Data Collection, Analysis and Calculation considerations

Device Classification

* All eight desktops and two printers are manufactured by Hewlett-Packard.
* Both Copiers are manufactured by Sharp
* Two fax machines, both are manufactured by Brother
* One printer is manufactured by Samsung
* Computers’ operating systems include Windows XP Professional
* Norton Symantic Antivirus program is used on all desktops
* All fifteen devices are located in the office building at Armour Transport Ltd.
* Primary users are administrative staff at Armour Transport Ltd
* All staff have regular access to desktop computers (with relevant devices as monitor, printer, and scanner)
* Some staff have private printers and desktop computers
* Four desktop computers, two printers, one photocopier and one fax machine are located downstairs in the office. Four desktop computers, one printer, one fax machine and one photocopier are located upstairs in the office.
* Most peripherals are shared amongst employees
* Approximately 320000 pieces of paper are used yearly.
* Printer toner is replaced 14 times a year

Qualitative Analysis

* What are the best first steps the unit could take to reduce energy use and save money?
  + Armour Transport Ltd is required by the head department of Armour Transport in Moncton New Brunswick to leave all equipment and peripherals running 24/7. Fully shutting down all equipment after use each day would greatly reduce energy consumption
  + Updating old technology with newer technology could help reduce excessive paper consumption and paper waste
  + Applying energy saving settings to each desktop could greatly cut back on energy consumption and help cut back on electricity bills
* How does the usage and settings vary between computers in the unit?
  + All desktop settings are controlled by Armour Transport Ltd head department and have the same settings applied to each computer. Some employees were unaware of how to apply changes for energy saving preferences on their desktops and relied on the head department to control settings. Employees were not granted permission to make permanent energy saving settings, only temporary settings which were adjusted nightly by the head department.
  + Printers, fax machines and photocopiers were shared amongst employees
  + Power management settings were at a bare minimum on each desktop computer, the only energy saving setting applied to each computer was that the display went to sleep after 20 minutes of being inactive.
* Department knowledge of computer energy consumption
  + Employees recognized that there was a significant amount of energy consumption being wasted in the department due to desktops being left on 24/7, however, believed that turning on and off their desktops would consume more energy and cost more if turned off after work each evening.
* Department knowledge of peripheral consumable consumption
  + Employees only expressed a small amount of knowledge on peripheral consumable consumption. Some employees were aware of the amount of paper and ink consumption in the department but believed that by simply recycling waste and shredding all paper documents they were significantly helping the environment.
  + Employees believed that their large paper consumption and amount of waste could be justified by having an out of date department where new technology had not yet been provided.
* Are there plans to replace/recycle equipment?
  + Department equipment is replaced when needed, not on a regular basis. Equipment that is no longer in use is dealt with by Armour’s head department, which is assumed by Kentville employees to be recycled. There are no current plans to recycle equipment at the Kentville Armour location
* Are devices generally turned off when not in use? Why or why not?
  + All active devices used at the department are regularly left on 24/7, no devices are turned off unless instructed by Armour’s head department. Employees noted that equipment was not to be turned off because updates and maintenance repairs were programmed to run each night on each desktop. Also noted, Armour Transport is a 24/7 dispatch department requiring equipment to run all night incase of urgent calls and services not being delivered and relayed through the night due to equipment being turned off.
  + Some individuals argued that it required more energy to turn on and off peripherals which would also increase the overall cost of electricity and believed it was more economically efficient to leave them running 24/7.
* Are really old devices being used under the misunderstanding that money is being saved (ie. Avoiding cost of a new system)?
  + Few of the peripherals used were slightly aged and were still in use because there was not a reason to have them replaced until they stopped working. Money was believed to be saved by avoiding purchasing new and expensive equipment
  + One aged CRT computer and monitor was located at the department but not in regular use. The CRT monitor was provided for any external (community) use and was only turned on for this purpose and always turned off directly after use
* Does the department know that viruses can cause systems to use more energy?
  + Antivirus systems are installed on each desktop at the department, however, employees were not aware that viruses could potentially increase energy consumption
* Does the department enforce regular backups of all computers
  + All backups and updates performed on desktops are regulated by Armour’s head department and performed regularly
* On the whole, what is the Green IT personality of this department?
  + Extremely limited Green knowledge
  + Considerable changes should be made to better the Green IT at Armour Transport Ltd
  + For the most part employees believe that their department is rated at being 45% Green, from the information gathered from the Pre- audit interview, we would suggest their department’s Green efforts should be rated at a 5-10% with serious room for improvement
  + Have little interest in becoming more economically friendly, believe that if the department is concerned they will be responsible for changes
* Are they living by the myths
  + Turning on and off computer is bad [YES]
  + Turning on and off costs more money in electricity [YES]
  + Screen savers save screens and money [YES]