CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Smart Office Toolkit – Energy Audit Sheet

How to use the audit sheet

- Below is the energy audit sheet that you can use when doing an audit at your office.
- You can print out this audit sheet and fill in the different sections and then calculate the energy consumption for the various appliances.
- The purpose of doing this detailed energy audit is to determine where most of your energy is used so that you can focus on these areas and reduce your energy consumption.
- You are advised to adapt these audit sheets to suit your needs. You can do it per floor or per room of per key activity area (offices, canteen, printing room, etc.). You will seldom find all these appliances in one room, yet we have provided a full list for you to choose from.
- You could also create an Excel spreadsheet for your office with your specific appliances, in order to do auto calculations, which can be easily updated over time. This way you can also create graphs which can help you identify trends over time.

Filling in the energy audit sheet

Make sure to record who carried out the audit, when it was done and which premises it refers to. Ensure that this information is captured on the audit sheet.

It is important to do a visual inspection to gather data at the office premises in order to:

- Determine the number of appliances that you have, for example you need to count the number of lights in a specific venue (e.g. 7 incandescent lights).
- Determine what the wattage of the appliances is (e.g. 60 watts). Check on the cheat sheet for some examples of wattage if you can't find it on the appliance. Note that similar types of lights might have different wattage. A fluorescent tube can either be 38 or 56 watts or more. Note that this is generally in watts, so you will need to divide it later by 1000 to get kilowatts.
- Determine how many hours it is used on average (e.g. 4 hours per day).

Once you have the data, you need to do the calculations:

- Calculate the average kWh per day (e.g. [7x60x4] /1000 = 1,68 kWh/d). Note that you need to divide it by 1000 at this stage to convert it from watts to kilowatts.
- You can make some comments on the side, such as the name of the printer, or some other information to differentiate between different types of printers at the office.

Energy Audit Sheet					
Name of auditor			Date		
Address			Venue		
Appliance	Number of appliances	Power use (watt)	Hours per day	Ave kWh per day (watt x hours x no/1000)	Comment
Give a short description of the appliance or fixture	How many of these items are there?	What is the rating for this item?	How many hours is it used per day?	Calculate the kWh (60x4x7)/1000	Make any comments relating to the item.
e.g. Light - Incandescent	7 lights	60 W	4 hours	= 1,68 kWh / d	
Lights - CFLs					
Lights - incandescent					
Lights - down light					
Lights - fluorescent					
Lights - fluorescent					
HVAC - heating					
HVAC - ventilation					
HVAC – air condition					
Fridge - stand alone					
Fridge - walk in					
Deep freezer					
Hot Water Geyser					
Kettle / Urn					
Stove					
Microwave					
Toaster					
Ceiling fan					
Extractor fan					
Dishwasher					
Laundry - washing machine					
Laundry - tumble dryer					
Laundry - iron					

Energy Audit Sheet					
Name of auditor			Date		
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Appliance	Number of appliances	Power use (watt)	Hours per day	Ave kWh per day (watt x hours x no/1000)	Comment
Water pump					
Television					
Laptop					
Data projector					
Computer					
VCR / DVD player					
Security					
Office / management					
TOTAL ELECTRICITY USAGE					kWh per day

Determine if any of the following energy sources are used (please tick):

Type	Possible usage	Yes	No
Liquid petroleum gas (LPG)	Cooking in kitchen, laboratories		
Petrol	Generator, vehicles		
Diesel	Generator, vehicles		
Renewable energy	Solar panels, wind energy		

Other:		

If yes, then please describe:

Please note any assumptions made during the audit for future reference: