This document has been produced as a resource that other charities & community organisations may wish to use in considering how energy is used and identify possible ways to reduce costs. Brighter Futures is a small Charity in Rhyl, we have spent the past 12 months working on reducing our energy use and the impact on the environment, we have been relatively successful in this endeavor, however we could have done more if we knew what we know now. We are not experts, we cannot provide formal guidance, we are simply sharing our experiences and thoughts to hopefully benefit other groups who we expect will have similar aims to us and want to support communities in the most economical way possible.

We hope that the following information will be useful to you and others, so let's get started…

OUR 3 ESSENTIAL THOUGHTS

1. Comprehensive and consistent energy monitoring is the crucial starting point for any group looking to manage energy use. If you don't measure, you cannot evaluate. If you don't where you are, you cannot know where you need to go.

2. Engage your team, this could be paid staff, volunteers or external partners using your facility. Without everyone understanding what things need to change, why they are changing, and what role they will play within this change, it simply will not work. *(keep in mind change can be frightening)*

3. Not everything needs to be expensive, small, free or very low-cost adjustments can go a long way and bring quick results.

WHAT WE DID THAT YOU COULD REPLICATE

STAGE 1 – MONITORING / GATHERING DATA

Monitoring our energy consumption regularly enabled us to build a clear and accurate picture of our current use, we were quickly able to see trends over days, weeks, and months that built a simple picture that everyone was able to understand.

With our monitoring ongoing, the identification of regular power use trends became simple, patterns quickly emerged, and we could then begin to study the reasons for levels of consumption on different days and at different times. (a data monitor can be very useful for this, if you have a smart meter your energy provide may provide one free, or you can just read your standard meter)

STAGE 2 – USING THE DATA

We used our data in various ways that might be useful to you…
We looked at our consumption when we were closed (initially on weekends).
We identified the pattern in the amount of kWh's of Gas and Electricity we were using over each weekend for the previous 4-week period to establish a baseline. We then run a "shutdown test" where we unplugged every non-essential item (fridges and freezers stayed on) and turned off power to all lights over another 4 weekends, (2 weekends with everything left on as normal, and 2 weekends with everything off) and used the data collected to identify our wastage.

STAGE 3 – MAKE FREE SAVINGS

We found that circa 20kWh could be saved each weekend, this may seem a small amount, but every little saved can help as current prices per kWh sit around 55p, so just switching off over weekends could save us over £500 per year without any investment or changes to our activities.

We followed the same process for evenings and each day of the week, again reducing power use by switching off items when not being used, we had quickly found a way to reduce our usage and save money by investing just in taking the time for daily monitoring and new closing procedures (simple rules for people to follow before locking up the building). Which was just a few minutes per day.

You can download a copy of our monitoring sheet from our website; it should be simple to use and quickly help you identify patterns in your energy use. The data you collect should be shared and discussed regularly with your team, highlight to them as changes are made what the impact has been and why this is important, saving money and your environmental impact.

You can also then use the data collected to engage with your senior management and demonstrate the financial benefits, this could be the catalyst to setting realistic targets for reducing consumption or further investment in the future. e.g. A proportion of the savings achieved could possibly then be used to invest in further energy saving measures from the action plan at the end of this report. This could result in a cycle of continuous improvement and energy cost reduction.

STAGE 4 – FACILITY AUDIT

Now you been able to make an impact during the times you are closed, you can start to look at how you can make changes during the times your open.

Building feature		Questions to consider
Lighting		Are we using lights only when required? Are the lights we use fit for purpose? Are the lights we use energy efficient?
Lighting controls		Are we using automatic or manual controls? Are the controls appropriate for infrequently / frequently used areas.
Heating system		What current system are you using? Is that heating system efficient?
Heating controls		Are you using a zone heating system? Do you have TRVs and thermostats adjusted correctly? Does everyone know how to effectively adjust the heating?
Insulation	**-Walls**	Do you have Solid wall construction or Cavity? Do you have any leakage from gaps or extraction? Do you already have walls insulated?
	-Roof	Do you have adequate insulation installed? Do you have any leakage from gaps or extraction? Do you have chimneys that are unsealed?
	-Windows & doors	Do you have double-glazed windows fitted? Do you have draft excluders fitted? Do you have any leakage from gaps, extraction or failed seals?
Air-tightness		Are external doors and windows draughtproofed? Are any loft hatches draught proofed?
Extraction & Ventilation		Are extraction systems or gaps leading to heat loss? Are controlled Mechanical ventilation system installed?
Catering and refrigeration	**-Catering**	What is our primary source of power such as Gas, Electricity etc? What are our primary cooking methods such as a gas hob, microwave, electric ovens etc?
	-Refrigeration	Are we using older energy-intensive refrigerators / freezers, do we know the energy rating? Is free space within the fridges and freezers kept to a minimum?
Electrical equipment		Do items have power saving settings? Can items be put on timers?
Water Efficiency	**-WCs** **-Faucets**	Do toilets have small-cistern units with dual-flush capabilities? Do taps have low-flow aerating fittings?

STAGE 5 – MAKING A PLAN

We have put a copy of the plan we made onto our website for anyone to download and use as an example, we hope the details within it are clear and easy to adapt to your facility, remember that small and very low-cost changes really can make a difference. Your plan should be built around the audit results, we found that splitting changes into free, low cost, and high cost enabled us to quickly make savings and demonstrate to the team the impact they had made alongside creating a funding plan for the medium- and longer-term improvements.

STAGE 6 – PRODUCING YOUR OWN ENERGY

In addition to saving of energy we have taken the step to also produce our own power, to do this we were supported by Gwynt Y Mor to purchase the first stage of our Solar Production equipment, this can be a tricky area and difficult to get right, especially when trying to get the best open and honest advice, we found that some installers really don't offer the best advice, you should always try and do research by talking to others who have had systems installed and use that as part of your considerations.

We hope this very short document can be helpful to other groups, our resources are limited, and we are unable as much as we would like to provide support or guidance beyond this document and the resources we are providing on our website, we recognize that even with this information the process can still seem daunting, please use the internet and look for advice from groups such as the Carbon Trust. We will intime hopefully add more information on our own progress on our website which we hope may be of further use in the future.

If there are pressing questions you may have, please email us and ask, but please be mindful we are just a small charity, this is not our area of work, and so it could be we are slow to respond.
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YOU CAN DOWNLOAD ALL THE TOOLS WE HAVE USED OR READ MORE ABOUT OUR JOURNEY FROM OUR WEBSITE:

WWW.BRIGHTERFUTURESRHYL.CO.UK/ENERGY