

# regional greenhouse plan

southern sydney regional organisation of councils june 2003

## A postcard from Sydney 2050

Global warming is the most serious environmental issue facing the world today. It will have major implications for the environment and life as we know it. CSIRO modelling indicates that by 2050 there could be:

- 50% more summer days over 35 degrees
- frequent extreme weather events including storms, droughts and bushfires
- an increase in the severity of photochemical smog as temperatures rise
- a higher prevalence of insect and waterborne diseases, like malaria and dengue fever
- an increase in storm surges impacting on coastal settlements
- a severe reduction in habitats such as mangroves and saltmarsh
- no more Australian snowfields - with NSW snowfields decreasing by more than 66%
- many native species (plants and animals) facing extinction
- sea level rises of between 10 and 40cm.

The Regional Greenhouse Plan will slow the rate of change and avoid the worse case scenario.



## Our response to global warming

Worldwide scientific opinion indicates that the world's climate is changing due to human activity. Ten of the past 12 years have been warmer than any previous year on record, and extreme weather events such as droughts, floods and severe storms are now more frequent.

This climate change is due to an increase in greenhouse gas concentration in the atmosphere. Today's global concentration of greenhouse gas are 30% greater than in the 18th century.

The Southern Sydney Regional Organisation of Councils (SSROC) recognises this problem and is working with councils, communities, businesses and industry to reduce greenhouse emissions. The cumulative impact of these actions will significantly reduce the region's contribution to this global problem.

### The Greenhouse Regional Plan is our response to the challenge of global warming.

A reduction in greenhouse gas concentrations will be achieved by implementing effective, practical actions within the SSROC region. A united Council approach to greenhouse gas reduction not only brings efficiencies and benefits with the sharing of resources and expertise, but also means we can tackle cross boundary issues like transport.

## Our Goal is:

**To reduce greenhouse gas emissions by 20% across the region by 2010.**

## Our Commitment

Councils are taking the greenhouse issue seriously, and are demonstrating leadership on this issue with a commitment to reduce the greenhouse emissions from their council areas by at least 20% of the 1997 level by 2010. They are developing innovative projects to reduce greenhouse emissions both from their operations and across the community. Participating Councils have joined the international greenhouse reduction program Cities for Climate Protection (CCP™) to help them achieve this goal. The Regional Greenhouse Plan (RGP) complements and expands on the Local Action Plans developed by Councils under CCP™.

Ten member Councils of SSROC are participating in the RGP covering more than one million people and a third of the Sydney metropolitan area.

Participating councils include: Botany Bay, Canterbury, Hurstville, Kogarah, Marrickville, Rockdale, South Sydney, Sutherland Shire, Waverley, Woollahra.

We are the biggest region in the world working together to reduce greenhouse gas emissions.

The Plan builds on SSROC's pioneering document *A Greenhouse Strategy for the Southern Sydney Region* (1992) that demonstrated the important role local government could play in reducing greenhouse gas emissions, providing a regional response to the issue as well as outlining local actions.

## A quick guide to the greenhouse effect

Greenhouse gases (water vapour, carbon dioxide, methane and nitrous oxide) are a natural part of the earth's atmosphere. They trap the sun's warmth, and maintain the surface temperature of the earth at a level necessary to support life.

Since the industrial revolution, the concentration of greenhouse gases in the atmosphere has increased significantly, mainly due to the burning of fossil fuels (coal, oil and natural gas) and land clearing. This increased level of greenhouse gas emissions trap more heat in the atmosphere causing global warming and climate change – this is known as the *enhanced greenhouse effect*.

Everyday activities such as transport, use of electrical appliances, heating and cooling the home, are all contributing to the greenhouse effect.

The only question that remains is how much our climate will change and how great the impact will be.

