

Aditya Birla Chemicals (India) Ltd.

Renukoot

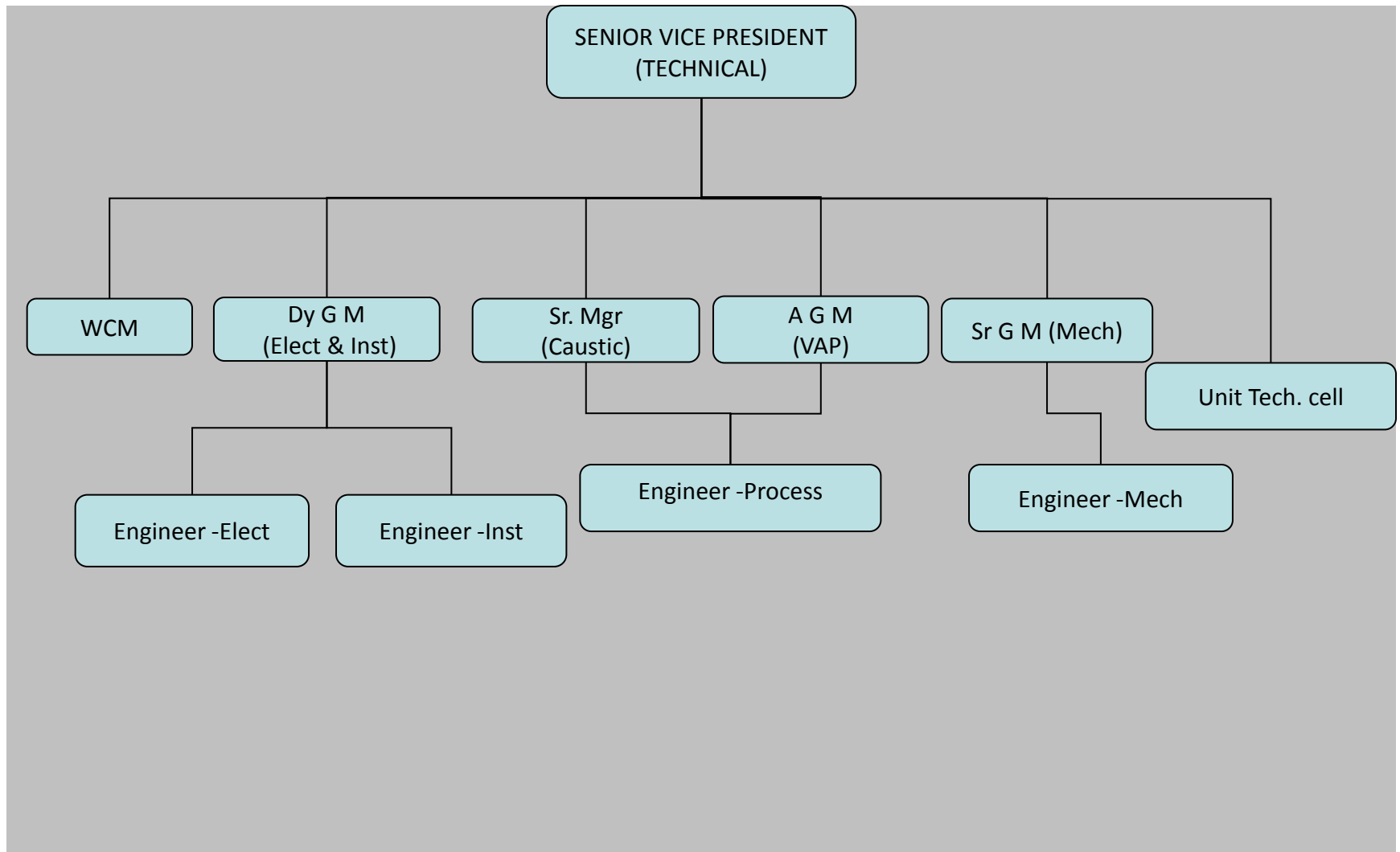
Best Practices - Energy Conservation

Integrity | Commitment | Passion | Seamlessness | Speed

ABCIL, Renukoot



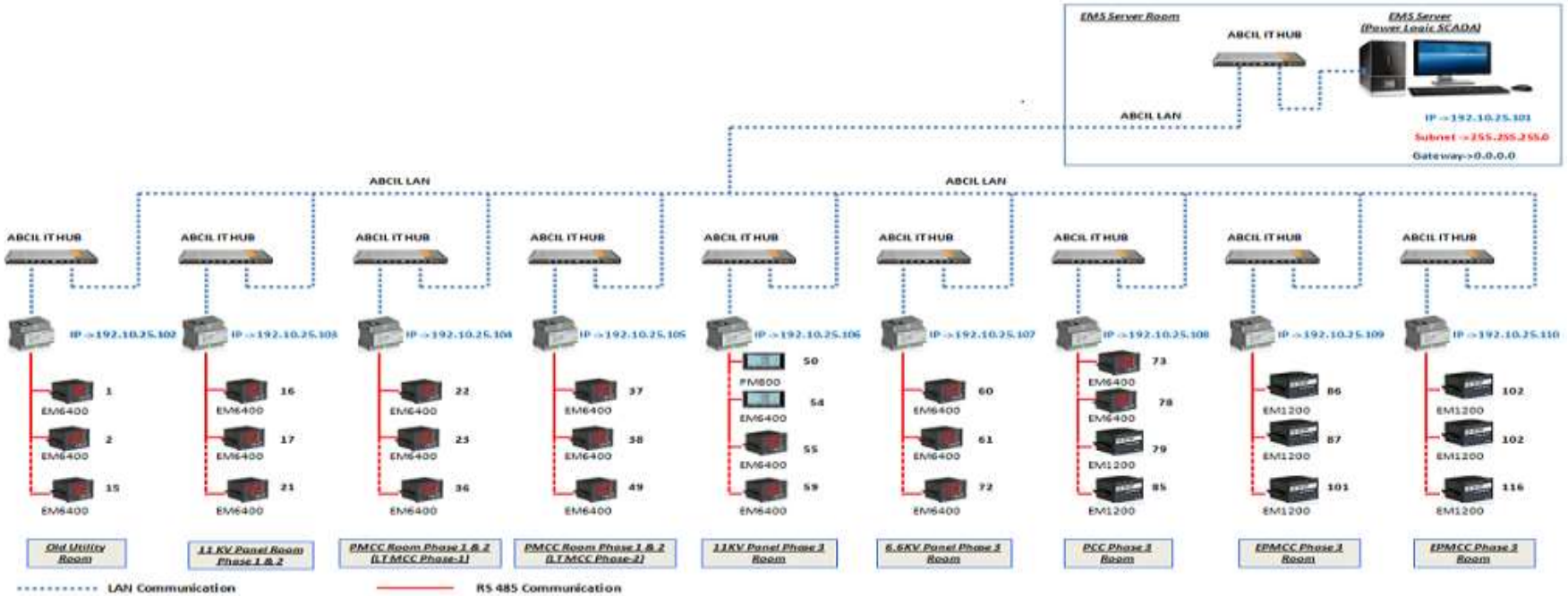
- A clear, well defined Energy Conservation Policy of the unit, spelling out the focus of the top management & involvement of all Employees.
- The Energy Conservation Policy is in Line with the group's vision on Sustenance and World Class Manufacturing practices.
- Operational Efficiencies, Focused improvement & Training are key drivers that Flows out from the Policy.





Annual Plan & Budget

- Energy Conservation Schemes are planned one year ahead & separate budget allocation as per schemes.
- The schemes are monitored on a regular basis by the Energy Conservation team as well as by The top Management(The Apex Committee)
- Schemes are derived from Employees' suggestions, brainstorming by the Energy Conservation Team, Inputs from technical cell as well as synergy contribution from the group's other units..



- Energy Monitoring System: Automatic Monitoring in real Time
- Monthly, Weekly Daily, Shift wise, Hourly energy reports.
- Trends & Graphs give quality analysis.
- 140 equipments monitored; Further 150 equipments planned to be taken on line.
- Operational Inefficiencies, Line Losses, Bus Losses are identified as a result & systematically reduced.



V th B Generation Membrane Cell of UHDE Germany: Installed at Phase I Electrolysers & Phase 3 Electrolysers.

Adoption of latest Energy Efficient Systems:

- Super Premium Energy Efficient IE4 Motors: 22 Motors being Installed; one 110 KW motor ordered from Brazil & Installed as manufacturing in India is still at incipient stage & limited up to 22 KW 4 pole motors
- Induction Lighting.
- VFDs on Innovative applications such as vibrators to control salt feed rate



Improving Operational Philosophy & Integration of Main Utilities Have Resulted in Dramatic Reductions in Energy Costs & peak Operational Efficiencies



Brine Integration: Integration Of Brine Circuits of Membrane I, II & III has resulted in substantial reduction of energy as well as enhanced operational efficiencies. Reduction in number of drives & utilisation of full potential. Lower manpower, lower maintenance costs, operability are other additional benefits

Air Integration: Stoppages of air compressors & running of highly efficient compressors after integrating air lines.



