

**Northern Alliance for
Greenhouse Action Submission:
Victorian Climate Change
Green Paper
September 2009**



**NORTHERN
ALLIANCE FOR
GREENHOUSE
ACTION**

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Summary of recommendations

Urgency of action

Recommendation: The State Government's implementation of climate change action reflect the urgency demanded by climate science, and by the community.

Whole of government approach, climate change assessment of all legislation, policies and programs

Recommendation: The State Government develop a 'climate change test' to be applied to all legislation, government policies and programs to ensure the consistent and effective application of climate change initiatives and responses.

Recommendation: The State Government extend and consolidate energy efficiency and green purchasing programs to address their own climate change impacts.

Local government and regional greenhouse alliances' roles

Recommendation: The State Government continue to provide resources and funding, and to work in partnership with local government and regional greenhouse alliances in the implementation of climate change actions and programs.

Recommendation: The State Government expand the Victorian Local Sustainability Accord as a key partnership and delivery mechanism for sustainability initiatives.

Recommendation: The State Government support the role of regional greenhouse alliances in implementation of climate action, and expand the network of regional alliances to achieve coverage of the entire state.

Recommendation: The State Government and other participants of the Public Lighting Taskforce implement the actions and initiatives identified through the Public Lighting Taskforce process.

Recommendation: The State Government provide assistance to the local government sector, particularly with finance and building the business case, to facilitate installation of energy efficient streetlighting in Victoria.

Recommendation: The State Government develop and expand collaboration and financing mechanisms to support the uptake of sustainable design and technologies.

Recommendation: The State Government pursue through COAG the issue of the impact of CPRS on the public sector.

Urban planning

Recommendation: The State Government continue to improve building standards related to energy performance.

Recommendation: The State Government develop a planning guidance tool or mechanism to assist council planners to consider the greenhouse gas implications of zoning, precinct planning and planning approvals. The planning guidance tool includes a requirement for a Public Transport Accessibility Level assessment for new developments, and specify a maximum, not minimum number of supplied car spaces.

MEMBER ORGANISATIONS

BANYULE CITY COUNCIL, DAREBIN CITY COUNCIL, HUME CITY COUNCIL, MANNINGHAM CITY COUNCIL, CITY OF MELBOURNE, MORELAND CITY COUNCIL, MORELAND ENERGY FOUNDATION LIMITED, NILLUMBIK SHIRE COUNCIL, CITY OF WHITTLESEA, CITY OF YARRA

Renewable/low carbon energy

- Recommendation: The State Government work through COAG with the National Electricity Market to address institutional barriers (market failures) to the installation of low emission and renewable technologies through minor changes to rules and regulations.*
- Recommendation: The State Government facilitates low emission and renewable technologies through information provision, provision of world's best practice feed-in tariffs, and funding support for small scale and medium scale renewable energy generation projects.*
- Recommendation: The State Government supports the establishment and operation of the smart electricity grid.*
- Recommendation: The State Government supports the identification, trialling and promotion of the skills and training required to enable a diversified energy system to develop in Victoria.*

Transport

- Recommendation: The State Government construct renewable energy or gas-fired power plants for use by public transport.*
- Recommendation: The State Government facilitate linkages and integration between state-wide infrastructure provision, and local governments' development of local sustainable transport planning.*
- Recommendation: The State Government provides incentives for drivers to adopt more fuel efficient vehicles, and amends the car registration system to institute higher costs for registering less efficient vehicles.*

Green skills green jobs

- Recommendation: The State Government provide pre- and post-qualification training, and audits of skills and industries to support the transformation to a low carbon economy.*

Sustainable Consumption

- Recommendation: The State Government continue to provide resources, research and funding to support sustainability behaviour change.*
- Recommendation: The State Government work through COAG to achieve global best practice in minimum energy performance standards, including improving minimum benchmarks over time.*