### Greenhouse guzzlers

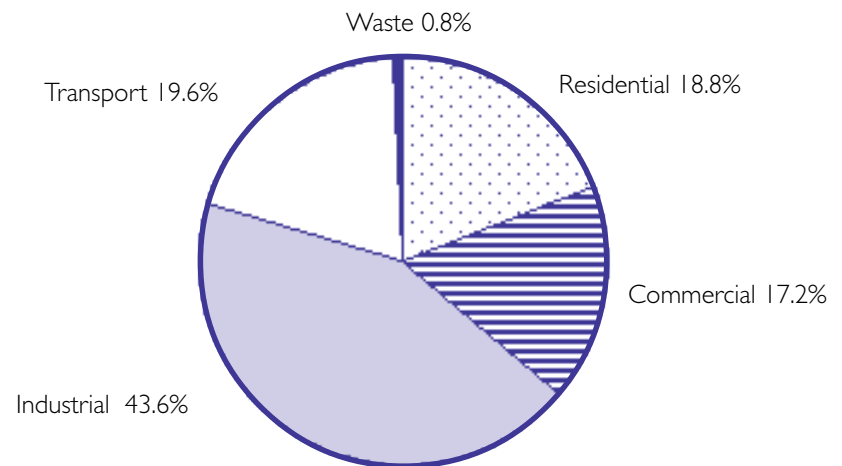
Per capita, Australians are amongst the highest greenhouse gas producers in the world. This is not a record we should be proud of.

If no action is taken to reduce our greenhouse gas emissions, they are predicted to grow by 28% between 1990 and 2010. This figure does not include changes of land use and land clearing.

At the Kyoto Summit, Australia negotiated a maximum emission target of 8% above the 1990 levels by the period 2008-2012. This is significantly more generous than international targets. Between 1990 and 1998 emissions actually rose 17%.

## Where do the emissions come from?

A major contributor to greenhouse gas emissions is the use of energy derived from fossil fuels - this includes coal, petrol, oil, and diesel. Since the majority of our electricity is produced by coal-fired power stations, electricity use is a significant contributor:



### Residential sector

Households contribute to emissions by using energy for water heating, room heating and cooling, swimming pool pumps, cooking, lighting and various electrical appliances. Significant savings can be easily made with minimal lifestyle changes.

### Commercial Sector

Emissions from this sector come predominantly from room/space heating, water heating, air-conditioning, lighting, refrigeration, cooking and running a wide variety of other equipment. This sector includes a wide range of businesses such as restaurants, smash repairers, retailers and dry cleaners.

### Industrial sector

Energy is used for industrial processes like plant and machinery operation, lighting, refrigeration, and manufacturing of chemicals.

### Transport Sector

This sector includes private vehicles, taxis, buses, trains, freight, aeroplanes, and recreational vehicles like boats. Reducing emissions from transport has multiple benefits, including reduced traffic congestion, traffic noise and air pollution. Greenhouse gas emissions from transport are expected to rise significantly between now and 2010.

### Waste Sector

Methane is produced when organic material in garbage decomposes. It is a potent greenhouse gas – the impact of just one tonne of methane is equal to the effect of 21 tonnes of carbon dioxide. The region's waste is mainly processed at a regional waste facility where methane is recovered and used as green energy.

As a region we have been very successful in diverting waste away from landfill through recycling and waste avoidance. On average we produce 22% less waste than in 1990 - but as we each produce 383kg of waste each per year, there is still plenty of room to improve!

## What are Councils doing?

Councils are leading by example, and are reducing emissions from their activities by at least 20%. Initiatives include:

- swimming pool retrofits
- air conditioning improvements
- street lighting review
- purchasing green power
- initiatives to reduce vehicle kilometres travelled
- energy efficient planning requirements for new residential dwellings
- regional and sub-regional transport strategies
- local and regional bicycle plans
- community tree planting days and annual tree giveaways
- providing green waste service
- preparing transport access guides for Council facilities.

## Cities for Climate Protection

The Cities for Climate Protection (CCP™) Program is an international program that assists local government to reduce greenhouse emissions on the principle of thinking globally but acting locally. It is supported by the International Council for Local Environment Initiatives (ICLEI) in collaboration with the Australian Greenhouse Office. A total of 171 Councils have joined the program, covering 66.74% of the Australian population. The program provides a framework of five milestones to develop strategic and corporate actions to reduce emissions.

### Southern Sydney greenhouse facts

Our region produced 10,168,816 tonnes of carbon dioxide in 1996. Of this 143,674 tonnes were produced as a result of Council operations. By 2010, CO<sub>2</sub> levels are forecast to rise by more than 25% if local and regional greenhouse plans are not implemented.

Fact: The population of Sydney increased by 7% between 1991 and 1998, but the total vehicle kilometres travelled by Sydney residents increased by 24% (SOE 2000).

Fact: Passenger cars contribute 56.3% of all transport emissions. A car generates about 40% more greenhouse per kilometre when its engine is cold.  
Be healthy and walk or cycle for short trips.

Fact: Over 90% of electricity in NSW comes from coal-fired power stations.

