National Green Theatres Programme Action for Adoption

Switch off non-productive energy-consuming devices within your working environment

March 2024

About

This information raises awareness about this carbon-saving action. There is no formal requirement to report on this action through the National Green Theatres Programme, however Boards are encouraged to consider how they are adopting this action ensuring they are connected with any relevant initiatives or national work streams.

Background

The healthcare sector is a significant contributor to the climate crisis making up 4.4% of the global net emissions. To put that in context, if the healthcare sector were a country it would be the fifth largest emitter of carbon.[1]

NHS Scotland's climate emergency and sustainability strategy states that Scotland's building energy use emits over 431,000 tonnes of carbon annually[2] and with lighting and outlets (computers, screens, anaesthetic machines etc) in theatres making up to 8.4% of a hospitals energy use[3,4,5] there is huge potential for our teams to positively impact the NHS' carbon footprint.

This action for adoption seeks to identify some simple steps that can be implemented within your teams to ensure we are all doing our bit towards reducing our impact on the environment.

Theatre shutdown checklist

The team within University Crosshouse Hospital, NHS Ayrshire and Arran, have taken action to address the inappropriate use of energy within their workplace. The team conducted a survey over three separate spot checks across their 10 theatres. The survey recorded whether the following elements were switched on when the theatre was 'closed' out of hours[5]:
- anaesthetic room lights,
- computers, anaesthetic machines, and
- ultraclean ventilation (UCV).

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[1] Health Care Without Harm: Josh Karliner and Scott Slotterback. 2019. https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf

[2] https://www.gov.scot/publications/nhs-scotland-climate-emergency-sustainability-strategy-2022-2026/pages/6/

[3] MacNeill A, Lillywhite R, Brown C. The impact of surgery on global climate: a carbon footprinting study of operating theatres in three health systems. Lancet Planet Health. 2017;1(9):e381-e8.

[4] https://s41874.pcdn.co/wp-content/uploads/Green-Surgery-Report-v1.1.pdf

[5] no theatre cases or domestic work ongoing at the time

The survey identified 27 lights, 12 computers, 9 anaesthetic machines and 5 monitors were left on during this period.

In response, the team created a short shutdown checklist with a reminder to switch off the various components at the end of the working day. This was incorporated into the sign out of the final theatre case daily. Education sessions were delivered to nursing and domestic staff empowering them to lead the change, as they are typically the last team members to leave the theatre complex. This checklist has now been in place for over 4 months with the latest spot checks identifying a reduction in unnecessary energy use by 85%.

Simple interventions such as implementing a theatre shutdown checklist can have a big impact locally and these cumulative small changes will have a larger impact nationally. The checklist used at University Crosshouse Hospital can be found in appendix one.

Guide to using 'Task Scheduler' – Automation of computer switch off

Task Scheduler enables you to automatically perform routines tasks on your chosen computers. The Task Scheduler monitors whatever criteria you choose (referred to as triggers) and then executes the tasks when the criteria is met. In this instance the scheduler allows teams to programme set times at which their devices should switch off. You can also add certain criteria such as only shutting the device down after 1 hour in idle, this may be particularly useful for lists that are running over.

A step-by-step guide to setting this up can be found in appendix 2.

LED lighting

It is important as part of this action that teams ensure that LED lighting is installed throughout the hospital, LED bulbs can be up to 80% more energy efficient than conventional bulbs. [6]To find out about the work going on locally around LED lighting please reach out to a member of the estates and facilities team.

Future work

This document highlights examples of small changes to daily routines that have a positive impact on the environment. As new information emerges to understand the true carbon and financial benefit of these changes it will become more feasible to quantify these benefits.

If you or your team have done a specific piece of work identifying the carbon impact of energy saving devices in your working environment, please get in touch with the team as are keen to hear about success stories and publicise them within our community.

Contact us

If you have any questions about this action, please contact the National Green Theatres Programme by emailing gjnh.cfsdgreentheatres@gjnh.scot.nhs.uk.

