

ENERGY CONSUMPTION REPORT 2018



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Introduction: Energy management can be broadly defined as the proactive, organized and systematic management of energy use in an organization to satisfy both environmental and economic requirements. Ananta Garments Ltd. has set itself an ambitious goal to become an energy efficient factory. We established an energy management system as a means to reduce our environmental impact caused by energy consumption and also to reduce operating costs. Energy management system attempts to balance the total energy inputs with its use and serves to identify all the energy streams in the systems and quantifies energy usages according to its discrete function. Regular reporting helps to make related people updated about the consumption scenario of energy which helps to make further decision regarding energy cost optimization, pollution control, safety aspects and suggests the methods to improve the operating & maintenance practices of the system. Our energy management system is the combination of below mentioned tasks

- ✓ Metering, Tracking and Collecting and understanding the energy consumption scenario of the facility.
- ✓ Identifying opportunities to save energy
- ✓ Taking action to save energy
- ✓ Tracking the progress and ongoing improvement

Goal: This report has been prepared to understand the energy consumption scenario of 2018 at the facility. The ultimate goal is to improve environmental performance and to reduce energy costs through improved energy efficiency and energy management control. Other benefits generally include increased resource efficiency, improved production budgeting and reduction of greenhouse gas (GHG) emissions.

Scope: The scope of this report combines the sources to users and distribution of energy at the facility.

Data sources: The data used in this report are collected from Utility bills and purchase invoices of different energy sources. Energy distribution and ranking has been done based on the Single line Diagram (SLD) of the facility.

Electricity Consumption in 2018

Name of month	Electricity Consumption (KWh)	Rate Per Unit (Tk.)	Bill Amount (Tk.)	Paid Amount (Tk.)	Payment Date	Remarks
January-2018	2,60,760	8.15	23,01,379	23,01,379	20 Feb-2018	
February-2018	2,89,380	8.15	25,46,295	25,46,295	22 Mar-2018	
March-2018	3,14,820	8.15	27,63,998	27,63,998	23 April-2018	
April-2018	2,61,820	8.15	23,10,450	23,10,450	24 May-2018	
May-2018	187,855 (Off-Pick Hour)	7.34	13,78,856	25,48,183	24 June,2018	
	96,309 (Pick Hour)	10.19	9,81,389			
June-2018	2,10,080 (Off-Pick Hour)	7.34	15,41,987	25,26,964	26 June,2018	
	78,317 (Pick Hour)	10.19	7,98,050			
July-2018	1,86,267 (Off-pick Hour)	7.34	13,67,200	17,11,462	16 August,2018	
	15,875 (Pick hour)	10.19	1,61,766			
August-2018	1,28,588 (Off-pick hour)	7.34	9,43,836	16,54,237	24 September,2018	
	27,517 (Pick-hour)	10.19	2,80,398			
September-2018	2,18,017 (Off-pick hour)	7.34	16,00,245	23,14,071	23 October,2018	
	50,800 (Pick-hour)	10.19	5,17,652			
October-2018	2,05,317 (Off-pick hour)	7.34	15,07,027	23,92,300	22 November,2018	
	67,205 (Pick hour)	10.19	6,84,819			
November-2018	214842 (Off-pick hour)	7.34	1576940	2612642	24 Dec 2018	
	82551 (Pick hour)	10.19	841195			
December-2018	175155 (Off-pick hour)	7.34	1285638	2091478	21 Jan 2018	
	72496 (Pick hour)	10.19	738734			
Total	3143971					

Diesel Consumption in 2018

Name of month	Diesel Consumption (Liter) Generator	Diesel Consumption (Liter) Boiler	Total Diesel Consumption (Liter)	Remarks
January-2018	3,381	2,000	5,381	
February-2018	4,739	1,200	5,939	
March-2018	8,084	2,200	10,284	
April-2018	10,048	2,400	12,448	
May-2018	5,211	400	5,611	
June-2018	4,289	400	4689	
July-2018	7,290	-	7,290	
August-2018	3,536	-	3,536	
September-2018	4,955	-	4,955	
October-2018	5,828	-	5,828	
November-2018	3,696	-	3,696	
December-2018	3203		3203	
Total			72860	

Natural Gas Consumption in 2018

Bill for the Month	Consumption in CM	Rate per Cubic Meter	Bill Amount (Tk.)	Amount Paid(Tk.)	Payment Date	Remarks
<i>January-2018</i>	28,352.42	7.76	220,521	220,521	20 Feb-2018	
<i>February-2018</i>	17,922.51	7.76	139,650	139,650	22 Mar-2018	
<i>March-2018</i>	15,760.72	7.76	122,809	122,809	23 April-2018	
<i>April-2018</i>	17,816.70	7.76	138,764	138,764	27 May-2018	
<i>May-2018</i>	15,636.16	7.76	121,843	121,843	24 June-2018	
<i>June-2018</i>	13,877.52	7.76	108,196	108,196	24 July-2018	
<i>July-2018</i>	6,914.57	7.76	54,163	54,163	19 August-2018	
<i>August-2018</i>	6,437.70	7.76	50,463	50,463	24 September-2018	
<i>September-2018</i>	8345.17	7.76	65,265	65,265	23 October-2018	
<i>October-2018</i>	7153.00	7.76	56,013	56,013	22 November-2018	
<i>November-2018</i>						
<i>December-2018</i>						
Total	138216.47					

