

Estimates Committee 2012
Questions Taken On Notice

(12/06/2012 to 21/06/2012)

Date: 14/06/2012

Output:

Sub Output:

Subject: School reductions in electricity cost

From:Mr Gerry Wood to Dr Chris Burns
Education and Training

Question: **4-8**
Minister, could I be given figures for particular schools which show any reductions in electricity costs to those schools and how they achieved those reductions?

Answer:
Answered On: 19/07/2012

Minister: MINISTER BURNS
Portfolio: MINISTER FOR EDUCATION AND TRAINING

Question on Notice 4.8

Mr WOOD: Minister, could I be given figures for particular schools which show any reductions in electricity costs to those schools and how they achieved those reductions?

ANSWER:

The Department of Education and Training (DET) Strategic Plan includes a sustainable asset strategy where resourcing and infrastructure is aligned to equitable and strategic priorities including DET's targets for energy use reduction and ecological sustainable development.

The reduction in the cost of electricity to schools is a good indicator of reduced fossil energy consumption. However, there are many variables which could increase the overall electricity cost in a particular year, such as adding enclosed air conditioned space to the school's overall footprint, after hours use by others of the school, such as the introduction of after school care and various programs supported by school as heart of community policy that encourages the use of schools by community outside of school hours.

Each school could have a range of these factors that 'tells the story' of their school's efforts to become a sustainable school. Further, the outcome of effort may not be evident immediately i.e. 2010/11 data but in future years will reflect the implantation of various initiatives described below, which target both behaviour as well as building and mechanical services

Attached is a list of schools with reduced electricity expenses and a cross reference to the participation by the school in various programs including:

AuSSI - The Australian Sustainable Schools Initiative (AuSSI) was a partnership of the Australian Government and the states and territories that seeks to support schools and their communities to become sustainable. AuSSI engages participants in a whole-of-school approach, to explore through real-life learning experiences, improvements in a school's management of resources and facilities including energy, waste, water, biodiversity, landscape design, products and materials. Funding for this program was ceased however, DET will advocating for the re launch in 2012/13 with the aim that all DET schools sign up to be AuSSI schools in some if not all of these areas.

BER - \$3.6 million of Building the Education Revolution funding was invested in solar photovoltaic installations across 14 schools in 2011. The largest of the solar array projects

was at Millner Primary School and included installation of 100.8kW solar photovoltaic system. The Solar Outdoor Learning Facility will supply Millner Primary School with 150 000kWh of renewable energy each year which will reduce the school's greenhouse gas emissions by 100 tonnes of carbon dioxide equivalents annually.

The project was designed to be a learning experience for the students attending this school as well as providing an excursion opportunity for other students. Features to support learning include a viewing platform and an interactive display to provide both static & graphic displays to "Tell the Story" of the Solar Array.

ESS - The Energy Smart Schools Program was a key initiative to meet the NT Government Energy Smart Buildings Policy of a 10% reduction in energy intensity by all agencies by 2010-11. DET actual energy intensity decrease was 12.24% from the 2004-05 baseline year.

The Key Program Components of the program were:

- Whole of school sustainability facilitation
- Energy auditing of school
- Funded energy efficiency projects
- Integration of sustainability concepts as a core component of the corporate culture, in order to reduce energy use throughout school facilities.

Fifty-nine government schools, contributing to over 80 per cent of DET's total building energy use were targeted under the ESSP. The schools were located throughout the Territory including four regions outside of Darwin (Alice Springs, Katherine, Tennant Creek, and Nhulunbuy) and a number of remote schools.

The identified schools were selected based on a number of factors including their relatively high energy intensity (kWh/m²), total annual energy use, large student numbers and school size (larger schools have increased potential to realise significant energy efficiency improvements and associated CO₂-e reductions).

Over the course of the program, each of the 59 schools were encouraged to incorporate environmental sustainability concepts into their curriculum and the daily operation of their facilities. Whilst all facets of environmental sustainability were targeted during the program and beyond, the primary focus of the ESSP and ongoing initiatives is for sustainable energy management.

GEEP - \$1.8 million of funding from the Government Energy Efficiency Program was invested in 2011-12 across 44 NT schools for lighting upgrades. The Schools Energy Efficient Lighting project, funded at \$1.7 million, is expected to save annually 3 507 gigajoules in energy; \$226 225 in energy and maintenance costs; and 775 tonnes of greenhouse gas (CO₂-e). This is equivalent of removing 172 cars of the road per year.

NSSP - \$3.6 million of Commonwealth Government funding will be invested in 2011/12 and 2012/13 as part of the National Solar Schools Program for the installation of rooftop solar photovoltaic systems across 78 schools.

For most schools, NSSP funding will be used for the installation of between 4 and 9.75kW, grid-connected solar array with a Solar SETS Data Collection Storage and Visualisation System. Local installers are engaged in order to support the Northern Territory's renewable energy industry. For many of the schools, the decision to participate in NSSP stemmed from recommendation that came out of the ESSP energy audit reports completed by Planet Savers.

The NSSP program for schools has been designed with education in mind; particularly towards the areas of energy efficiency and renewable energy. The solar system and DCSVS is capable of providing 1 minute interval data, which means that students are able to directly see the impacts of their energy conservation efforts. Making energy usage visible is an essential first step in learning to manage the schools carbon footprint while making sustainability easy and fun to understand. It has links in with P-12 curriculum; focusing on how to read the system, culture / behaviour change, social impacts of climate change and sustainability, broad context of climate change and understanding the meta-language of sustainability and renewable energy. The system also quantifies energy savings and along with the SETs program, allows schools to track their effort and reduced fossil fuel energy use.

ESD – designing for new school buildings

The Department of Lands and Planning (formerly Department of Planning and Infrastructure sustainability unit) has been working closely with DET and the Department of Construction and Infrastructure to ensure that environmentally sustainable building design (ESD) standards as well as opportunities to exceed standards are incorporated into all new schools and school buildings. A comprehensive easy to follow checklist of environmental design requirements has been compiled based on modelling, life cycle cost evaluations and expert advice. In addition, local architects and consultants continuously engage in professional development to increase expertise in designing for our Territory climate.

Recycling

Many schools are already actively recycling waste while the new cash for cans program and trailers for schools will further incentivise the emphasis on reducing waste in schools.

Water conservation

The PowerWater Corporation sustainability unit will be piloting water audits at two schools in Term 3 and will be launching an interactive water conservation campaign later in 2012 targeting schools.