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[6] https://ukenergylighting.co.uk/how-does-led-lighting-help-the-environment/

Appendix 1:

Sustainability Theatre Shutdown Checklist

The operating theatre and anaesthetic room consume a large proportion of energy in the hospital. Leaving appliances switched on overnight has a considerable environmental impact.

Please can the following checklist be completed by theatre staff at the end of each day:

- ○ Shut down computers
- ○ Turn off anaesthetic machine and monitors
- ○ Turn off/unplug surgical equipment
- ○ Turn off lights – scrub/prep/theatre/anaesthetic room
- ○ Turn off ultra clean ventilation (Orthopaedic theatres)

Appendix 2

This guide provides step by step instructions to programme your computer to automatically shut down during out of hours.
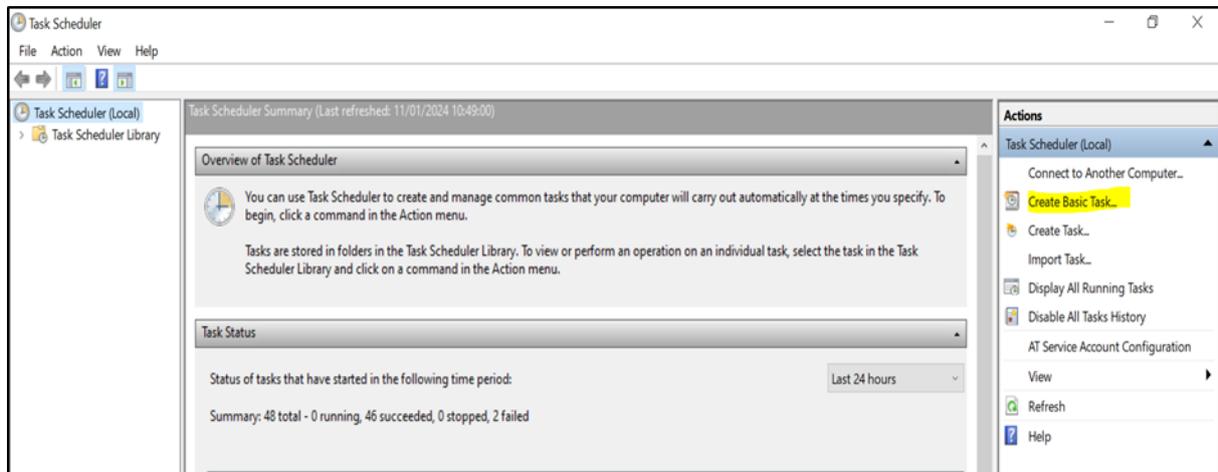
1.0 Automatically shut down out of hours

Step 1.1

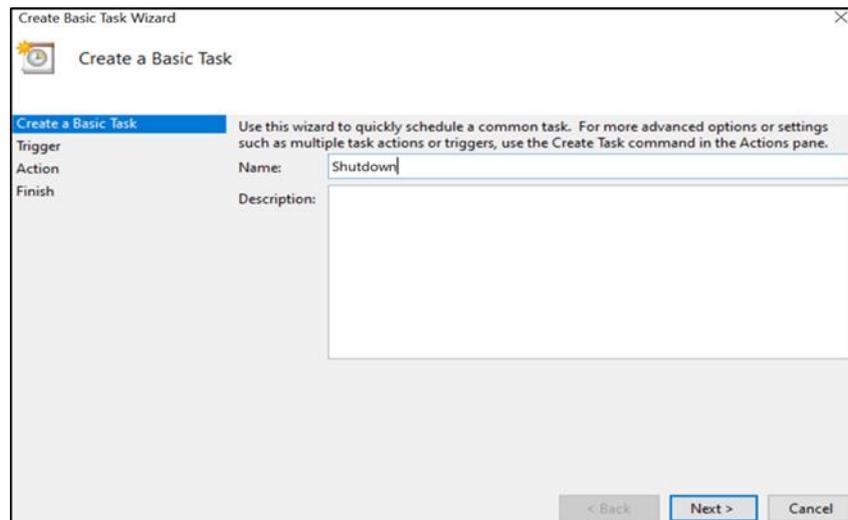Go to the search bar at the bottom left of your screen home and type, 'Task Scheduler' then select this app.