Calculation for Electricity consumption

SL No	Name	Quantity	Load in Watt/PC	Run Time (Hr)	Total Unit/Year(Kwh)	Segregation of purposes	Total consumption for various purposes(kwh)	Total Consumption in megajoule
1	4 Feet LED Light	6099	18	10	324954.72	Total consumption for lighting	518293.04	1865854.944
2	2 Feet LED Light	779	9	10	20752.56			
3	4 Feet Tube Light	745	40	10	88208			
4	LED Light 12W	383	12	10	13604.16			
5	LED Light 7W	650	7	10	13468			
6	LED Light 36W	10	36	10	1065.6			
7	LED Light 100W	190	100	10	56240			
8	Sewing M/C	3042	400	10	3601728	Total consumption for sewing machine	3601728	12966220.8
9	Fan	160	100	10	47360	Total consumption for Fan	838272	3017779.2
10	Exhaust Fan	1100	142	10	462352			
11	Exhaust Fan	750	148	10	328560			
3	AC	42	122400	10	362304	Total consumption for AC	362304	1304294.4
12	Cutting M/C	30	750	10	66600	Total consumption for cutting machine	69708	250948.8
13	Cutting M/C	15	70	10	3108			
14	Computer	155	250	10	114700	Total consumption for official purpose	198071.36	713056.896
15	Printer	57	300	10	50616			
16	LAN Switch	25	150	10	11100			
17	CCTV	103	12	10	3658.56			
18	DVR	8	150	10	3552			
19	Attendance M/C	40	50	10	5920			
20	ATM	1	1200	24	8524.8			
21	Fusing M/C	7	46980	10	139060.8	Total consumption for fusing machine	139060.8	500618.88
22	Lift	4	47370	10	140215.2	Total consumption for utility	694356.8	2499684.48
23	Compressor	4	114400	10	338624			
24	Boiler	1	18000	10	53280			
25	Pump	4	78300	7	162237.6			
26	Fire Pump (Jocky)	1	11000		0	Total		23118458.4
27	Fire Pump (Main)	1	150000		0			
28	Fire Pump (Diesel)	1	1200		0			

Calculation for other energy sources

	Name of the energy Source	Purpose	Consumption	Total Consumption in mega joule
1	Diesel	Generator(utility)	72860 ltr	2615674
2	Natural Gas	Boiler(utility)	138216.47 m3	5114009
Total				7729683

Total energy Consumption in mega joule

30848141.4

Notes

1 cubic meter = 37 megajoule

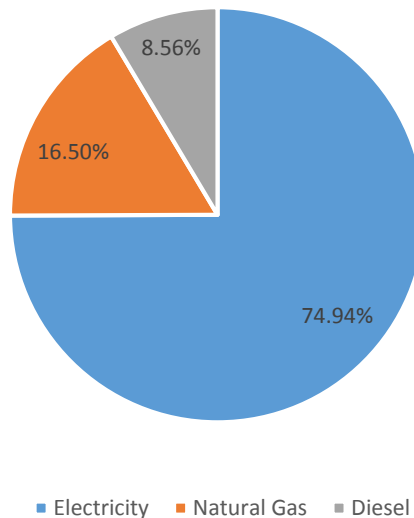
1 kwh= 3.6 megajoule

1 liter = 35.9 megajoule

Energy source wise Ranking

SL	Source name	Consumption %	Rank
1	Electricity	74.94%	1
2	Natural Gas	16.50%	2
3	Diesel	8.56%	3

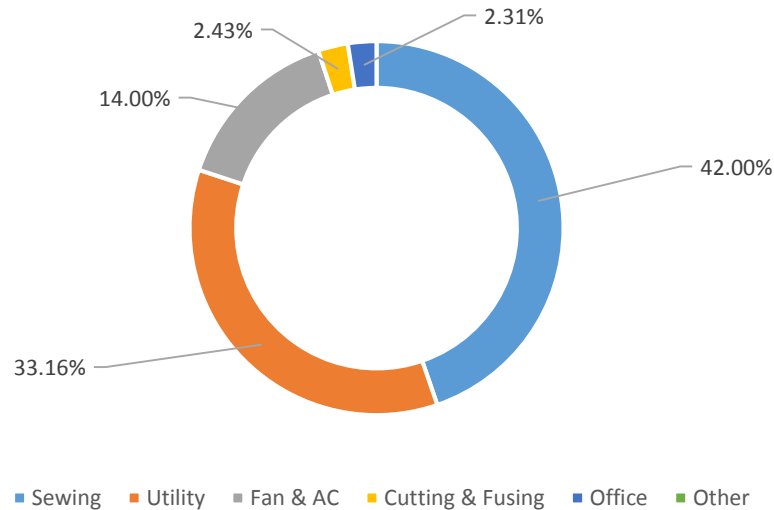
Energy Sources wise Consumption



Energy consumption process wise ranking

SL	Purpose/Process	Consumption %	Rank
1	Sewing Machines	42.00%	1
2	Utility	33.16%	2
3	Fan & Ac	14.00%	3
4	Lighting	6.04%	4
5	Cutting & fusing	2.43%	5
6	Office	2.31%	6
7	Other	0.20%	7

Process wise Energy consumption



Conclusion: This report contains the total energy consumption information at Ananta Garments Ltd. in 2018. It will help to understand the energy distribution pattern in the facility.