

‘ACT’-ing ON ENERGY CONSERVATION NOW IS OUR COLLECTIVE RESPONSIBILITY.

Energy conservation Initiatives and the Implementation Measures is the collective responsibility of the Govt and the Industry. **First the Govt needs to promote the ECON Initiatives to the industry & society by mandatory approach now and that is the need of the hour. All along, the Govt thro BEE was suggesting only, the ECON measures to the industry.** The same Govt thro BEE had thrust five star ratings of gadgets in the domestic & commercial segment and the point is driven home already.

But compared to domestic & commercial segment energy consumption, the industry is a Energy Guzzler. But the Govt till date, has promoted ECON measures for namesake only. If the same is enforced on the industry, then the industry also will take up the ECON issue practically and achieve the energy reduction year after year thro ECON & Energy Efficiency measures thro Energy Audit route. **Also the industry needs to showcase in detail, their value added ECON & energy efficiency measures in their Company Annual Reporting.**

HOW THE INDUSTRY VIEWS THE ENERGY AUDIT PROGRAM:-

We are surprised at the slack approach of some industries towards energy audit. The big industries do conduct energy audit program for the whole year. That is, they give a call to many energy audit firms in the First quarter starting April. In the second quarter they will discuss with all the energy auditors about the percentage of savings achievable before conducting the audit. i.e. the auditor is supposed to give % reduction in their energy bill by first conducting a preliminary random energy survey. In the third quarter, the process of issuing a work order to the energy auditor happens. In the fourth quarter only, the energy audit will be completed and the post energy audit discussions will take place before the end of March. So one financial year is gone in between just to complete the energy audit formality.

In the next year, the industry plans to implement the zero & low cost energy conservation measures. The same industry will do the paper workings on high cost energy conservation measures for the whole year discussing with the Retrofit vendors related to energy and process segments. Now in the second year after energy audit, the industry will decide to put money on the high cost proposals.

INDUSTRY WAITS FOR ENERGY CONSERVATION TO HAPPEN TO THEM:-

1. Let us study the statistics of HT electricity consumers in all the States, to know how many industries have done at **all energy audit in the last FIVE or TEN years and if at all done, the frequency between any two energy audits will be more than five years.**
2. How many of the industries feel that the energy audit will be definitely helping them to trace their breakdown of energy consumption and find out the amount of energy losses draining silently visibly less first and invisibly more next.
3. First of all, how many industries are in possession of portable clamp on Power Analyzer costing Rs.10,000/- to measure the breakup of electricity consumption. They talk for many years about buying Hi End Power quality Analyser for Rs.2 Lakhs Plus and till date have not even purchased still.
4. Also they are not aware of Infrared Thermal Imager costing Rs.50,000/- & Less to measure and reduce the Hot Spots in Electrical and in the Process & utility as a part of Predictive Energy Monitoring. Apart from EB meter, no other KWH meter costing Rs.2000 + exists in the industry to monitor the consumption.
5. **Industry groups normally don't take the initiative to proceed on the energy conservation proposals.** Unless the industry receives the FIR about the Energy Saver product & its first workings, the industry will not at all try the energy saving gadget / retrofit.
6. **There is no point in trying energy saver at any machine in the industry unless the same industry has a in-situ KWH meter or portable Power meter to measure the electricity consumption before and after installing the retrofit device or fine tuning the same.**
7. **Here we must state the energy conservation device vendors including the MNC over-charge the industry due to the delayed response & acceptance from the industry, when their ECON saver is introduced.** Take the case study of LED tube light sold for Rs.6000 few years back, is now available from many market players for less than Rs.1000 /- that too on BOOT basis.
8. **Here many industries are avoiding the Servo stabilizer for the lighting circuit** because the management feels that their transformer is already voltage regulated by the with OLTC retrofit and that they don't

need the Servo. Now the lighting circuit must be fitted with servo stabilizer (because of their Fast response in voltage correction in seconds), along with Surge Protection Device to avoid Switching Surges to the lighting soft loads.

9. Many industries have gone for bulk purchase of 1000s of LED tubelights. But in each year around 50 no LED tubelights fail due to the above reasons. **Having invested in Million Rs in LED lighting, the industry postpones spending within a Lakh Rs towards the above incoming protections.**
10. In the industry Electrical networks, HT switching, power electronic drives, non linear active loads working etc target to attack the weak spots in lighting distribution and other soft electronic loads and hence SPD are becoming mandatory in many of the sophisticated equipments incoming side. **The image shows that monthly failures of tubelights in a textile mill and after putting the stabilizer, the failures came down drastically.**
11. Similarly, We come across many branded motors IE3, IE 2 versions taken on trial basis; from the motor vendors are running for many months in the industry. A week study before and after can be extrapolated to study the new motor efficiency compared to the decade-old-few-times-rewound motor running in the industry. But still, industries have not initiated replacing their existing motors.