Step 1.2

Once open, navigate to the actions pane on the right of the screen and click 'Create Basic Task…' Highlighted in yellow below:

Step 1.3

Once opened create a name for your task i.e 'Shutdown', the description section is optional. Then Click Next.
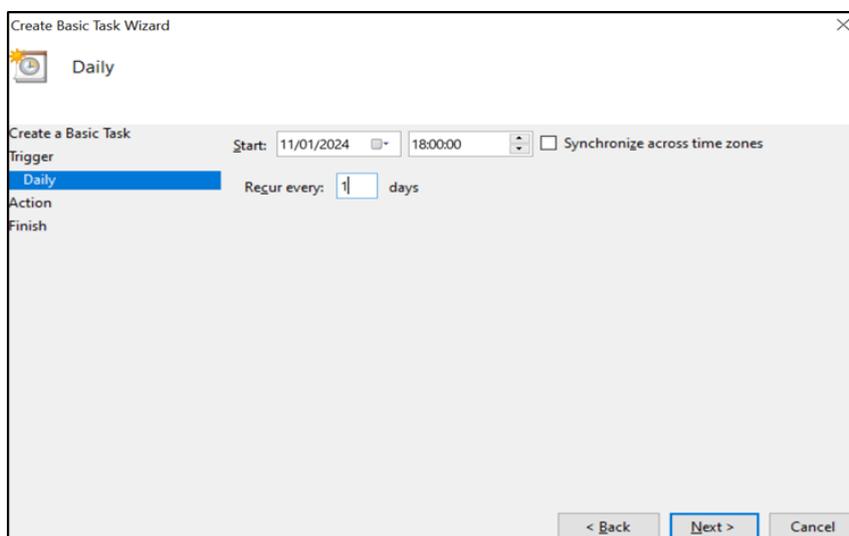
Step 1.4

Next you are presented with an option for 'When do you want the task to start?'. Choose the frequency that works for your team, daily is the recommended option. Then click Next.

Step 1.5

You are now presented with the scheduler. Please use today's date, if this is when you would like the task to begin, then select the time you want to your device to shutdown at:
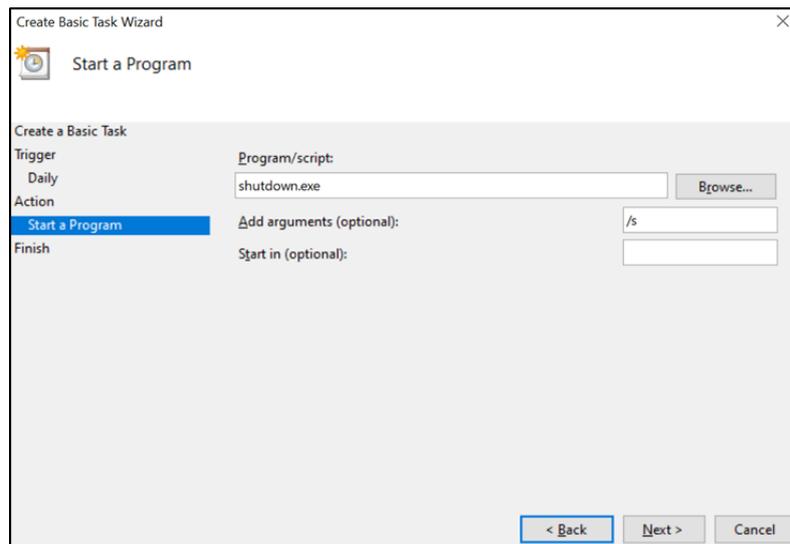

Step 1.6

Make sure that 'Start a program' is selected and click next.