Adaptation

- Recommendation: The State Government provide resources for delivery of community capacity building programs, and research.*
- Recommendation: The State Government support local governments' development and implementation of integrated risk management and adaptation plans through provision of resources and research.*
- Recommendation: The State Government review the impacts on habitat and biodiversity of climate change, and vegetation clearance on private land, as well as the State's network of biodiversity reserves, and habitat linkages.*

Conclusion

- Recommendation: The State Government identify international best practice and innovative policy and program responses, to support the claim that Victoria maintains its position as a leader in climate change actions and responses.*

Introduction

The Northern Alliance for Greenhouse Action (NAGA) welcomes the release of the Victorian Climate Change Green Paper, and the opportunity to provide a submission. Climate change provides huge and complex challenges to our established ways of life; the Green Paper recognises the requirement for a wide and varied suite of measures to effectively implement the necessary mitigation, adjustment and adaptation responses to climate change.

About NAGA

The **Northern Alliance for Greenhouse Action** (NAGA), which began operating in 2002, is an alliance of Moreland Energy Foundation and the nine councils spanning the northern region of Melbourne from the CBD to the rural/urban fringe¹. The Alliance shares information, coordinates and implements community based emission reduction activities, undertakes research into reducing carbon emissions across the NAGA region, and cooperates on the research and development of innovative emissions reduction projects for NAGA members' own emissions sources. NAGA also establishes partnerships and linkages with state and federal government agencies and departments, local government and industry associations, research institutions, community groups and consultants, to facilitate climate change action in the northern metropolitan region.

NAGA's Regional Plan: Towards Zero Net Emissions for the NAGA Region

Following 12 months of research and consultation, NAGA has developed the regional plan '*Towards Zero Net Emissions for the NAGA Region*' (TZNE)². The TZNE regional plan responds to the urgent need to reduce greenhouse emissions by providing for the first time in Australia, a comprehensive and evidence-based regional direction for carbon mitigation to 2020. The Plan highlights the key actions which would stem the growth of greenhouse emissions and make major inroads towards the transition to a low carbon region.

TZNE represents a regional approach to greenhouse gas reduction. It demonstrates what can be achieved to move towards zero net emissions by 2020 through leadership, advocacy and driving innovation. To achieve further cuts to the region's greenhouse gas emissions, and to achieve substantial and meaningful climate change action, there will need to be alignment and concerted effort in regards to policies and actions by the Federal and State Governments, individual Local Governments' mitigation strategies and the contribution of businesses and individuals.

Structure of this submission

NAGA supports the objectives, long term goals and priorities that have been identified in the Green Paper. This submission highlights the urgency of climate change action and summarises NAGA's strategic climate change action priorities, and the roles of local government and regional alliances. This overview is followed by more detailed responses to issues and opportunities in specific sectors.

The views represented in this submission do not necessarily represent the views of all NAGA members individually.

¹ NAGA's members: Cities of Banyule, Darebin, Hume, Manningham, Melbourne, Moreland, Whittlesea and Yarra, Nillumbik Shire Council and Moreland Energy Foundation.

² Northern Alliance for Greenhouse Action, 2009, *Towards Zero Net Emissions for the NAGA Region* www.naga.org.au

NAGA's strategic priorities and directions

Urgency of action

There is a mandate for strong government action and leadership, expressed for example through State Government research³ and public opinion surveys⁴. However this sense of urgency, expressed at local, regional, and state-wide scales is not reflected by the State Government and the speed and urgency with which it is implementing climate change action or the lack of consistency in incorporating climate change considerations into broader decision-making and implementation.

Climate science is now overwhelmingly confirming that human activities, especially the combustion of fossil fuels, are influencing the climate in ways that threaten the well-being and continued development of human society⁵. In addition, climate science is indicating that climate change will not be a continuous change but is likely to involve feedback loops and irreversible step changes. Current targets are more likely to ensure dangerous climate change, if not catastrophic, according to climate scientists. The climate science is stating strongly the urgent and substantial action required to avoid dangerous climate change, yet climate policy is not reflecting the level of action required.

