

ESC Energy Analysis - 37kW Waste Fan

From	To	Waste fan Totals-> Resource Usage
01-10-13 0:00	01-10-13 0:15	5600
01-10-13 0:15	01-10-13 0:30	5400
01-10-13 0:30	01-10-13 0:45	5700
01-10-13 0:45	01-10-13 1:00	5700
01-10-13 1:00	01-10-13 1:15	5600
01-10-13 1:15	01-10-13 1:30	5500
01-10-13 1:30	01-10-13 1:45	5700
01-10-13 1:45	01-10-13 2:00	5700
01-10-13 2:00	01-10-13 2:15	5600
01-10-13 2:15	01-10-13 2:30	5400
01-10-13 2:30	01-10-13 2:45	5800
01-10-13 2:45	01-10-13 3:00	5700
01-10-13 3:00	01-10-13 3:15	5600
01-10-13 3:15	01-10-13 3:30	5400
01-10-13 3:30	01-10-13 3:45	5700
01-10-13 3:45	01-10-13 4:00	5800
01-10-13 4:00	01-10-13 4:15	5600
01-10-13 4:15	01-10-13 4:30	5600
01-10-13 4:30	01-10-13 4:45	5600
01-10-13 4:45	01-10-13 5:00	5700
01-10-13 5:00	01-10-13 5:15	5700
01-10-13 5:15	01-10-13 5:30	5400
01-10-13 5:30	01-10-13 5:45	5600
01-10-13 5:45	01-10-13 6:00	5700
01-10-13 6:00	01-10-13 6:15	5700
01-10-13 6:15	01-10-13 6:30	5500
01-10-13 6:30	01-10-13 6:45	5600
01-10-13 6:45	01-10-13 7:00	5700
01-10-13 7:00	01-10-13 7:15	5500
01-10-13 7:15	01-10-13 7:30	5500
01-10-13 7:30	01-10-13 7:45	5600
01-10-13 7:45	01-10-13 8:00	5600
01-10-13 8:00	01-10-13 8:15	5600
01-10-13 8:15	01-10-13 8:30	5500
01-10-13 8:30	01-10-13 8:45	5600
01-10-13 8:45	01-10-13 9:00	5700
01-10-13 9:00	01-10-13 9:15	5600
01-10-13 9:15	01-10-13 9:30	5400
01-10-13 9:30	01-10-13 9:45	5600
01-10-13 9:45	01-10-13 10:00	5600
01-10-13 10:00	01-10-13 10:15	5600
01-10-13 10:15	01-10-13 10:30	5400
01-10-13 10:30	01-10-13 10:45	5600
01-10-13 10:45	01-10-13 11:00	5700
01-10-13 11:00	01-10-13 11:15	5600
01-10-13 11:15	01-10-13 11:30	5400
01-10-13 11:30	01-10-13 11:45	5600
01-10-13 11:45	01-10-13 12:00	5600
01-10-13 12:00	01-10-13 12:15	5600
01-10-13 12:15	01-10-13 12:30	5500
01-10-13 12:30	01-10-13 12:45	5600
01-10-13 12:45	01-10-13 13:00	5700

01-10-13 13:00	01-10-13 13:15	5600
01-10-13 13:15	01-10-13 13:30	5500
01-10-13 13:30	01-10-13 13:45	5700
01-10-13 13:45	01-10-13 14:00	5500
01-10-13 14:00	01-10-13 14:15	5700
01-10-13 14:15	01-10-13 14:30	5400
01-10-13 14:30	01-10-13 14:45	5600
01-10-13 14:45	01-10-13 15:00	5700
01-10-13 15:00	01-10-13 15:15	5400
01-10-13 15:15	01-10-13 15:30	5500
01-10-13 15:30	01-10-13 15:45	5500
01-10-13 15:45	01-10-13 16:00	5700
01-10-13 16:00	01-10-13 16:15	5600
01-10-13 16:15	01-10-13 16:30	5400
01-10-13 16:30	01-10-13 16:45	5600
01-10-13 16:45	01-10-13 17:00	5700
01-10-13 17:00	01-10-13 17:15	5600
01-10-13 17:15	01-10-13 17:30	5400
01-10-13 17:30	01-10-13 17:45	5600
01-10-13 17:45	01-10-13 18:00	5600
01-10-13 18:00	01-10-13 18:15	5600
01-10-13 18:15	01-10-13 18:30	5500
01-10-13 18:30	01-10-13 18:45	5700
01-10-13 18:45	01-10-13 19:00	5700
01-10-13 19:00	01-10-13 19:15	5400
01-10-13 19:15	01-10-13 19:30	5500
01-10-13 19:30	01-10-13 19:45	5700
01-10-13 19:45	01-10-13 20:00	5700
01-10-13 20:00	01-10-13 20:15	5600
01-10-13 20:15	01-10-13 20:30	5500
01-10-13 20:30	01-10-13 20:45	5600
01-10-13 20:45	01-10-13 21:00	5700
01-10-13 21:00	01-10-13 21:15	5400
01-10-13 21:15	01-10-13 21:30	5600
01-10-13 21:30	01-10-13 21:45	5600
01-10-13 21:45	01-10-13 22:00	5700
01-10-13 22:00	01-10-13 22:15	5600
01-10-13 22:15	01-10-13 22:30	5400
01-10-13 22:30	01-10-13 22:45	5700
01-10-13 22:45	01-10-13 23:00	5600
01-10-13 23:00	01-10-13 23:15	5700
01-10-13 23:15	01-10-13 23:30	5400
01-10-13 23:30	01-10-13 23:45	5600
01-10-13 23:45	02-10-13 0:00	5600

Total WHr/15mins 536400.00

Total kWhr/15mins 536.40

Average kW/Hr 22.35

Euro Price per kW/Hr 0.12

Cost per Hour 2.68

Euro Cost over 24 hours 64.37

Euro Cost over 8 hours (1 x 8hour shifts) 21.46

Euro Cost over 16 hours (2 x 8hour shifts) 42.91

Total €Cost 2shifts over 250 days(50wks x 5days) 10728.00

Utilising VSD Control on Fan

	Fan Running at 85% Speed	
	Average kW/Hr	15.65
	Euro Price per kW/Hr	0.12
	Cost per Hour on VSD	1.88
At 85% speed; KW/hr = $0.85 \times 0.85 \times 0.85 = 0.62 = 62\%$ Allowing 8% for losses power usage = 70%	For a 2 shift period of 16 hours with: Fan running at 85% speed for 14 hours kWhr usage is 70% - Euro Cost	26.28
	Fan running at 20% speed for 2 hours during meal breaks and machine downtime	
At 20% Speed kWhr usage is 10% - Euro Cost of Running KW/hr = $0.2 \times 0.2 \times 0.2 = 0.008 = 0.8\%$ Allowing 8% for inefficiencies and losses power usage = approx 10%	Euro Cost over 16 hours (2 x 8hour shifts)	0.54 26.82
	B. Total €Cost 2shifts over 250 days(50wks x 5days)	<u>6705.00</u>
	€Yearly savings over 2 shift period (A-B)	<u>4023.00</u>