Fact: Appliances on standby constitute more than 8% of domestic electricity consumption. Switch all appliances off at the wall.



## Greenhouse Timeline

- 1988** *International*  
United Nations International Panel on Climate Change (IPCC) established to review existing knowledge and assess the greenhouse situation.
- 1990** *International*  
1<sup>st</sup> IPCC report released - forms basis for the Framework Convention on Climate Change (FCCC).
- 1992** *Local*  
A Greenhouse Strategy for the Southern Sydney Region released - recognised important role of local government in addressing the greenhouse issue.
- 1992** *National*  
National Greenhouse Response Strategy (NGRS) endorsed - to help meet obligations under FCCC. Interim target: By 2005 to achieve a 20% reduction on 1988 levels. Superseded by Kyoto negotiations.
- 1993** *International*  
Australia signs FCCC - 154 other countries also signed.
- 1994** *National*  
FCCC comes into action - aims to stabilise greenhouse emissions to prevent dangerous human induced interference with the climate system.
- 1996** *State*  
Sustainable Energy Development Authority (SEDA) established - aims to reduce greenhouse emissions in NSW.
- 1997** *International*  
Kyoto Protocol drafted - commitment to reduce greenhouse emissions to 5% below 1990 levels. Australia does not ratify it.
- 1997** *National*  
Australian Greenhouse Office established.
- 1998** *National*  
National Greenhouse Strategy replaces NGRS.
- 2000** *Local*  
SSROC Councils start to join the Cities for Climate Protection (CCP™) Program - by 2002, 10 out of 11 councils have joined.
- 2001** *National*  
Australian greenhouse target - Australia negotiates a target of no more than 8% above 1990 levels. Australia refuses to ratify the Kyoto Protocol until USA ratifies.
- 2003** *Local*  
Regional Action Plan - To reduce greenhouse emissions by 20% across the southern Sydney region.

# Southern Sydney Regional Greenhouse Plan

**Our Mission: To working together to address the challenge of global warming**

Priority	Actions	Target Group
High	Develop regional media and communications strategies	NR/Res
	Support an energy efficient DCP for the non residential sector	NR
	Promote green power use	NR
	Support and promote energy audits for small to medium sized business	NR
	Support energy education programs for business and industry	NR/R
Medium High	Promote existing community education programs on greenhouse issues	Res
	Support street lighting review options	Cou
	Support regional trip generators to develop transport access guides	NR
	Support integrated regional transport programs	Cou/Res
	Develop a regional CCP/greenhouse web page	Cou/NR/Res
Medium	Develop a discount coupon program &/or a retrofit kit	Res
	Identify existing energy efficient building in the region & promote	NR/Res
	Create virtual tours of existing energy efficient buildings	Cou/NR/Res
	Deliver targeted community greenhouse education	Res
	Develop an awards program for energy efficient business & industry	NR
Low	Develop a regional light rail position paper	Cou/Res
	Link up local bike plans to form a regional bike plan	Cou
	Promote industrial waste and recycling initiatives	NR
	Support green plumber program	NR/Res
	Support State Transit Authority initiatives to run on CNG in the region	Cou

KEY: NR = Non Residential

Res = Residential

Cou = Council

## Where to get further information

The success of the regional actions will be evaluated and reported in the Councils' State of the Environment Reports and through the SSROC website.

Visit the SSROC website on [www.ssroc.nsw.gov.au](http://www.ssroc.nsw.gov.au) and follow the links to the local and regional greenhouse plans, or call your local Council.

Australian Greenhouse Office [www.greenhouse.gov.au](http://www.greenhouse.gov.au)  
 Sustainable Energy Development Authority [www.seda.nsw.gov.au](http://www.seda.nsw.gov.au)  
 Cities for Climate Protection [www.iclel.org/ccp-au](http://www.iclel.org/ccp-au)  
 Kyoto Protocol <http://unfccc.int>  
 Energy Smart Information Centre [www.energysmart.com.au](http://www.energysmart.com.au)  
 Your Home Guide [www.yourhome.gov.au](http://www.yourhome.gov.au)  
 Climate Action Network Australia [www.climateaustralia.org](http://www.climateaustralia.org)  
 Commonwealth Scientific and Industrial Research Organisation (CSIRO) [www.csiro.gov.au](http://www.csiro.gov.au)  
 Greenpower [www.greenpower.com.au](http://www.greenpower.com.au)

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