Two Cooling towers Pumps of capacity in Membrane cell I & II replaced with single pump by rationalising head with flow requirement.

Similar Exercise carried out in Membrane III phase where 2 pumps were running & now only one pump. Substantial savings obtained.

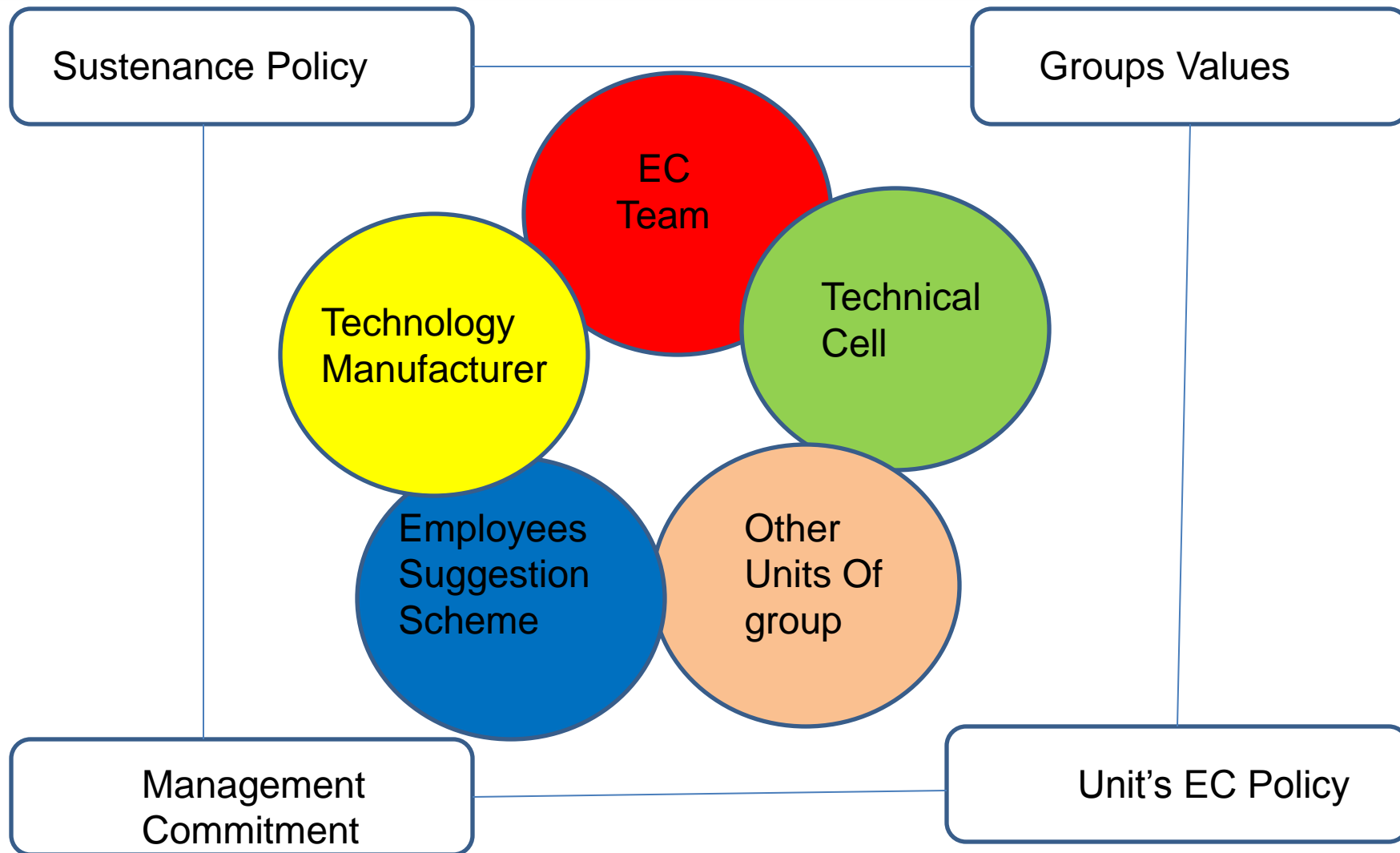


VFDs in Cl₂ Compression: Use of VFD for Cl₂ Compression has not only saved substantial energy but has brought about a paradigm shift in operational efficiency.

Chilled Water Pump Replacement: Pump replaced matching flow & head requirement.

Additional electrolyser added to bring down current density & save substantial power.





Thank you!