



Energy Conservation Measure implemented in 2007-2008

(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure	Sector:FOOD.....			
Year to be filled by BEE	New FBC Coal Fired Boiler replacing RFO Boiler	Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
<p>Description of the energy conservation measure:</p> <p>The plant met steam requirements through an RFO based Boiler, that was operating at an efficiency of 77%. This boiler has been replaced by an Energy efficient FBC Boiler. Moreover the Boiler has reduced overall Steam consumption by 0.5 Tons/hr due to internal Steam requirement on Oil Fired Boiler.</p> <p>Apart from this this, there is also large saving due to Fuel Substitution. While the Cost of Steam in the RFO Boiler was Rs. 1800/Ton of Steam (at an average RFO cost of Rs.25/kg for the year), the FBC Boiler generates steam at Rs.0.8 / kg.</p>					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): Cethar Vessels & GSK					
Total investment, Rs.: 9,01,30,000			Year of implementation: 2008		
First year energy cost savings, Rs.: 7,56,87,000					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kg)	Other
Energy consumption before	1160			6324	
Energy consumption after	2176	14486			(Note that apart from Fuel Substitution, There is benefit on increased Boiler Efficiency & reduced Steam consumption)
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2	5000		25000	
<p>Company address:</p> <p>GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.</p> <p>Energy Manager: K.G.Harish</p>					

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ID to be filled by BEE	Title of the measure		Sector:FOOD.....			
Year to be filled by BEE	Plant Efficiency Improvement		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
Description of the energy conservation measure:						
<p>The plant conducted extensive trials to increase the inputs solids further so as to reduce the energy required for drying, resulting in improving plant throughput from 80 Tons per day to 86.5 Tons per day. The plant had to replace certain motors and pumps based on their revised optimum operating points.</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.: 22,78,000			Year of implementation: 2007			
First year energy cost savings, Rs.: 95,19,000						
First year other savings, Rs.:						
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other	
Energy consumption before	13058	11093				
Energy consumption after	12105	10224				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2	5000				
Company address:						
<p>GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone, Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.</p>						
<p>Energy Manager: K.G.Harish</p>						


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ID to be filled by BEE	Title of the measure	Sector:FOOD.....			
Year to be filled by BEE	Reduction in Plant C/O and setup times	Technology : Efficiency Improvement			
Description of the energy conservation measure:					
<p>The plant has improved Cleaning-In-place cycle time from 44 hrs to 48 hours, ensuring more effective plant run time and improving throughput, which is an effective 2 days of reduction in production time per annum at current volumes.</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.: -			Year of implementation: 2007.		
First year energy cost savings, Rs.: 7,56,87,000					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	12105	10224			
Energy consumption after	12007	10128			
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2	5000			
Company complete address:					
GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.					
Energy Manager:					
K.G.Harish					


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ID to be filled by BEE	Title of the measure 300 kVA UPS For Critical Loads	Sector:FOOD.....			
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
Description of the energy conservation measure:					
With increasing loads, the plant Critical load increased by 220 kW for which DG was required to be operated to ensure uninterrupted power. The Site installed a 300 kVA UPS so as to eliminate DG running, thereby reducing HSD consumption in the plant more than 286 kL annually.					
Picture/ sketch/ drawing before modification (if available)	Picture/ sketch/ drawing after modification				
					
Agency that executed the project (with complete address and email): Inhouse / PCI Ltd.					
Total investment, Rs.: 35,00,000	Year of implementation: 2008				
First year energy cost savings, Rs.: 46,29,000					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	6045			286489	
Energy consumption after	7077				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...					
Company complete address:					
GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonapat-Meerut Road, PO Bahalgarh, Sonapat - 131001.Haryana.					
Energy Manager: K.G.Harish					

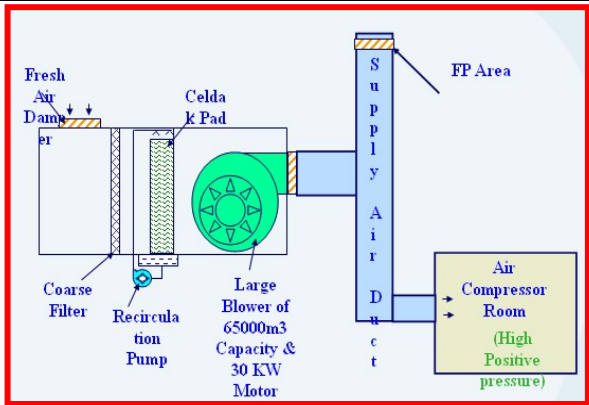
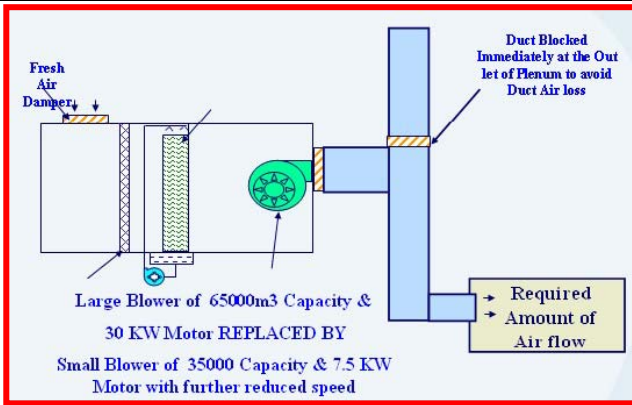
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(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure Refrigeration & AHU Optimization	Sector:FOOD.....			
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
Description of the energy conservation measure:					
Rationalisation of refrigeration and Dehumidification requirements, Optimising Operational setpoints and optimising AHU airflows -There has been a stoppage of Refrigerator Compressor by about 1000 Hrs, resulting in an overall reduction in Refrigeration load by 5,37,000 TR.					
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.: 1,00,000			Year of implementation: 2007		
First year energy cost savings, Rs.: 26,11,762					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	2346				
Energy consumption after	1889				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2				
Company complete address:					
GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.					
Energy Manager: K.G.Harish					


