries 40. We don't know why the commercials and services are excluded. When the concept was made then services like railways were included.

Answer

The short answer is they will be. In this cycle they are not; in the next cycle you will see more sectors in which will include those. The point is that the amount of baseline work that needs to be done in those sectors is far more and that they don't do it. Therefore we have been having to do it for them. It is taking much longer than we anticipated. That is why it would move into the next cycle.

Sector - Power Plants

Question

My second question is on the methodology of PAT baseline energy conservation and energy efficiency. You have taken the grid power the multiplication factor of 860 whereas for the captive power you are taking the coal consumed. There is a discrepancy because both are power generations. In fact the captive power generator will be a sufferer because invariably are mostly more efficient than the grid power. If the captive power is wind for other use you are going out of the gate but still it is considered as included into your SECs. If somebody is using hazardous combustibles which are wastes as a fuel then you should get some credit. In the earlier meetings we were told hazardous combustibles are wastes and the municipal solid waste that would qualify for energy certificate credits. But they are not now covered here. I want some clarification on that.

Answer

Regarding grid power to CPP, I agree with your point that the conversion factor has a much important role to play. In one way we are multiplying it with the 860 if you are taking from grid but if you have a CPP I have to take the entire GCD of either oil or the coal depending upon the fuel they use. We are going to introduce a normalization factor for that. If the deviation is more than 20% from grid power to CPP then there will be a correction factor or a normalization factor introduced there. That would be definitely taken care of at the end of the target year as well as in the base year.

If you have got a CPP you are buying coal now and you will be buying coal in the future, for you that is taken care of in the baseline and it will be taken care of in the years in the future if your CPP becomes more efficient that is good. The only problem you will face is if today you are buying 80% from the grid which you rightly said as 860 and three years down the line you are buying only 20% from the grid then your CPP production increases greatly. That is the normalization that Mr. Garnaik talked about. We seek your suggestions on how to do this normalization.

They last question was on wastes. We are still open to the question of how do we handle waste. What we don't want it is to become an escape clause. If there is for example, a third party which is verifying what is waste and what is not we can discuss it with you and see how we can bring wastes because I think I have shared with you that I personally did not agree to the fact that either energy from renewable or energy from waste should be excluded I believe the energy used in the system. However, this is something which happened at the directive of the prime minister himself. I believe that if the intention of the government is that renewable within the plant and to me using waste is a kind of recycling. I will include it in that as long as we can have some kind of a method to make sure that it is actually a waste.

Sector- Cement

Question

It appears from the document that for the cement industry cement would be the only product whereas there are many plants where there are split location grinding units which are not designated consumers. Majority of the clinker produced, to the extent of even 80% is sent to split location grinding unit and cement production is only 10 or 20% from these locations. How the SEC would be calculated in these cases because cement will be very low and SEC will go substantially up because almost 96 – 97% of total power is consumed in producing only clinker.

Regarding product varieties we see that there is no impact of product variety for cement industry. There are products which are OPC, PPC and slag cement. In slag almost 50-60% slag is added in the clinker and in PPC almost 25–35% fly ash is added in the clinker whereas the actual power consumption is almost 96 – 97% in the clinkerisation only. Basically by doing this you will be promoting a particular variety of product and the product which are not having fly ash or slag will be out of the market in the case. This will distort the situation. We should have some kind of differentiation for product varieties as well.

Answer

This is a very valid question. That is why the comparison would be done on the plant basis itself. It is not plant to plant. In this case where you are focusing the clinker produced and very little amount of cement is produced in one of the premises and most of the things are going to the nearby grinding section. In that case we can define that your product would be clinker, not the cement. It depends upon

how the scenario is. So the definition of boundary and definition of the product is very crucial. You have talked about the energy consumption in the clunker and all. Once we take the total plant as a whole I think this is not coming into picture because we are telling from the raw material preparation, clinkerisation and if the grinding in which they are inside the total is taken into consideration.

The target is for your plant alone.

But the relative SEC come from the benchmark which will have probably only the slag cement and the relative figure will be extremely low?

Here we are also using one of the conversions OPC to PPC to PSC and these kinds of conversion factors are there. We are converting it to a equivalent product.

My suggestion is that for these kinds of issues it might be useful to have a manufacturing association meeting so that these kinds of issues are resolved and we find a solution to them. Offhand I can say you could use for SEC in determining the targets you could use clinker as the base. That might be one way of doing it. We need manufacturing association meetings. That would be better.

