



Twinning Project IL/11

Implementation and Strengthening the Environmental Framework for
IPPC, Resource Efficiency and Eco-Management in Israel



Energy Management Hotel Sector

EnMS - Implementation Tool

Workshop Manufacturer Association Israel
Tel Aviv, March 15, 2017





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Excel Spreadsheet / Worksheet for Record and Assessment of the ,Mini‘ Energy Management

Organization	
Name of organization	
Adress	
Top Management	
Phone	
Email Adress	
Homepage	
Kind of operations	
Short description of Business Area	
Total energy cost	
Legal form	
Company Idenificant	
Statistics	
Actual year	
Staff	
Turnover	
Annual Balance	





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'Mini' Energy Management System – Excel Spreadsheet Sheet 2

Commitment and Responsibilities

Task	Responsible	support
Write & sign the Commitment	General Director	Energy Manager
Assign responsibilities	General Director	Human Resources Director
Allocate resources	GeneralDirector	Head of Finance
Monitor implementation of the Mini EnMS	Energy Manager	Department Heads /EnmS Team
Planning, implementation and evaluation	Energy Manager	EnMS Team
Recording of energy-related data	Energy Manager	Controlling Administrator
Proposals for energy efficiency measures	Energy Manager	General Director
Evaluate and economically prioritize measures	General Director	Energy Manager
Information management	IT-Representative	Energy Manager
Decision to implement measures	General Director	Head of Finance
Coordination of the implementation of measures	Energy Manager	Department Heads
Monitor effectiveness & efficiency	Energy Manager	Controlling Administrator
Control Documentation	Energy Manager	Quality Manager
Purchasing energy and energy-efficient products	Procurement Administrator	Energy Manager
Application for government grant	Head of Finance	Energy Manager





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‘Mini’ Energy Management System – Excel Spreadsheet Sheet 3

Energy Used in Year 2

Fuel	Unit	Accounting from	to (date)	Fuel Use	Unit/Duration	total Cost	Specific Cost		Fuel uses kWh	Anual Cost	Database/ Measurement	Accuracy/ calibration
Electric power		01.01.2013	31.12.2013	1.299.663	/364 Tage	257.068 €	0,20 €/		1.299.663	257.774,62 €		
Natural gas		01.05.2013	31.12.2013	4.298.964	/244 Tage	252.280 €	0,06 €/		4.298.964	377.385,56 €		
Fuel oil		01.01.2013	31.12.2013	2.536.710	/364 Tage	205.765 €	0,08 €/		2.536.710	206.330,76 €		

Energy Used in Year 1

Fuel	Unit	Accounting from	to (date)	Fuel Use	Unit/Duration	total Cost	Specific Cost		Fuel uses kWh	Anual Cost	Database/ Measurement	Accuracy/ calibration
Electric power		01.01.2012	31.12.2012	1.400.000	/365 Tage	300.000 €	0,21 €/		1.400.000	300.000,00 €		
Natural gas		01.05.2012	31.12.2012	4.400.000	/244 Tage	252.280 €	0,06 €/		4.400.000	377.385,56 €		
Fuel oil		01.01.2012	31.12.2012	2.500.000	/365 Tage	205.765 €	0,08 €/		2.500.000	205.765,47 €		





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‘Mini’ Energy Management System – Excel Spreadsheet Sheet 4

Fuel energy content and calorific values

Fuel	unit	Energy content		Calculated	cost	emission factors in kg CO2/ unit		
		Calorific values from literature kWh/unit	Measured calorific value kWh/unit			From literature	Measured	Calculated
Power	kWh	1,00		1,00	0,00			0,00
Regenerative Power	kWh	1,00		1,00	0,00			0,00
District heating	kWh	1,00		1,00	0,00			0,00
Regenerative district heating	kWh	1,00		1,00	0,00			0,00
Natural gas L	kWh	1,00		1,00	0,00			0,00
Natural gas H	kWh	1,00		1,00	0,00			0,00
Fuel oil EL	Liter	10,08		10,08	0,00			0,00
Fuel oil S	Liter	11,00		11,00	0,00			0,00
Bio-Diesel	Liter			0,00	0,00			0,00
Biomass	tonnen			0,00	0,00			0,00
Wood chips	tonnen			0,00	0,00			0,00
Wood pelets	m ³	3200,00		3200,00	0,00			0,00
Piece of wood (oak and beech)	Raummeter	2400,00		2400,00	0,00			0,00
Piece of wood (coniferous)	Raummeter	2000,00		2000,00	0,00			0,00
LPG	Liter	6,57		6,57	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00
				0,00	0,00			0,00





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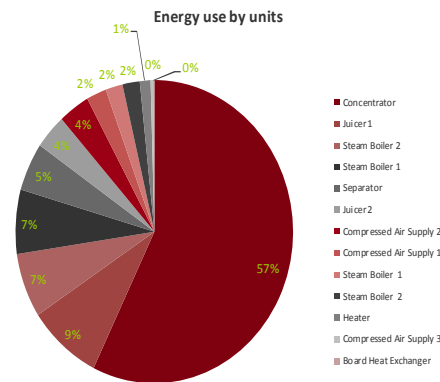
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‘Mini’ Energy Management System – Excel Spreadsheet Sheet 5

Energy use by units

Electical consumer

	Energieverbrauch in kWh_el/a	Installierte Leistung kW_el
Concentrator	642.345	-
Juicer 1	96.092	-
Steam Boiler 2	77.412	-
Steam Boiler 1	76.874	-
Separator	57.655	-
Juicer 2	41.862	-
Compressed Air Supply 2	41.182	-
Compressed Air Supply 1	25.739	-
Steam Boiler 1	22.650	-
Steam Boiler 2	22.650	-
Heater	13.727	-
Compressed Air Supply 3	3.260	-
Board Heat Exchanger	1.716	-
Gesamtergebnis	1.123.164	-



Thermal consumer

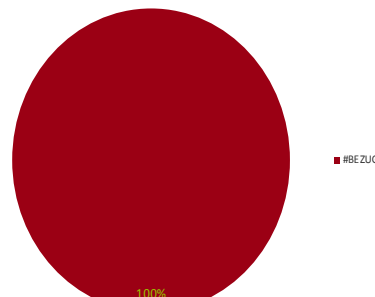
	Summe von Thermische Ne	Summe von Energiebedarf, thermisch in kWh
Steam Boiler 1	-	-
Juicer 2	-	-
Concentrator	-	-
Aseptic Facility	-	-
Steam Boiler 1	-	-
Board Heat Exchanger	-	-
Heater	-	-
Cold Store 1	-	-
Juicer 1	-	-
Cold Store 2	-	-
Mash Tanks	-	7.228.347
Cold Store 3	-	103.340
Steam Boiler 2	-	-
Compressed Air Supply 1	-	-
Steam Boiler 2	-	-
Compressed Air Supply 2	-	-
Separator	-	-
Compressed Air Supply 3	-	-
Gesamtergebnis	-	7.331.687

Energy use Category

Equipment

	Energy use in kWh_el/a	Installed power kW_el
#BEZUG!	1.123.164	-
Gesamtergebnis	1.123.164	-

Energy use by category



Thermische Verbraucher

	Thermal PowerkW	Sum of thermal energy consumption in kWh
#BEZUG!	-	7.331.687
Gesamtergebnis	-	7.331.687

Evaluation of energy use





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