Addressing climate change mitigation, adjustment and adaptation will require fundamental and far-reaching changes to our economies and lifestyles; we have the opportunity to be proactive in these changes and in limiting emissions. If we don't take urgent and transformative action, or if we try to cling to old technologies and old business practices we will be reduced to reactive responses to cope with the impacts of dangerous or catastrophic climate change.

Recommendation: The State Government's implementation of climate change action reflects the urgency demanded by climate science, and by the community.

Whole of government approach, climate change assessment of all legislation, policies and programs

NAGA supports a whole of government approach to addressing climate change. As well as development and implementation of new policies and programs, effective climate change action requires the cessation of policies, programs and initiatives that exacerbate greenhouse emissions (such as allowing outdated, high polluting coal-fired power stations to continue to operate), or that reduce our adaptive capacity to respond to climate change impacts (such as authorising continued urban sprawl without adequate investment in infrastructure including public transport, employment opportunities, etc). A climate change test must be developed and applied to all legislation, government policies and programs to ensure the consistent and effective application of climate change initiatives and responses.

Recommendation: The State Government develop a 'climate change test' to be applied to all legislation, government policies and programs to ensure the consistent and effective application of climate change initiatives and responses.

There are significant opportunities to extend and consolidate programs to address state and local governments' own impacts through energy efficiency and purchasing, utilising a range of measures including regulation, targets, incentives and standards.

Recommendation: The State Government extend and consolidate energy efficiency and green purchasing programs to address their own climate change impacts.

Transforming local economies to a carbon constrained future

Local government and regional alliances can play a critical role in transforming local economies and local communities and positioning them for a carbon-constrained future. To achieve the substantial cuts in greenhouse gas emissions that science indicates are necessary will require transformation of our economies, including both in energy supply (shifting from coal dominated generation to distributed/local systems of renewable and low carbon generation), and in energy demand (shifting from highly energy intensive industries to industries with less intensive energy requirements and/or industrial precincts that can coordinate or streamline energy, services and materials inputs and outputs). Developing an energy services sector will also support the community's transition to a carbon-constrained future through delivery of targeted, and effective energy efficiency and renewable energy services.

³ Sustainability Victoria, 2009, *2009 Green Light Report*, <http://greenlightreport.sustainability.vic.gov.au/>

⁴ Climate Institute polling (various dates)

http://www.climateinstitute.org.au/index.php?option=com_content&view=category&layout=blog&id=131&Itemid=65

⁵ University of Copenhagen, 2009, *Synthesis Report from Climate Change, Global Risks, Challenges and Decisions, Copenhagen 2009, 10-12 March*. www.climatecongress.ku.dk

Other specific issues and opportunities

Local government and regional greenhouse alliances' roles

Local government carries out multiple roles in climate change mitigation, adjustment and adaptation. Some of these include urban planning, community welfare and development, provision and maintenance of infrastructure, recreation facilities and programs, etc. Local governments have played leadership roles in implementation of climate change actions to reduce their own emissions, and in assisting their communities to reduce emissions. Local government, and regional greenhouse alliances (of which more than half Victoria's municipalities are members), have been active in implementing climate change programs and policies for a number of years, and are well placed to work in partnership with the state government to deliver programs at local and regional scales that are targeted to the specific characteristics of their communities, including targeting socially disadvantaged sectors.

Effective delivery of climate change action programs can be achieved through the provision of adequate resources from State Government (research information, policy frameworks and funding) to local government and their alliances. The Victorian Local Sustainability Accord has been working to strengthen cooperative efforts between State and local government sectors, with significant achievements in some areas; the Accord should be continued and expanded as a key partnership and delivery mechanism for sustainability initiatives.

Recommendation: The State Government continue to provide resources and funding, and to work in partnership with local government and regional greenhouse alliances in the implementation of climate change actions and programs.

