

## Scottish Environment Protection Agency

### Main CO<sub>2</sub> Target

SEPA has set a target to reduce its direct emission of CO<sub>2</sub> by 25% from the baseline in 2006-2007 by the end of March 2012. Despite facing challenges with increased number of buildings and staff numbers during 2007-2010, we have now turned the corner and can report that overall emissions are down 6% by the end of 2010-2011 against the baseline. Predictions are that we will reduce emissions by a further 10-12% during 2011-2012 and will hit the target a year late in 2013. SEPA has agreed a 'road map' of all actions and timings that will aim lead to achieving the target by 2013.

### Transport CO<sub>2</sub> Target

SEPA set a sub-target over 3 years to reduce CO<sub>2</sub> emissions from transport (flights, cars, pool vehicles, trains and ferries) by 10% of 1006-1007 levels by March 2011. This target was exceeded and emissions from all transport modes were down 25% at the end of March

- Business Car mileage CO<sub>2</sub> reduced by 24% from the baseline period
- SEPA reduced UK mainland flights by 95% over 3 years and CO<sub>2</sub> from all flights by 75% over the same period.
- SEPA is the first UK public sector body to achieve WWF's 1 in 5 Flights challenge.<sup>[1]</sup>

### Building Consolidation and CO<sub>2</sub> Savings

SEPA closed its Dingwall technical building in Dec 2010 and relocated staff to its main office building in Dingwall – Graesser House. This move has reduced electricity consumption across the two buildings – so far – 13%, equivalent to 25 tonnes CO<sub>2</sub> during 2010-2011 and we expect to realise a further 50 saving of tonnes during 2011-2012.

SEPA will close its Thurso office in July 2011 and relocate its staff to share a single building with the Scottish Government's Rural Payments and Inspectorate Directorate in Strathbeg House, Thurso. This is expected to result in significant electricity savings. Further building consolidation is being actively investigated.

### Technical Changes

SEPA installed an air source heat pump at our Fort William office in June 2011-2012. This is expected to save up to a third of current electricity consumption used to heat the building. SEPA installed a voltage optimiser in its corporate office in Stirling during 2010-2011. It is too early to identify actual savings but it is anticipated that up to 10% of the buildings electricity load will be reduced.

## IT Changes

SEPA's IT department has very recently virtualised all computer servers at its Corporate Office in Stirling by replacing >100 conventional computer servers with 6 'blade' servers. It is too early to identify electricity savings but it is anticipated these will be significant. In addition the electricity used currently for cooling will be reduced by at least a third.

## Waste Management

SEPA has continued to apply the principles of the waste management hierarchy to its own wastes during 2010-2011 as well as expand those wastes that can be collected for recycling and return valuable materials to the supply chain. SEPA has entered into a recycling contract with the Mitie Group which guarantees materials uplift from remoter buildings such as those in the Highlands. The carbon benefits are expected to be significant as the contractor is also expanding uplifts of similar materials from other public sector organisations in the same localities. This means more materials salvaged from landfill and less transport impacts as fewer but larger uplifts are collected.

## Procurement

SEPA, SNH and JNCC have occupied a new BREEAM 'Excellent' rated Office/Laboratory building in Aberdeen which reflected their own and the government's sustainability agenda. In addition to adopting best practise in terms of sustainable building development, the building provided high quality accommodation and led by example in partnering with an innovative developer to demonstrate the value of sustainable buildings to all stakeholders. In collaboration with Grampian Housing Association the re-development of the Torry area provided affordable housing and additional jobs to the area.

- The construction phase monitored and controlled contractor noise, water and energy usage, mileage of site personnel and deliveries to minimise environment impacts;
- The open plan design maximises the use of natural daylight and ventilation while the thermal mass of concrete floors and ceilings aid heating/cooling of the building;
- Solar thermal panels are installed on the roof to pre-heat domestic hot water
- A biomass boiler provides heating for the building, with wood pellets sourced locally;
- 6.5Kw wind turbines and solar PV panels generate additional electricity; and
- Rainwater harvesting system collected water from the roof for re-use in toilets.

Total carbon dioxide savings across all 3 organisations compared to their existing buildings are 32 tonnes per year and may improve as the building is "bedded-in".

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[1] [http://assets.wwf.org.uk/downloads/one\\_in\\_five\\_challenge\\_annual\\_report.pdf](http://assets.wwf.org.uk/downloads/one_in_five_challenge_annual_report.pdf) See Page 19.