

NECTAR LIFESCIENCE LIMITED

Unit-II, Mohali (Punjab)

Unit Profile

Nectar Lifescience Ltd a **manufacturer of a Lactam based antibiotics**. It was incorporated in the year 2004. Nectar Lifesciences Ltd. (NLL) is a knowledge driven organization which constitutes a vital part of fast growing Indian Pharmaceutical Industry. In a short span of existence, NLL has today emerged as 365 ranked organization amongst the top 500 Indian Corporate & is currently among top 25 fore runners of the Indian Pharmaceutical industry with a top 5 ranking in the Indian Bulk Drug Industry from a stand alone Active Pharmaceutical Ingredients (API Manufacture) perspective.

MORE ABOUT THE COMPANY

■ **Technical Capabilities**

The company has a large technical design, Project and Engineering department, which are well equipped with modern engineering tools, such as process simulation, optimization. All plant expansions, modernization & designs are mastered and improved from the basic technology received through the licenser. The group has the capability to offer basic and detailed engineering services for its range of plants & products.

■ **Self sufficiency on Power front**

The company has installed adequate captive power generation capabilities through Steam Turbines and Diesel Generating Sets to ensure uninterrupted operation of the plants while utilizing the co-generation concept.

■ **Certifications**

ISO 50001, ISO 9000, ISO 14000, OSHAS 18001, ISO 22000, EUGMP, EDQM & ANVISA certifications.



Energy Consumption

The company has accorded top priority for minimizing energy consumption by putting consistent efforts towards optimization of operating / process parameters, modernization / up gradation of plant / equipment. The main energy source is in the form of biomass, HSD and electricity. The company has 100 % self-sufficiency on power front.

The annual Specific Electrical Energy consumption (kWh/tonne) and Specific Thermal Energy consumption (Million Kcal/tonne) for the year 2013-14 was 21519 kWh/tonne and 136.88 Million kcal/tonne respectively and for the year 2014-15 it was 17774.12 kWh/tonne production and 108.57 Million kcal/tonne respectively. Continuous efforts have brought down the figure of Electrical consumption and Thermal Energy consumption w.r.t previous year (2013-14) by 17.4% and 20.68% respectively, Indicating a significant reduction in the Thermal and Electrical consumption as compared to previous years, in spite of rising prices of fuels and higher production levels. This has become possible by optimization of process parameters, technology innovation, R & D at the plant level and through analysis of Energy data at various levels.

The power consumption and energy consumption trends for the last two years are tabulated below:

Description	Unit	2013-14	2014-15
Electrical Energy	Lacs kWh	281.1	324.2
Production	tonne	1306	1824
Power Consumption	kWh/tonne	21519	17774
Percentage reduction in Power consumption	%	17.40	
Thermal Energyconsumption	Million Kcal/Year	178767	198037
Specific thermal Energy consumption	Million Kcal/tonne	136.88	108.57
Percentage reduction in Thermal consumption	%	20.68	

PROPOSED ENERGY SAVING PLANS

- Additional Refrigeration system of (-70 deg C) Mechanical vapour compression system using screw compressor in two stages coupled with Libr VAM having capacity 30TR instead of Liquid Nitrogen.
- Process and street lights to be replaced with LED to save Electricity.
- Company is planning to introduce a system to reduce the moisture content in Rice Husk by 4-5% so that fuel energy can be minimize.
- Planning to provide VFD's for 100 KW Motors and above, wherever applicable.
- Replacing steam ejector system with dry vacuum pumps.

Energy Conservation Achievement

NLL has consistently achieved reduction in Energy consumption at the same time increasing production and productivity consistently. The company has bettered their own earlier achieved specific consumption, Various Energy Conservation schemes in house & suggested by external agencies were taken up on

Project description	Achievement of Annual energy savings in 2014-15						Investment incurred on the project Rs. (Lakhs)
	Electricity	Fuels*				Total savings (Rs. Lakhs)	
	(Lakh kWh)	Coal (tonnes) (Rice Husk)	F.Oil (kL)	Gas (lakh Nm ³) (Liquid Nitrogen)	Total fuel (MTOE)		
(i) Please list the projects title names which were implemented during the year saving against each projects in the suitable columns. (ii) Please mention the achievement of energy							
Replacing the Liquid Nitrogen system to Mechanical vapour compression system using screw compressor in two stages coupled with Libr vapour absorption system	-	-	-	5309174.00	-	342.00	160.00
Energy saving to put DSH (De Superheating station)	-	1395	-	-	-	66.29	0.00
Installing correct size cooling tower pump to supply CHW VAM.	4.94	-	-	-	-	35.30	4.50
Optimize the capacity of CT Pump No 5 in Sterile Utility.	1.95	-	-	-	-	13.94	0.20
Change Temperature setting of Cooling Tower Fans.	0.14	-	-	-	-	0.99	0.00
Installing a correct size Cooling tower Pump No 45.	2.94	-	-	-	-	21.02	2.20
Modify Suction & install correct size of CT Pumps	1.68	-	-	-	-	12.01	5.00
Avoid Recirculation and throttling at Reflux circulation pump	0.76	-	-	-	-	5.41	0.40
Optimizing Plant voltage Level at 400V	6.65	-	-	-	-	47.57	4.00
Power Factor in MCC Panel	2.30	-	-	-	-	16.47	3.50
Waste heat recovery from steam condensate and pre heating the feed of distillation column	-	495	-	-	-	5.94	5.00
14 watt CFL replaced instead to 60 Watt Bulb	4.26	-	-	-	-	30.48	1.70
VFD on FD fan, Boiler Feed Pump, Cooling water pump	14.26	-	-	-	-	101.93	25.00
Installing VFD in CT Pumps,compressor,centrifuges.	8.23	-	-	-	-	58.84	12.60
Replacing Steam & water Jet Ejector with Dry vacuum pump	-	1152	-	-	-	13.82	12.00
Replacing the water vacuum pump with dry vacuum pump	0.15	-	-	-	-	1.06	4.50
Total	48.25	3042.00				773.07	240.60

continuous basis; as a result there is a steady decline on the energy consumption of its major products as

INNOVATIVE PROJECT

Replacing the Liquid Nitrogen system to Mechanical vapour compression system using screw compressor in two stages coupled with Libr VAM. Cost Saving 3.42 Crores

This Project is going to get Published in ISHRAE Journal in 2016 because of its unique nature.

Energy Policy



ENERGY CONSERVATION POLICY

At Nectar we are committed to energy conservation for all its products and related operations.

Efforts will be made to reduce energy consumption in every possible ways as under.

To meet the above goals we will strive for:

- Replacement of energy inefficient equipments with energy efficient equipment
- Nurturing energy efficient design, technology for all future acquisition, where ever practicable.
- Enhancing utilization of renewable energy resources and feedstock where ever feasible to reduce environmental emissions .
- Closely monitoring and controlling the energy consumption by utilizing effective management system.
- Up gradation of process, technology and equipment .

27th July 2015

Sanjiv Goyal

Managing Director