Recommendation: The State Government expand the Victorian Local Sustainability Accord as a key partnership and delivery mechanism for sustainability initiatives.

In many areas, regional greenhouse alliances have formed to share resources, information and program delivery. NAGA is one of seven regional greenhouse alliances in Victoria. The greenhouse alliances bring together local governments, state government departments and agencies and other key players to plan, design and implement regional programs for climate change mitigation and adaptation. There is recognition of the efficacy and efficiency of scales of implementation, and of the potential for complementing action at local, state and federal levels. Members of NAGA have recognised the opportunities and efficiency of working at the regional and sub-regional scale, as demonstrated by the development, endorsement and implementation of regional actions in the strategic regional plan '*Towards Zero Net Emissions for the NAGA region*'. The contribution that regional alliances can make towards climate change action should be acknowledged, and regional alliances and networks should be supported, including expanding the network of regional alliances to cover the entire state.

Recommendation: The State Government support the role of regional greenhouse alliances in implementation of climate action, and expand the network of regional alliances to achieve coverage of the entire state.

Streetlighting is a key issue for local government; streetlighting is a major contributor to local governments' greenhouse gas emissions, and the installation of efficient streetlighting can make a substantial impact on greenhouse gas reductions for the sector. NAGA has received grants from the Victorian Government's Sustainability Fund under the Victorian Local Sustainability Accord to undertake programs to address barriers to the installation of energy efficient streetlighting. In addition, NAGA and its members have played an active role in the State Government's Public Lighting Taskforce, which has addressed a number of these barriers at a high level. NAGA looks forward to the implementation of state-wide actions and initiatives as a result of the Public Lighting Taskforce. However, local government continues to require State Government assistance, particularly with finance and building the business case, to allow installation of the energy efficient streetlights.

Recommendation: The State Government and other participants of the Public Lighting Taskforce implement the actions and initiatives identified through the Public Lighting Taskforce process.

Recommendation: The State Government provide assistance to the local government sector, particularly with finance and building the business case, to facilitate installation of energy efficient streetlighting in Victoria.

Governments can take lead roles in addressing key institutional and systemic barriers to the uptake of energy efficiency practices and technologies (as outlined above for streetlighting). To embrace these leadership opportunities requires developing and expanding collaboration and financing mechanisms to support the uptake of sustainable design and technologies.

Recommendation: *The State Government develop and expand collaboration and financing mechanisms to support the uptake of sustainable design and technologies.*

The proposed CPRS offers substantial assistance to various industry groupings assessed to be potentially significantly impacted by increased costs. However the CPRS provides no assistance to public entities, including to local and state governments. This is an issue that could be pursued through COAG.

Recommendation: *The State Government pursue through COAG the issue of the impact of CPRS on the public sector.*

Urban planning

Local government plays a key role in urban planning, and NAGA's report *Towards Zero Net Emissions for the NAGA Region* has identified a number of opportunities and priorities for action in this area that can have substantial impacts. These include:

- continued improvement in residential building standards related to energy performance; increasing the standard from 5 star to 6 star still does not meet world's best practice. Increasing building standards would address both mitigation and adaptation objectives and provide demand for development of the energy services sector and green jobs.
- A number of studies, such as *Urban Design to Reduce Automobile Dependence*⁶ and *The Endangered State of Australian Cities: Climate Threat and Urban Response*⁷ have considered the role of density and the relationship with emissions. These studies note that a correlation exists between the low densities of Australian and North American cities and a high energy use per capita, when compared with higher density European cities. The State Government should develop a tool or mechanism to assist council planners to consider the greenhouse gas implications of zoning, precinct planning and planning approvals (such as that developed in the UK Building Research Establishment *A sustainability checklist for developments – A common framework for developers and local authorities*⁸).
- Transport emissions are a key element related to urban planning and density levels; it is proposed that transport issues also be addressed as part of the development of planning guidance tools and materials. It is suggested that the planning guidance consider issues such as the current statutory provisions for parking and the potential requirement for a Public Transport Accessibility Level (PTAL)⁹ assessment for new developments. The current statutory provisions outline minimum parking rates for land-use development, specifying a minimum number of car spaces that must be supplied based on floor space or another indicator (e.g. number of seats, patrons, etc.); it is suggested that changing this approach from a minimum to a maximum number of allowed car spaces would assist in reducing car use.

