


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 : Chemicals			
Year to be filled by BEE	VFD For Cooling water HP Supply Pumps	Technology			
<p>Description of the energy conservation measure:</p> <p>The requirement of cooling water varies based on the process requirements, but the pumps will be operated at full load through out the day since the motors are induction motors and runs in constant speed which leads to energy losses. A VFD was installed with a pressure sensor in the circulation line and this controlled the speed of the pump based on the requirements & maintaining a constant head. When the consumption in the plant is less, it reduces the speed of the pump and save energy.</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.: 520000			Year of implementation: 2007		
First year energy cost savings, Rs.: 96121.73					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	368060				
Energy consumption after	300712				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr R M Seralathan				Signature Date	

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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 : Chemicals		
Year to be filled by BEE	VFD & FRP fan for cooling tower Pos no 78136		Technology		
Description of the energy conservation measure:					
<p>The cooling towers in utility block use to run 24 hrs a day irrespective of cooling water temperature. As the utility plant equipments are designed to operate at 30 deg. C, lot of energy was wasted by operating the cooling towers at lower temperature. A temperature sensor was provided in the cooling water line & set the operating band at 27 to 30 deg.C and this controlled the speed of the towers. When the temperature is less it reduces the speed of the cooling tower and save energy. Also Aluminium fans replaced with energy efficient FRP fans.</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.: 235000			Year of implementation: 2007		
First year energy cost savings, Rs.: 445982					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	73197				
Energy consumption after	48540				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr R M Seralathan				Signature	
				Date	

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Annexure 'B'

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 Engg Stores lighting	Sector : Chemicals			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: In Engg stores, multiple lights are controlled by a single switch. This results in operating a gang of lights for want of light in a particular area. During day time also the same situation leads to energy loss. So non critical lights were identified and separate switches provided to switch only when required.					
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.: 1000			Year of implementation: 2007		
First year energy cost savings, Rs.: 5376					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	N/A				
Energy consumption after	430				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr R M Seralathan				Signature Date	

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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 : Chemicals			
Year to be filled by BEE	MEG compressor running time reduction by reducing the load and unload temperature range.	Technology			
<p>Description of the energy conservation measure:</p> <p>Operating parameters of MEG Brine chilling system was analysed through Data Acquisition and revised the compressor loading, unloading & tripping temperature settings. This has reduced the compressor running hrs from ave. 8 hrs from 14 to 15 hrs per day. Also cooling water flow to condenser stopped manually during compressor trip.</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.: Nil			Year of implementation: 2007		
First year energy cost savings, Rs.: 184190					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	N/A				
Energy consumption after	22670				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 Timer for Agro. Change room heaters	Sector : Chemicals			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: In Agro plant Change Room, Geysers were operating for 24 hrs. The operation of the same was controlled by installing cyclic timers which resulted in considerable amount of electrical energy.					
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.: 5000			Year of implementation: 2007		
First year energy cost savings, Rs.: 168516					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	N/A				
Energy consumption after	42464				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa				We authorise Bureau to use this information for dissemination	
Contact person who could be contacted for more information: Mr R M Seralathan				Signature Date	