The quality of coal that you have got has already affected your specific energy consumption. That has been taken in your base.

But in future we don't have any control on the coal quantity.

For the power station we are taking that into account. I don't know whether your designated consumer is a power station or aluminum plant.

Question

If a company is having 3-4 cement plants with similar characteristics and the company wants to report for all the cement plants as a conglomerate will it be allowed?

Answer

Are you asking for reporting or compliance? Reporting each plant will have to do individually. As far as compliance is concerned it is internal e-cert trading. We will issue e-cert to plant A you can use it if plant B doesn't perform. Internally you can decide on the compliance part.

ANNEXURE 1

LIST OF PARTICIPANTS

Sl.No	Person Name	Designation	Company Name
1	Dr Rajesh Nair	Executive Vice President	Acropetal Technologies Ltd
2	Mr Harjeet K Anand	Dy. Director (Tech)	Alkali Manufacturers Association of India
3	Mr L N Goswami	Executive Director	All India Induction Furnaces Association
4	Mr E S Ullas	Executive Director	All India Induction Furnaces Association
5	Mr A. K. Bhargava	Chief Executive Officer	All India Steel ReRollers Association
6	Mr H C Verma	General Manager (Purchase)	Alps India Ltd
7	Mr Man Singh	DGM (Engg)	Alps India Ltd
8	Mr Guneet Singh	Director	Ambuja Cement
9	Mr Diwakar Kukreti	Programme Manager	Ambuja Cement
10	Mr Rajesh Kothari		Ambuja Cement Ltd
11	Mr Surindr Kumar Mahajan		Arti International Ltd
12	Dr A V Singh	President (Distillery Business & EHS)	Bajaj Hindusthan Ltd
13	Mr Ajit Dubey	Senior Chief Engineer	Ballarpur Industries Ltd
14	Mr Ramesh Mishra	Deputy General Manager (Engg)	Banswara Syntex Ltd
15	Mr S S Sajal	Director	Banswara Syntex Ltd

16	Mr Ajit Kumar Dubey	DGM(Electrical)	Bilt Graphic Paper Products Limited
17	Mr. Rakesh Gupta	Dy. Manager(Process)/ Energy Manager	Binani Cement Limited
18	Mr Arvind Jha	Designation : Sr. VP (Production)	Birla Corporation Limited
19	Mr Vivek Sharma	Ventures Manager -Biofuels	BP India Services Pvt Ltd
20	Mr R N Gupta		BSL Ltd
21	Mr Manoj Garg		BSL Ltd
22	Shri M K Pramanik	Sc C (MED)	Bureau Of Indian Standards
23	Mr Prabal Kumar Basu	COO & Director	Caparo Power Pvt
25	Dr S P Ghosh	Advisor(Technical)	Cement Manufacturers' Association
26	Shri Kanchan Kumar Roy Chowdhury	Technical Associate	Cement Manufacturers' Association
27	Mr T C Pandey	General Manager	Century Pulp & paper
28	Mr. Rajnish Chaba	SR. MANAGER -TSE	Chambal Fertilizers and Chemicals Ltd.(Gadepan-II)
29	Mr A Annadurai	Asst. Vice President(Operations)	Chettinad Cement Corporation Ltd
30	Mr Ramesh Subramanyam	CFO/Company Secretary	Coastal Gujarat Power Limited
31	Mr B S Dhabriya	Executive Director	Creative Dyeing & Printing Mills (P) Ltd
32	Mr Kishan Kumar	Senior Executive	Creative Dyeing & Printing Mills (P) Ltd
33	Mr M S Subba Rao	Q.C Manager	Creative Dyeing & Printing Mills (P) Ltd
34	Mr Ashwani Kr Sharma	Manager (Engg)	DCM Textiles

