



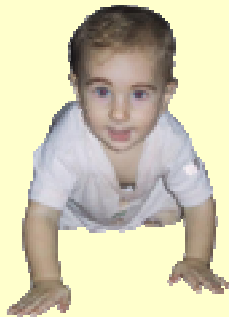
Electrical Energy Management



Realizing The Potential

It's nice to see a
baby crawling.

Not Business !



**A Profitable Business
Needs to **RUN****



**I wish our market share
improved like this!**



But?

Tough Challenges



**Ever fluctuating raw material
cost contribute to uncertainty?**



**Efficient work force
add to expenses?**



**Ever rising overheads
pulls you down?**



High Competition

**None of these
are really
controllable**



**Fortunately Electrical Power
is Controllable**

WHY MANAGE POWER?



Power is Scarce and Costly

WHY MANAGE POWER?

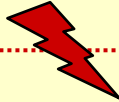
**Quality of Power Enhances
Overall Performance**

**Half of the Energy Produced
in the World is Consumed by INDUSTRY**

**Machinery Utilizing Electrical Power
Accounts Nearly 90 % of Consumption**

**An Average of 10 to 30 % of Energy is
Wasted Through Poor Management
Practices**

WHY MANAGE POWER?



Wasted Energy is only Part of the Problem.

Poor Quality of Power Disrupts Plant Productivity Leading to Costly Raw Material and Production Losses

MANAGING POWER

COMMON INEFFICIENCIES INCLUDE:

- **Severe Fluctuations in Voltage**
- **Leaks/losses at both Point of use and Supply side Equipment**
- **Indiscriminate use of Electricity**
- **Transformer Losses**
- **Simple Lack of Maintenance**
- **Inappropriate use of Power**
- **Lack of Integrated System Control to Improve Quality, Eliminate Losses & Regulate Usage.**

MANAGING POWER

The Tough Question to ask in these Plants is how much Production Revenue must be Generated Annually in Order to do Nothing ?

This certainly does not make production at any cost a sound reason for having a poorly operated and configured plant electrical system.



MANAGING POWER

The Supply and Demand Sides of a Manufacturing Facility do not Work Independently of each other. They Work/ or often Don't Work Together as a System.

The Entire Electrical System therefore should be ANALYSED, MONITORED and CONTROLLED

MANAGING POWER

**Demand is the most Misunderstood Part of
the Plant Electrical System**

**“CONTROL” is Generally Limited to
Controlling Electrical Parameters to Avoid
Penalties Rather than Optimize Usage**

MANAGING POWER

**There are no Standard Guidelines for
Reining in other Electrical
Parameters**

**Without Information or Education none of
this is Perceived as a Problem because it
Cannot be Defined or Quantified**

Potential for Energy conservation...

Industries	Energy share in production cost (%)	Conservation potential (%)
Refineries	1.0	8-10
Sugar	3.4	25-30
Ferrous foundry	10.5	15-20
Textile	10.9	20-25
Petrochemical	12.7	10-15
Chlor-alkali	15.0	10-15
Iron and steel	15.8	8-10
Fertilisers and pesticides	18.3	10-15
Pulp and paper	22.8	20-25
Glass	32.5	15-20
Ceramics	33.7	15-20
Aluminium	34.2	8-10
Cement	34.9	10-15
Ferro-alloys	36.5	8-10

POWER HUNGRY ?



**PEAK LOAD
(Mw)**

**ENERGY CONSUMPTION
(Gwh)**

2003 -04

2011 -12

2003 -04

2011 -12

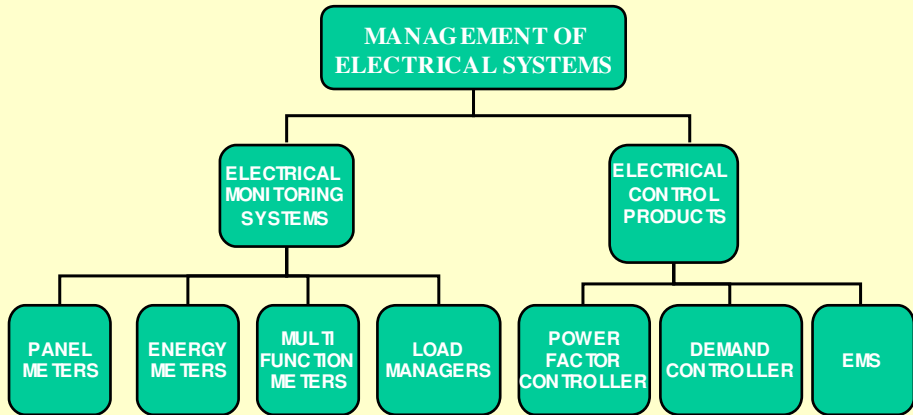
	2003 -04	2011 -12	2003 -04	2011 -12
ALL INDIA	75756	152746	362799	755847
NORTH	22346	48137	97889	222668
SOUTH	22127	40367	107427	211732
EAST	8664	19088	36968	87521
WEST	23055	47108	116641	223035

Potential for Energy conservation...

Energy cost being one of the primary costs of production, a pragmatic approach to conserve energy by the industry can bring down its cost to a great extent.



The ELMEASURE APPROACH





ELMEASURE APPROACH

- ◆ **Electrical system problems require total solutions.**
- ◆ **A professional organization will help identify system problems, whether they are in demand, distribution or supply, allowing one to develop cost-efficient solutions that meet return on investment goals.**



WRAP UP..

ELMEASURE

ELMEASURE

Innovative Products
Technical Strengths
Proven Business Processes
International Benchmarking
Certifications



Ready to Work with You