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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 : Chemicals			
Year to be filled by BEE	Timer for fans and lights in the Engg change room for use in shifts where lights are left on	Technology			
<p>Description of the energy conservation measure:</p> <p>In Engg Change Room, fans and lights were operating for 24 hrs for use in regular shifts. The operation of the same was controlled by installing cyclic timers to operate during shift change hours, which resulted in considerable amount of electrical energy</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.: 2000			Year of implementation: 2007		
First year energy cost savings, Rs.: 66084					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	N/A				
Energy consumption after	7992				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 VFD for Cooling water pump 8479	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The requirement of cooling water varies based on the process requirements, but the pumps will be operated at full load through out the day since the motors are induction motors and runs in constant speed which leads to energy losses. A VFD was installed with a pressure sensor in the circulation line and this controlled the speed of the pump based on the requirements & maintaining a constant head. When the consumption in the plant is less, it reduces the speed of the pump and save energy.</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.: 174000			Year of implementation: 2007		
First year energy cost savings, Rs.: 351553					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	143400				
Energy consumption after	108306				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 VFD for Cooling water pump 8479	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The requirement of cooling water varies based on the process requirements, but the pumps will be operated at full load through out the day since the motors are induction motors and runs in constant speed which leads to energy losses. A VFD was installed with a pressure sensor in the circulation line and this controlled the speed of the pump based on the requirements & maintaining a constant head. When the consumption in the plant is less, it reduces the speed of the pump and save energy.</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.: 174000			Year of implementation: 2007		
First year energy cost savings, Rs.: 351553					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	143400				
Energy consumption after	108306				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 WHRB Export steam	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The steam boiler designed to produce 16 TPH F&T 100 deg C was being operated at 8 TPH due to low steam requirement from plants. Combustion air required for combustion was controlled by throttling the dampers through PLC controlled servomotors fitted at forced draft fan duct. Lot of energy was wasted due to this throttling process. Considering the low load operation of boiler VFD is incorporated for FD fan which will regulate the speed of the motor and fine air adjustment will be controlled through dampers. This saved considerable amount of energy</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.: 800000			Year of implementation: 2007		
First year energy cost savings, Rs.: 24045608					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before				998	
Energy consumption after				Nil	
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...				24083	
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 VFD MW booster pump	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The requirement of cooling water varies based on the process requirements, but the pumps will be operated at full load through out the day since the motors are induction motors and runs in constant speed which leads to energy losses. A VFD was installed with a pressure sensor in the circulation line and this controlled the speed of the pump based on the requirements & maintaining a constant head. When the consumption in the plant is less, it reduces the speed of the pump and save energy.</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.: 423000			Year of implementation: 2007		
First year energy cost savings, Rs.: 295020					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	35347				
Energy consumption after	66220				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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 FRP fan for Cooling Tower pos no 18007	Sector : Chemicals			
Year to be filled by BEE		Technology			
Description of the energy conservation measure: The earlier aluminium fans of Paharpur make cooling towers have been replaced with energy efficient FRP fans. These FRP fans consumes around 30% lesser than the conventional aluminium fan with 10% increase in air flow					
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.: 70000			Year of implementation: 2007		
First year energy cost savings, Rs.: 108526.					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	35235				
Energy consumption after	22344				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa				We authorise Bureau to use this information for dissemination	
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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 Chilled water supply pump	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The requirement of cooling water varies based on the process requirements, but the pumps will be operated at full load through out the day since the motors are induction motors and runs in constant speed which leads to energy losses. A VFD was installed with a pressure sensor in the circulation line and this controlled the speed of the pump based on the requirements & maintaining a constant head. When the consumption in the plant is less, it reduces the speed of the pump and save energy.</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.: 174000			Year of implementation: 2007		
First year energy cost savings, Rs.: 252953					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	132295				
Energy consumption after	170004				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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ID to be filled by BEE	Title of the measure	Sector : Chemicals			
Year to be filled by BEE	VFD for G 134 Boiler Combustion Air Blower	Technology			
<p>Description of the energy conservation measure: The steam boiler designed to produce 16 TPH F&T 100 deg C was being operated at 8 TPH due to low steam requirement from plants. Combustion air required for combustion was controlled by throttling the dampers through PLC controlled servomotors fitted at forced draft fan duct. Lot of energy was wasted due to this throttling process. Considering the low load operation of boiler VFD is incorporated for FD fan which will regulate the speed of the motor and fine air adjustment will be controlled through dampers. This saved considerable amount of energy</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.: 316000			Year of implementation: 2007		
First year energy cost savings, Rs.: 521584					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	124580				
Energy consumption after	62659				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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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 2 nos ETP aeration blower	Sector : Chemicals			
Year to be filled by BEE		Technology			
<p>Description of the energy conservation measure: The blowers provided for aeration process in ecology are operating at full speed. Actual air required for this process was varying depending on the process requirements. The same is controlled by installing a VFD and run as per the required frequency, which saved considerable amount of energy</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.: 57475			Year of implementation: 2007		
First year energy cost savings, Rs.: 386232					
First year other savings, Rs.:					
On annual basis	kWh 000'	Coal (Tons)	Gas Nm ³	Oil (kL)	Other
Energy consumption before	124580				
Energy consumption after	436438				
Energy tariff, Rs/ kWh/ Ton/ Nm ³ / kL ...	9.3				
Company complete address: Syngenta India Ltd, Santa Monica Works, Corlim, Illhas, Goa Contact person who could be contacted for more information: Mr R M Seralathan				We authorise Bureau to use this information for dissemination Signature Date	

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