35	Mr Jiwesh Nandan		Energy Efficiency Services Limited
36	Mr M C K Veda	Sc-'F" &Head (Mech Engg)	Energy Management Sectional Committee
37	Mr Ramani Iyer	President	Forbes Marshall Ltd
38	Prof. Tejinder Lamba	Consultant	Freelance
39	Mr Rahul Malhotra	Director	Future Innovations Pvt Ltd
40	Mr Rajesh Gupta	Director	Gauuri Trading Company
41	Mr Dipanshu Gupta	Executive (Business Development)- Power Market	Global Energy Pvt.Ltd
42	Mr L K Singh	Executive Director	GPI Textiles
43	Mr R K Singh	Chief Engineer	Grasim Bhiwani Textiles Ltd
44	Mr.Bilu Singh,	Project Manager	Growdiesel Mission
45	Mr Sanjeev Lowe	General Manager	H P Cotton Textile Mills Ltd
46	Mr S K Gupta	Executive Director	Harshiv Urja Pvt Ltd
47	Mr Vikas Bisla	Managing Director	Harshiv Urja Pvt Ltd
48	Mr Vikas Tusir	Director	Harshiv Urja Pvt Ltd
49	Mr Mohan Singh	Director	Hind Hydraulics & Engineers
50	Mr R J Singh	Asst.Vice President	Hindalco Industries Ltd
51	Mr Rajeev Jhunjunwala	Chief Engineer	Hindalco Industries Ltd
52	Mr T K Singh	AGM-Technical Cell	Hindalco Industries Ltd

53	Mr James Bujold	President	Honeywell India
54	Mr Ashwini Channan	Director –Government Relations	Honeywell India
55	Mr Varun Jain	Director-Policy & Regulatory Affairs	Honeywell International
56	Mr Ravi Agnihotri	DGM(Process)	IFFCO Aonla Unit
58	Mr Tapas Kumar Bag	Sr.Manager	Indo Gulf Fertilisers
59	Mr R K yadav	Manager (commercial and energy efficiency)	Indraprastha Power Genration Company Limited
60	P K Gupta	Manager (projects)	Indraprastha Power Genration Company Limited
61	A K Jha	Manager (project) and energy efficiency	Indraprastha Power Genration Company Limited
62	Mr S K Gupta	Am(C&I) and Manager (Energy)	Indraprastha Power Genration Company Limited
63	Mr Naveen Sharma	General Manager	J K Lakshmi Cement Ltd
64	Mr V K Jain	Chief Technology Officer	Jaiprakash Associates Ltd(Cement Division),
65	Mr Ajoy Sinha	Executive Director	Janki Corp.Limited
66	Mr Lakhbir Malhotra	DGM (Utility)	JCT LTD , PHAGWARA
67	Mr S S Kapoor	Manager (Elect)	JCT LTD , PHAGWARA
68	Mr Tarun Bajaj	Head Production	Jhajjar Power Limited
69	Mr K P Rao	DGM Electrical	Jhajjar Power Limited
70	Mr Kapil Malik	Managing Director	Karan Capillaries Pvt Ltd
71	Mr Sanjay Jain	Vice President	Lafarge India Pvt Ltd

72	Col. Sandeep Sudan	Head-Physical Security Practice	Mahindra SSG
73	Col. Deepak Kajla	Lead Consultant	Mahindra SSG
74	Mr Jai Narayan	Sr.Manager (Engg)	Malwa Cotton Spinning Mills Ltd
75	Mr Vikram Sahgal	Chairman & Managing Director	Micron Instrumentation
76	Ms Rita Acharya		Ministry of Power
77	Mr Uttam K Talapatra	Assistant General Manager	MVL Power Limited
78	Mr Deepak Rana	Manager (Engg)	Nahar Industries Enterprises Ltd
79	Mr Ashutosh Saxena	General Manager	National Council for Cement and Building Materials
80	Mr Rabindra Singh	General Manager	National Council for Cement and Building Materials
81	Mr Jagdeep Shah Singh		National Fertilizers Ltd.
82	Mr Arul Kumaran	Scientist-B	NIC,Ministry of Communications & IT
83	Mr V N Choudhary	Executive Director	NTPC
84	Mr Goving Kumar Mishra		Obra Thermal Power Station
85	Col M S Yadav	Asst.General Manager	P S Bedi & Co Pvt Ltd
86	Mr Sanjay Kapoor	Asst General Manager	P S Bedi & Co Pvt Ltd
87	Mr Prateek Sharma	Business Development Manager	P S Bedi & Co Pvt Ltd
88	Mrs. Rupa Devi Singh	MD& CEO	Power Exchange India Limited
89	Mr. Prabhajit Kumar Sarkar	AVP,Strategy & Product Developmen	Power Exchange India Limited