Step 1.7

In 'Program/script' type "shutdown.exe" Then in 'Add arguments (optional):' Type "/s". Then click Next:

Step 1.8

On the summary screen check to ensure all the information is correct then click 'Finish'.

Your computer will now be scheduled to shut down every day at the time you have programmed.

1.0.   Advanced – setting the conditions

It is also possible to set specific conditions before the task runs. For instance, 'Start the task only if the computer is idle for xx minutes'. To set this up follow the steps below
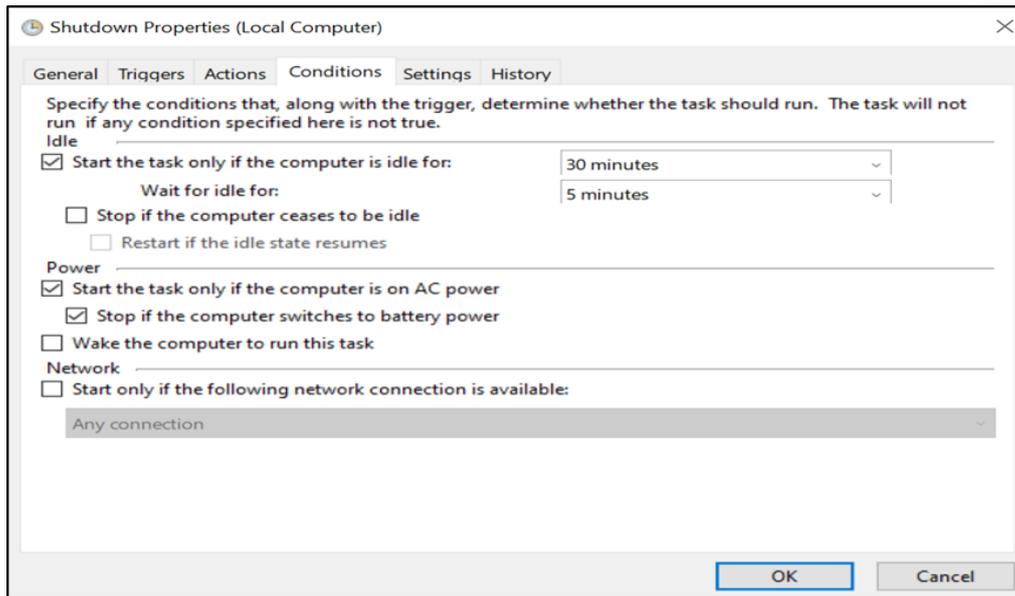
Step 2.1

Open the Task Scheduler app and click on 'Task Scheduler Library' on the left hand side of the page. Find your shutdown schedule and right click on it and click 'Properties'.
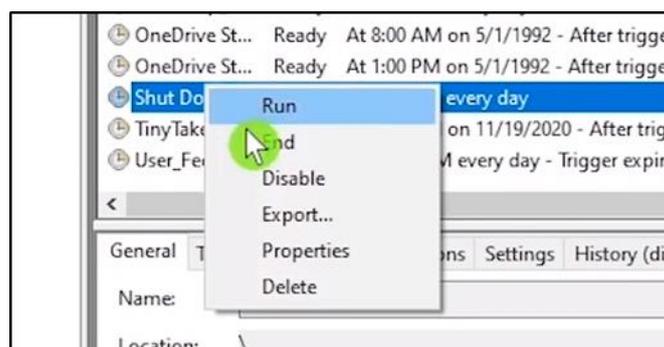
Step 2.2

On the pop up page navigate to the 'conditions' tab and check the box that says 'Start the task only if the computer is idle for:' and set the conditions that work for you and your team.

3.0. Cancelling the schedule

If you would like to cancel the schedule you have set up please follow the steps below

Step 3.1

Open the Task Scheduler app and navigate to the 'Task Scheduler Library'. Find your schedule and right click on the schedule. Click delete and confirm the deletion when the pop up box appears on your screen as shown below: