

## Energy management Toolbox talks

By the end of CP5, Network Rail has a regulated target is to reduce CO2 emissions by 11.19%. Our target for CP6 is a 25% reduction in CO2 emissions and an 18% reduction in total energy use. If action is not taken, it is inevitable that NR will witness not only environmental losses, but also economic and social implications. For example, failure to achieve the regulated carbon target will result in reputational damage, in addition to not realising almost £15 million in energy efficiency savings. Therefore, in order to achieve this target, there are a number of small-scale measures that can be implemented which in turn can lead to large-scale business benefits. These measures are explained in detail below.

### Conserving Electricity

Network Rail utilities expenditure is over £450m per annum. The price of electricity is rising every year making it increasingly difficult for Network Rail to keep costs down and remain competitive. In order to maintain success, we need to operate as efficiently as possible when it comes to our energy usage. Everyone in Network Rail can have an impact to minimise overheads and contribute to a sustainable future.

We all are expected to contribute to minimize unnecessary consumption of electricity.

Examples of minimising consumption:



### Lighting

Lighting is generally the biggest user, consuming 25% – 30% of the energy used in commercial buildings. It is also one of the main causes of heat.

Actions to maximise lighting efficiency:

- ✓ Turn off lights when not in use
- ✓ Use natural lighting if possible
- ✓ Make sure that the surfaces of tube lights and lamps are regularly cleaned to achieve maximum illumination. What you might not know is that dirt can absorb as much as half the light given off by fixtures, tubes and bulbs, requiring the use of additional sources of light.
- ✓ Switch to other energy efficient lights e.g. LED lighting

## Computers

Monitors use about 65% of the energy consumed by computers. There is a common misconception that screen savers reduce energy use, instead it is better to change your computer settings so that your computer automatically switches to 'sleep mode'.

Better still switch them off when not in use.

- ✓ Put monitors into sleep mode
- ✓ Reduce the brightness of your screen to a reasonable level
- ✓ Close down programmes that are not in use
- ✓ Unplug laptops from charge when battery is full



## Heating, cooling and other equipment

At about 20% of energy spend in large buildings; air conditioning is only second to lighting in terms of energy consumption.

- ✓ Turn off machinery and other electrical appliances when not in use. (i.e. blowers, fans, air conditioning units etc.) e.g. an air conditioning unit can use up to 20 times more electricity than a fan running for the same amount of time;
- ✓ Do not tamper with the settings on thermostats/radiators;
- ✓ Switch off heating when not required;
- ✓ Check that thermostats and timers are installed and working correctly to suit occupancies , e.g. for heating to turn off an hour before occupancy;
- ✓ Wear layers of clothes – allowing you to add/remove layers before turning on heating/air conditioning;
- ✓ Do not open windows while heating or air conditioning is on, switch off the heating/aircon instead;
- ✓ Always consider low energy consuming apparatus/equipment when purchasing, even if they are not cheaper to buy – short term savings can turn into extra long-term costs
- ✓ Share any ideas you have with your manager, your energy strategy lead and/or the Central Energy Management team.

## Conserving Water

Water is a resource that can often be wasted without anyone noticing. Just because it falls from the sky does not mean it's free and unlimited. A significant part of Network Rail's water bill is for the capital and running costs of treatment, pumping, distribution, wastewater disposal and for the maintenance of the network.

The combination of continuously rising energy costs along with energy being required during all stages of water supply and disposal, leads to the rising prices that NR is being charged. On top of this, energy generation not only creates high financial costs, but also environmental costs due to its high carbon footprint. Therefore, in order to reduce costs as well as carbon emissions, minimising the amount of water we use is essential to witness both economic and environmental benefits.



## Actions to take:

- ✓ Tightly close all taps
- ✓ Report leaks in pipe/hose connections, urinals etc. as soon as possible
- ✓ Look out for water saving opportunities, don't assume somebody else has/will
- ✓ Use the small flush on toilets if available
- ✓ Only turn dishwashers on once full

## Conserving Consumable Items

It is important to conserve consumable items in the workplace not only from a financial perspective, but also environmentally as conserving the life-span of our resources reduces the amount of waste we produce as a company. By becoming more resourceful through our work behaviour, we become more economical and efficient, therefore reducing the demand for more consumable items – saving more energy.

We all are expected to contribute to savings and conserve consumable items by:

- ✓ Printing necessary documents in fast print mode to save on toner and ink (avoid using coloured ink);
- ✓ Taking good care of provided PPE;
- ✓ Use work equipment appropriately to avoid damage;
- ✓ Save paper by printing less important documents double sided;
- ✓ Use scrap paper for rough notes;



## Other initiatives

There is so much more that can be done. Look out for opportunities to save energy and water as you go about your daily work. Whether it's making sure that doors are closed (which also has security benefits) or switching off unnecessary equipment, there are lots of small actions that can be taken to reduce energy and carbon emissions, and save money. You may have ideas for technical changes to buildings or infrastructure that will save energy – make your Energy Working Group members aware, or if you're not sure who these are then send your thoughts to the central Energy Management Team.

### Energy Management Team

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