90	Mr P.Varshney	Senior Vice President, Energy Management	PTC India Ltd
91	Mr S.S. Arora		Rainbow Denim Ltd
92	Ms Swati Gupta	Chief Manager	REC
93	Mr T.Muralidhar	President-Technical(Petroleum & Petrochemicals) Corporate Affairs(Policy/Technical/Regulatory)	Reliance Industries Limited
94	Mr Arun Saini	Director	Sainsons Paper Industries Ltd
95	Mr Rajpal	Sr.Electrical Engineer	Sainsons Paper Industries Ltd
96	Mr H P Mishra	General Manager Electrical	Shakumbhri Straw Products Ltd
97	Mr Sanjay Singh	Energy Manager	Shree Cement Ltd
98	Mr. Vijay Barthwal	General Manager - Head Power	Shree Cement Ltd
99	Mr. Arun Bhalla	Chief Executive - Power Business Development	Shree Cement Ltd
100	Mr Anil kumar	Executive Director & Chief Executive Officer	Shreyans Industries Limited
101	Mr Rajiv Gupta	Chief Executive Officer	Solwin Energy (P) Ltd
102	Mr. P. K. Sinha	Vice President	SPML Infra Limited
103	Mr Inder Jeet Singh	Chief General Manager (Works)	Star Paper Mills Ltd
104	Mr Yogendra Kishore Maheshwari	Dy.General Manager (P&D)	Star Paper Mills Ltd
105	Mr H D Khera	Executive Director	Steel Re-Rolling Mills Association of India
106	Mr V Raghuraman	Director	Suzlon Energy Ltd.
107	Mr A. K. Mathur	Managing Director	Synergics Hydro (India) Pvt Ltd

108	Mr Rajat Goel	Sr.Project Manager	TAFCON Project (India) Pvt Ltd
109	Mr RS Rathee		Tanda Thermal Power Station
110	Shri Vinaya krishna Dixit		Tanda Thermal Power Station
111	Dr S Nand	Director (Technical)	The Fertiliser Association of India
112	Mr Manish Goswami	Director Chief (Technical)	The Fertiliser Association of India
113	Ms Devika Mukherjee	Manager HR & Admin	The Green Mantra Environmental Carbon Solutions Pvt. Ltd
114	Mr. Prashant Bulsu	Country Head- Business Development	The Green Mantra Environmental Carbon Solutions Pvt. Ltd
115	Mr Salil Dutt	Corporate Manager	Thermax Limited
116	Mr T M Aggarwal	President	Transmission Consulting Engineers
117	Mr J K Rajan	Sr.Vice President	TUV Sud South Asia
118	Mr Shatamshu Shekhar	Product Manager	TUV Sud South Asia
119	Mr Sivakumar M	Vice President	TVH Energy Resource Pvt Ltd
120	Mr Mohinder Pratap Singh	General Manager	Ultratech Cement Ltd
121	Mr Bimal K Modi	General Manager	Ultratech Cement Ltd
122	Ms Shivani Raina	Program Coordinator	US India Energy Cooperation Program
123	Mr Deepak Kumar	Executive Engineer	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd
124	Mr D K Singh	Executive Engineer	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd
125	Mr Pradeep Kr Aggarwal	Vice President (Engineering)	Vardham Spinning & General Mills

126	Mr M. Russell Park	Managing Director	Veolia Energy India (Dalkia India)
127	Mr Manish Soni	Program Officer	Winrock International India
128	Mr G S Chawla	Advisor	Yamunapower Pvt Ltd

ANNEXURE 2

ADVERTISEMENT



Confederation of Indian Industry
Since 1895



Interactive Session on National Mission for Enhanced Energy Efficiency (NMEEE)

Date: Thursday, 27 January 2011

Venue: Hotel Taj Mahal, Mansingh Road, New Delhi

Programme Brief

To create awareness about the National Mission for Enhanced Energy Efficiency (NMEEE) and Perform, Achieve and Trade (PAT) Mechanism Ministry of Power and Bureau of Energy Efficiency (BEE) in partnership with Confederation of Indian Industry is organising an Interactive Session which will provide a platform for interactions between the CEOs & CMDs of DCs with senior policy makers from Ministry of Power & Bureau of Energy Efficiency.

Programme Agenda

- Setting and Assigning differential specific energy conservation reduction targets for DC's based upon their existing baseline
- Verification & Certification of SEC reduction in the target year followed by issuance of Energy Saving Certificate (ES-Certs) to the over performing DCs
- Seeking opinion of various stakeholders on PAT consultation document

Target Groups

Levels: CEOs/CMDs of various Designated Consumers (DCs)
DCs: Aluminium, Chlor-alkali, Cement, Fertilizer, Textile, Power Plant, Iron & Steel, Pulp & Paper

Participation by invitation only

For more information, kindly contact: Sunny Mathew / Surender Rai

Confederation of Indian Industry

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