

SEMINAR ON ENERGY CONSERVATION

- **Organized by MEPCO Officers Mess.**
- **For the Awareness of MEPCO Family Members.**

WHAT IS ENERGY CONSERVATION ?

- **Conservation Of Oil.**
- **Conservation Of Gas.**
- **Conservation Of Electricity.**

Energy Conservation is not a local issue but it is a national rather international issue.

. OIL RESERVES

Regions	End 2006 in M Barrels	Share of Total	R/P Ratio
Middle East	742.7	61.5%	79.5 Y
Europe & Eurasia	144.4	12.0%	22.5
Africa	117.2	9.7%	32.1
South / Cent. America	103.5	8.6%	41.2
North America	59.9	5.0%	12.0

GAS RESERVES

Regions	End 2006 in M Barrels	Share of Total	R/P Ratio
Middle East	73.47	40.5%	100 Y
Europe & Eurasia	64.13	35.3%	59.8
Asia Pacific	14.82	8.2%	39.3
Africa	14.18	7.8%	78.6
South / Cent. America	7.98	4.4%	10.6
North America	6.88	3.8%	47.6
Total World	181.46	100%	63.3

WHAT IS LOAD SHEDDING / SHARING/ MANAGEMENT

1. Deficit between demand and supply.
2. Existing short fall of PEPCO 3000 MW to 3500 MW.

- **IS LOAD SHEDDING FAVOUR MEPCO ?**
NO

Rather it harm!

- . Electricity can not be stored.
- . MEPCO is to be shed about 600 to 800 MW

$800 \times 10^6 \times 1 \text{ HR} \times 6.0 \text{ Rs} / 1000 = \text{Rs. 48 Lac per Hour.}$

- . **Bad name to MEPCO (Main Loss).**

WHY DO WE SHED THE LOAD?

- 1. Our generation system is highly responsive to load.**
- 2. If load increased beyond Limit system will Turn Off OR Collapse.**

IF SYSTEM DAMAGE / COLLAPSE THEN

- Loss of Million Rupees to replace the damage equipment.
- Time Consuming Activity.
- Long time outage / Power Failure.
- So Load Shedding is being done.
- To avoid unavoidable situation, damage of costly equipments and long time outage.

Can load shedding be addressed

HOW

- **Increasing Production i.e. Constructions of Dams / Power Houses.**
- **By conservation of energy (live within available resources) .**
 - **Cut down the supply of Industry.**
 - **Cut down the supply of agriculture consumers.**
 - **Cut down the supply of Hospitals / Emergency.**
 - **Cut down the supply of Domestic / Commercial OR**
 - **To decrease the waste of Electricity during use.**

- **GENERAL USES OF ELECTRICITY**

1. **Illumination.**

2. **Controlling the Temperature.**

- **The sources of Illumination are**

1. **Natural source i.e. SUN.**

2. **Artificial Source i.e. Electricity.**

ELECTRICITY CAN BE CONSERVED BY

- 1. Observing solar day and night system.**
- 2. Usage of Energy Saver instead of Bulbs.**
- 3. Using of Light when needed, only on working place and not for whole room / area.**
- 4. Usage of standardized appliances.**
- 5. Switch of the Light / Fan / AC when you are out.**
- 6. Avoid to use appliances in standby mode.**
- 7. After charging the Mobile, Charger should be removed from the socket.**
- 8. Thermostat of AC should be selected at low level.**

- 9.** Avoid to use Electric heater - - **main Electy: Waster .**
- 10.** Decoration Light should be switched off.
- 11.** Iron should not be used in peak hours and Automatic Iron should be used if extreme necessary.
- 12.** Wastage of more water in wash rooms - - **Waste Electy:**
- 13.** AC should be avoided in nights cooling may be observed through windows.
- 14.** During the use of AC, room should be air locked and AC should be kept on sleep mode.
- 15.** Houses should be constructed according to the new technology by using the sun light and fresh air.
- 16.** Measures be taken to resist the heat transfer from room to outside and vice versa.

LOSS DUE TO STAND BY MODE

- **One TV takes 4 watt in stand by mode**
 $35,00,000 \times 4W \times 10Hrs/1000 =$
1,40,000 Units (140 MW).

LOSS DUE TO CASUALNESS.

- **One Fan and One tube light remained on even no person is available**
 $35,00,000 \times 120W \times 10Mint/1000 \times 60$
 $= 70,000$ Units (70 MW).

ELECTRICITY CONSERVATION SUMMARY

Description	Load (Amp)	Monthly Units 20% L.F	Monthly Saving	
			Units	Rupees
Bulb 100W	0.8	24	0	0
Tube Light 40W	0.4	12	12	43.82
Energy Saver 18W	0.1	3	21	76.69
Sub-Stdndrd. Lal Pump	6.5	712	0	0.00
Standard Lal Pump	4.5	493	60	219.11

WHY WE SAVE ELECTRICITY WHEN WE ARE PAYING THE BILL

- **Saving / Conservation is inbuilt in the nature of human being.**
- **All the peoples have the right to share in the natural resources.**
- **One MW wastage of energy cost 62 Million US Dollar to generate it.**

TIME REQUIRED FOR CONSUMING ONE UNIT

APPLIANCE	TIME
80 Watt Fan	12 Hours
1000 Watt Electric Iron	1 Hour
120 Watt TV	8 Hours
Medium Refrigerator	10 Hours
100 Watt Bulb	10 Hours
Red Water Pump	1 Hour
1 Ton AC	40 Minutes
Tube Light	30 Hours
18 Watt Energy Saver	56 Hours

MONITORING AND SURVEILLANCE

- **Energy Conservation Societies may be constituted at Division, Circle / MEPCO Level having the representation of local bodies, civil society etc.**
- **Mobile Van to Disconnect the Billboards, Extra Lights etc during peak hours.**
- **Elimination of Theft of Electricity.**

MOTIVATION TECHNIQUES

- **Competition of energy saving with some rewards among MEPCO Families, Public Man, Students etc.**

THANKS