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ID to be filled by BEE	Title of the measure FDV Optimization	Sector:FOOD.....			
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
Description of the energy conservation measure:					
<p>FDV systems were studied in detail for Air flow requirements Vs.actual generation and were optimized by realigning the blowers and motors by lower capacity so that excess air flow is eliminated and only Optimum Air flow is maintained. In a major reduction, One FDV system of 65000 cu. mtr capacity (30 kW) was replaced by a 35000 cu.mtr capacity (7.5 kW).</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.: 20,000	Year of implementation: 2007-08				
First year energy cost savings, Rs.: 8,35,000					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	7.5				
Energy consumption after	1.9				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2				
Company address:					
<p>GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.</p>					
Energy Manager: K.G.Harish					

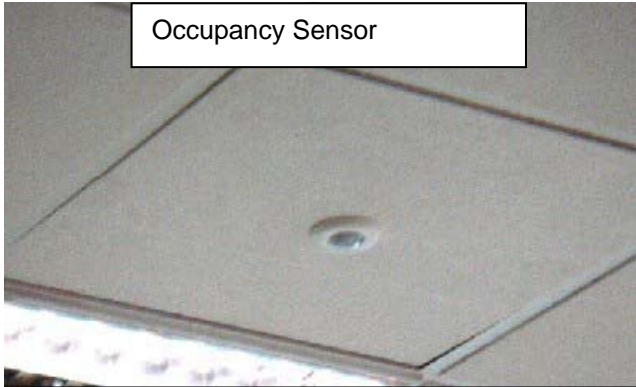
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(To be filled up separately for each Energy Conservation Measure)

ID to be filled by BEE	Title of the measure VFD For Boiler FD Fan.	Sector:FOOD.....			
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel			
Description of the energy conservation measure:					
The FD Fan was operating on Star Delta Starter. Optimization of Air flow and Combustion Control was achieved by providing an Oxygen analyzer for trimming resulting in efficiency improvement.					
Picture/ sketch/ drawing before modification (if available)			Picture/ sketch/ drawing after modification		
					
Agency that executed the project (with complete address and email): GSK					
Total investment, Rs.: 7,00,00			Year of implementation: 2008		
First year energy cost savings, Rs.: 9,26,348					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before		13183			
Energy consumption after		13005			
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...		5.0			
Company address:					
GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.					
Energy Manager: K.G.Harish					


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ID to be filled by BEE	Title of the measure Lighting Improvements	Sector:FOOD.....
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel
Description of the energy conservation measure:		
Conventional Fluorescent Lamps in the plant were replaced by T5 type Lamps. While the conventional lamps consumed about 49W per fitting, the T5 Lamps consume 28 W. This year 54 Lamps have been replaced. As a policy, Site has decided to replace all conventional lamps by T-5 lamps in a phased manner during replacements. Further, Occupancy Sensors have been installed in low occupancy areas		
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.: 75,000	Year of implementation: 2007-08	
First year energy cost savings, Rs.: 2,25,000		
First year other savings, Rs.:		
On annual basis	kWh 000'	Coal (Tons)
	Gas Nm ³	Oil (kL)
	Other	
Energy consumption before	85.8	
Energy consumption after	49.1	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2	
Company complete address:		
GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.		
Energy Manager: K.G.Harish		

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ID to be filled by BEE	Title of the measure Thin Plate Batteries	Sector:FOOD.....
Year to be filled by BEE		Technology : Fuel Saving – Energy Efficient equipment /Alternate Fuel
Description of the energy conservation measure:		
<p>Conventional batteries for DG's have been replaced by Thin plate type batteries which are of smaller AH. The equivalent battery for a 150 AH new battery is 32 AH. Further, their charging current & losses are lower since it is a built in SMPS charger with no extra battery chargers as compared to the conventional battery that was used.</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.:	Year of implementation: 2007-08	
First year energy cost savings, Rs.: 3,000		
First year other savings, Rs.:		
On annual basis	kWh 000'	Coal (Tons)
Energy consumption before	0.69	
Energy consumption after	0.15	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	6.2	
Company complete address:		
<p>GlaxoSmithkline Consumer Healthcare Ltd. 14km Stone,Village Khewra, Sonepat-Meerut Road, PO Bahalgarh, Sonepat - 131001.Haryana.</p> <p>Energy Manager: K.G.Harish</p>		