Energy Management and Plant Efficiency

1. Purpose

To establish a structured framework for managing energy efficiently across all manufacturing plants of Deepak Nitrite Limited, with the objective of reducing energy intensity, lowering emissions, and achieving operational excellence.

2. Scope

This policy applies to:

- All manufacturing units, utilities, and support functions of Deepak Nitrite Limited.
- All employees, contractors, and service providers involved in operations, maintenance, or project activities.

3. Objectives

- Achieve measurable reduction in specific energy consumption (SEC).
- Optimize plant efficiency by reducing energy losses in processes, utilities, and equipment.
- Increase the share of renewable and cleaner energy in overall consumption.
- Integrate energy management into day-to-day plant operations.
- Support Responsible Care®, ISO 50001, and ESG commitments.

4. Guiding Principles

- **Efficiency First** – Prioritize low-energy and high-efficiency equipment in design and operation.
- **Continuous Monitoring** – Regularly track, analyze, and benchmark energy data.
- **Lifecycle Approach** – Consider total energy cost and impact in procurement and project design.
- **Employee Ownership** – Engage all employees in identifying and implementing energy-saving opportunities.
- **Innovation Driven** – Adopt digital tools, automation, and best-available technologies to enhance efficiency.

5. Energy Management Framework

5.1 Governance & Accountability

- **Board / Sustainability Committee**: Approves energy targets and reviews performance.
- **Corporate Energy Management Team (CEMT)**: Sets annual energy strategy, ensures implementation across plants.
- **Plant Energy Management Cell (PEMC)**: Executes energy initiatives at site level, led by Plant Head and Energy Manager.
- **Energy Champions**: Identified in each department to drive awareness and initiatives.

5.2 Key Focus Areas

A. Process Optimization

- Conduct periodic energy audits and implement findings.
- Optimize process parameters (temperature, pressure, flow) to minimize energy wastage.
- Improve heat recovery through waste heat boilers, condensate recovery, and heat exchangers.

B. Utility Efficiency

- Upgrade boilers, compressors, pumps, and motors with high-efficiency models.
- Maintain optimum loading of equipment and minimize idle running.
- Implement Variable Frequency Drives (VFDs) and efficient cooling systems.

C. Renewable & Cleaner Energy

- Install solar/wind power projects within feasible capacity.
- Explore biomass or other clean fuels for boilers and furnaces.
- Transition progressively from coal/furnace oil to gas-based or hybrid solutions.

D. Energy Monitoring Systems

- Deploy smart meters and automated energy management systems (EMS).
- Benchmark SEC against best-in-class industry practices.
- Implement real-time dashboards at plant level.

E. Employee Engagement

- Conduct periodic training and awareness campaigns on energy saving.
- Launch suggestion schemes to capture innovative ideas.
- Recognize and reward departments/teams for energy-saving achievements.

5.3 Targets & KPIs

- Reduction in Specific Energy Consumption (SEC) (kWh/MT of product).
- % share of renewable energy in total consumption.
- % reduction in GHG emissions linked to energy.
- Number of energy-saving projects implemented annually.
- Employee participation in energy initiatives.

5.4 Reporting & Review

- **Monthly**: Plant Energy Management Cell reviews performance vs targets.
- **Quarterly**: Corporate Energy Management Team consolidates plant reports and submits to Sustainability Committee.
- **Annually**: Company-wide energy performance reviewed by Board and disclosed in Sustainability/ESG reports.

6. Continuous Improvement

- Adopt Energy Management best practices across all plants.
- Conduct periodic internal/third-party energy audits.
- Benchmark against leading chemical industry peers.
- Invest in R&D and pilot projects for breakthrough efficiency improvements.

Through this structured Energy Management & Plant Efficiency framework, Deepak Nitrite Limited reinforces its commitment to responsible care, sustainability, and operational excellence. Every plant, every process, and every employee shall contribute towards reducing energy intensity and supporting India's low-carbon growth vision.



Chief Manufacturing Officer
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