WHY INDUSTRY NEEDS A LIASON TO INTERACT WITH ENERGY AUDITOR?

1. **Even today, the big Industries, with thousands of Crores turnover, still show in their Annual Reports;** the most common ECON measures year after year; the Power Factor Improvements, or the compressor leakage losses arrest, or changing their T 12, T 8, or T5 to LED tube lights. **The industry which talks of energy conservation in lighting etc constant Watt loads even today does not show value addition in their ECON measures achieved thro energy audit route.**
2. If they had not done still, the practice now is that an ISO Auditor will suggest the industry to change the light fittings and they also religiously follow his words. We observe many industries are acting obediently to

their new 5 S implementation team. **They are trying to showcase the improvements to others by this 5 S activity and we want the same enthusiasm to be given to the ECON implementation thro Energy Audit route.**

3. The industry does not need an ISO Auditor or Cost Auditor to show them that the industry is losing internally due to energy losses. Presently, the Finance / ERP / IT related auditors do tell the industry about the abnormal variation in specific power consumption in full / lean production schedules.
4. One to one correspondence of industry management to Energy auditor in the energy conservation is very much essential. Here, Finance auditor, A grade Electrical contractor or a Process Expert etc. do the liaisoning. **On the contrary, all of the above to work in unison like a team to achieve energy conservation. But this is possible only in the case of industry Management taking the initiative to approach the energy auditor directly & transparently.**

GOVT TO PROMOTE STAR RATED EQUIPMENTS TO THE INDUSTRY:-

1. World Bank was planning to fund to Indian Project in 2013, 50 Million \$ towards promoting BLDC ceiling fans instead of conventional fans. When they care for our energy efficiency, what we in our country, can do together to reduce the ceiling fan landed cost to the consumer. **But unfortunately the Less star rated fan costs Rs.1000 + sells more than branded 5 Star fan which costs Rs.2000 +. Above all this, the latest BLDC fan costs around Rs.5000/-**
2. **The vast price difference between 1 star to 5 Star + rated fan is Rs.1000 to Rs.5000 for a ceiling fan shows the need for the Govt to minimize the taxes on 5 Star rated gadgets, appliances and Energy saving devices and equipments to the industry.**
3. For the sake of Electricity saving and safety, the Govt can mandate the industry and commercial establishments to use Servo stabilizers for the Lighting loads to regulate the lighting voltages precisely.
4. **For the sake of LPG saving and safety, the Govt can approve & mandate the domestic cylinder user to use Two stage LPG regulator cum Gas Fuse device for LPG cylinders and this will help to save Rs.5000 Crores Annually by curtailing the domestic subsidized cylinder quantity from 12 to 9.**
5. for the sake of reducing the Link Electricity losses and safety against excess motor current, the Govt can mandate the capacitor to be fixed at or near to the motor end for any motor above 3 HP running without any VFD drives. The Agriculture sector has understood this because this retrofit had been mandated by the authorities.
6. For the sake of reducing the motor to load Belt Link losses & production improvements, the Govt can mandate the motor to machine linkages thro Raw Cogged Edge belts instead of conventional V belts.
7. For the sake of safety and comfort to the industrial sheds, the Govt can make the turbo vents to be installed on all the industry roofs to improve the attic ventilation and especially in their utility areas like DG sheds, compressor house and canteens etc.
8. For the sake of safety during electricity switching line surges, the Govt can mandate the Surge Protection Devices at the Industry Incoming, Lighting distribution boards etc.

GOVT. INITIATIVES IS THE FIRST AND FORE MOST PREQUISITE:-

Till now the pro-active industry which thinks itself that it is losing energy in the process between the end to end say from raw material to finished product, are into energy conservation actively. But for the typical Indian industry, unless the Govt mandates this annual energy conservation plan, the industry will not implement this voluntarily. The industry top management feels why they should try first, when others in the segment have not attempted energy audit route to energy conservation. **They feel that these ECON procedures are to be done for namesake and do not attach any weightage. Atleast from now, the Govt must bring to books, the energy intake by the individual HT industry, the breakup of energy consumption and target on reducing the same.**

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