



## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>UPS For Critical Loads</b>	Sector .....FOOD.....			
Year to be filled by BEE		Technology ...Fuel Saving / Alternate Fuel.....			
Description of the energy conservation measure:					
<p>There are two sources of power in the plant – State Electricity Grid and Captive DG's. Due to Poor reliability of State Grid, High Critical load of the plant, 1400 kW was operated with DG &amp; Grid in Synchronization. The Project was to install a UPS system of 1800 kVA for the high Critical load. This is the first time a UPS system is being used for Major Industrial drives of such a high rating. This has limited DG running to only total grid power outage and has reduced Diesel consumption by almost 3.5 kL/Day. Additionally, it has resulted in Power savings through reduced running of DG Auxiliaries and has reduced Air emissions</p>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): In-house.					
Total investment, Rs.: <b>1,53,00,000</b>			Year of implementation: 2007		
First year energy cost savings, Rs.: 79,18,000					
First year other savings, Rs.:-					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	HSD (kL)	Other
Energy consumption before (For Handling Critical loads)	-			490	(Note that Usage of HSD has been repl by Grid power)
Energy consumption after	1764			-	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	4.3			32000	Rs.4.3 per unit as against Rs.9.00 on HSD
Company complete address: GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone, Village Khewra, Sonapat-Meerut Road, PO Bahalgarh, Sonapat - 131001.Haryana.					
Energy Manager: K.G.Harish					


## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b><u>Improvement in Plant Operational Efficiencies</u></b>		Sector .....FOOD.....			
Year to be filled by BEE			Technology ...Efficiency Improvements.....			
Description of the energy conservation measure:						
<p>Various continuous improvement initiatives have been taken to improve the Operational efficiency of the Plant by more than 20 % over the previous year. This has resulted in improved throughput of the plant by 20%, thereby reducing plant Operating Days by 30 days in the year to deliver same volume.</p>						
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification			
Agency that executed the project (with complete address and email): In-house.						
Total investment, Rs.: <b>35,00,000</b>			Year of implementation: 2006&2007			
First year energy cost savings, Rs.: 2,08,33,000						
First year other savings, Rs.:-						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	RFO (kL)	Other	
Energy consumption before	7923			3302		
Energy consumption after	6458			2692		
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	5.5			20900		
Company complete address: GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonapat-Meerut Road, PO Bahalgarh, Sonapat - 131001.Haryana.						
Energy Manager: K.G.Harish						

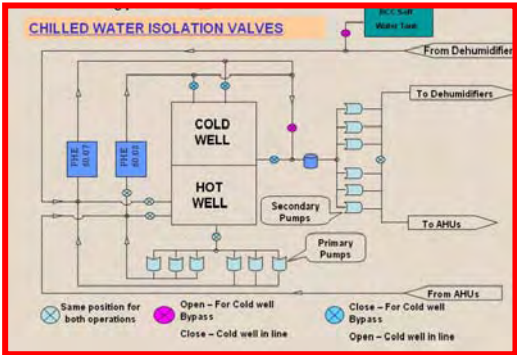
## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b>Solar Heating for Laundry and Canteen</b>	Sector .....FOOD.....
Year to be filled by BEE		Technology ...Renewable Energy.....
<p>Description of the energy conservation measure:</p> <p>Laundry applications for the Site were operated on Boiler and electric heating system. Similarly, Hot water requirements of Canteen were met through LPG heating. Solar Water Heaters have been installed in Laundry and Canteen Areas which ensures all hot water requirements for these areas is now met through the Solar Water heaters.</p>		
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>	
		
Agency that executed the project (with complete address and email): In-house.		
Total investment, Rs.: <b>250,000</b>		Year of implementation: 2006
First year energy cost savings, Rs.: 120,000		
First year other savings, Rs.:-		
On annual basis	kWh 000'	Coal (Tons)
Energy consumption before	<b>23,600</b>	
Energy consumption after	-	
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	5.50	
Company complete address: GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone, Village Khewra, Sonapat-Meerut Road, PO Bahalgarh, Sonapat - 131001.Haryana.		
Energy Manager: K.G.Harish		







## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b><u>Installation of Harmonic Filters.</u></b>	Sector .....FOOD.....			
Year to be filled by BEE		Technology ...New technology .....			
Description of the energy conservation measure:  <p style="margin-left: 40px;">The Plant has a high population percentage of Non linear loads, which was adversely impacting Power quality and also resulting in higher Energy Consumption. A Harmonic Study was initiated for the entire plant and Harmonic Filters were installed at a Cost of INR 46 Lacs. This has resulted in improvement in Power quality to defined norms and has resulted in Energy saving of approx 1.25 Lac units per annum.</p>					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
					
Agency that executed the project (with complete address and email): In-house.					
Total investment, Rs.: <b>46,00,000</b>	Year of implementation: 2006-07				
First year energy cost savings, Rs.: 5,50,000					
First year other savings, Rs.: -					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	RFO (kL)	Other
Energy consumption before	8262				
Energy consumption after	8139				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	5.50				
Company complete address: GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonapat-Meerut Road, PO Bahalgarh, Sonapat - 131001.Haryana.			Energy Manager: K.G.Harish		

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b><u>Optimization in Refrigeration System</u></b>	Sector .....FOOD.....			
Year to be filled by BEE		Technology ...New technology .....			
Description of the energy conservation measure:  <p style="margin-left: 40px;">The original configuration of the Refrigeration system was through a Hot well and Cold well arrangement. While this was first modified to a Common Well system by elimination of Hot well, subsequently, this has been modified to a Closed Loop system by eliminating the Cold well also. The schematic is as indicated. This has reduced the pumping Load by 70 kW.</p>					
<b>Picture/ sketch/ drawing before modification</b> (if available)	<b>Picture/ sketch/ drawing after modification</b>				
	 <p style="font-size: small; text-align: center;"> <span style="color: blue;">⊗</span> Same position for both operations     <span style="color: magenta;">⊗</span> Open - For Cold well Bypass     <span style="color: blue;">⊗</span> Close - For Cold well Bypass  <span style="color: magenta;">⊗</span> Close - Cold well in line     <span style="color: blue;">⊗</span> Open - Cold well in line </p>				
Agency that executed the project (with complete address and email): In-house.					
Total investment, Rs.: <b>2,00,000</b>	Year of implementation: 2007				
First year energy cost savings, Rs.: 2,35,200					
First year other savings, Rs.: - 12,00,000					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	RFO (kL)	Other
Energy consumption before	470				
Energy consumption after	235				
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	5.50				
<p>Company complete address:  GlaxoSmithkline Consumer Healthcare Ltd.  14km Stone,Village Khewra,  Sonapat-Meerut Road, PO Bahalgarh,  Sonapat - 131001.Haryana.</p> <p>Energy Manager:  K.G.Harish</p>					

## Energy Conservation Measure implemented in 2006-2007

ID to be filled by BEE	Title of the measure <b><u>Lighting</u></b>	Sector .....FOOD.....				
Year to be filled by BEE		Technology ...New technology .....				
Description of the energy conservation measure:  A rationalization study and review was done for lighting in the plant in terms of Usage and required lighting levels. Basis the recommendations of the study, 55 Nos. of 70 W HPSV Fittings were replaced by 11 W CFL's, 400 W Mercury vapor Lamps replaced by 250W.						
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification					
	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;"><b>BEFORE</b> 70 W HPSV</td> <td style="text-align: center; padding: 5px;"><b>AFTER</b> 11 W CFL</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </table>		<b>BEFORE</b> 70 W HPSV	<b>AFTER</b> 11 W CFL		
<b>BEFORE</b> 70 W HPSV	<b>AFTER</b> 11 W CFL					
						
Agency that executed the project (with complete address and email): In-house.						
Total investment, Rs.: <b>50,000</b>	Year of implementation: 2006					
First year energy cost savings, Rs.: 225,000						
First year other savings, Rs.:-						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm <sup>3</sup>	RFO (kL)	Other	
Energy consumption before	33560					
Energy consumption after	6810					
Energy tariff, Rs/ kWh/ Ton/ Nm <sup>3</sup> / kL ...	5.50					
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Energy Manager: K.G.Harish						