Recommendation: *The State Government continue to improve building standards related to energy performance.*

Recommendation: *The State Government develop a planning guidance tool or mechanism to assist council planners to consider the greenhouse gas implications of zoning, precinct planning and planning approvals. The planning guidance tool includes a requirement for a Public Transport Accessibility Level assessment for new developments, and specifies a maximum, not minimum number of supplied car spaces.*

⁶ Newman, P. and Kenworthy, J. (2006) *Urban Design to Reduce Automobile Dependence*.

⁷ Gleeson B (2007) *The Endangered State of Australian Cities: Climate Threat and Urban Response*, Griffith University Issues Paper, 8 November.

⁸ BRE, DTLR and DTI (2002) *A sustainability checklist for developments – A common framework for developers and local authorities* (BRE: Watford).

⁹ PTAL developed and utilised as a planning tool in a number of areas in the UK, for example Greater London Authority, 2002, *SDS Maximum Parking Standards: Derivation of PTAL-based parking restraint* SDS Technical Report 20. http://www.london.gov.uk/mayor/planning/docs/tr20_parking_standards.pdf

Renewable/low carbon energy

A significant portion of Victoria's energy is supplied through brown coal fired power generators, primarily located in the La Trobe Valley. Of the 9GW of installed generation in Victoria, approximately 6.3 GW is from brown coal generators¹⁰. Brown coal is the most greenhouse gas intense form of energy generation, with 1.2 tonnes of CO₂-e emitted per MWh, compared to 0.75 tonnes CO₂-e per MWh for NSW and Queensland black coal and 0.4 tonnes CO₂-e per MWh for a gas fired combined cycle gas turbine plant¹¹. Within Victoria, additional stationary energy is augmented by gas fired power stations and a small percentage of renewable energy from wind and hydropower. In addition to the greenhouse gas intensity of emissions associated with brown coal generation, a significant percentage of energy is lost to the network through the generation of heat during transmission from locations such as the La Trobe Valley and the subsequent distribution to the NAGA region.¹²

This greenhouse gas intensity of the Victorian stationary energy supply represents a significant barrier to emission reductions. While demand reduction and efficiency measures can reduce the demand for energy, underlying pressures from population and subsequent increases in housing stock and commercial and industrial facilities will to a degree nullify the effect of these measures without a strategy that addresses the need to decarbonise the energy supply.

Two approaches have emerged to reduction of the greenhouse gas intensity of energy supply. The first focuses on reducing the emissions from brown coal generation through either coal drying, to reduce moisture content or storing emissions through carbon capture and storage. The second approach to reducing emissions intensity is the transformation of the energy supply from brown coal to less greenhouse gas intensive forms, either gas fired or renewable. Whilst the technologies for the first approach are not yet proven, and costs are uncertain yet likely to be high, the technologies for the second approach to deliver gas-fired or renewable energy generation are well understood and already implemented in Victoria and globally. There is an urgent need to shift Victoria's stationary energy supply from coal dominated generation to distributed/local systems of renewable and low carbon generation. This shift will be supported by:

- Addressing institutional barriers to installation of low emission and renewable technologies. The operation of the National Electricity Market (NEM) and its influence on the ability for low emission and renewable energy technologies to enter the market was assessed as part of the Garnaut Review¹³. The Review considered the issues faced by low emission and renewable technologies in relation to the NEM to be based on market failures and specifically the failure of the market to account for the marginal benefits associated with these sources of energy generation. It is noted that to resolve these issues is considered to require minor changes to rules and regulations.
- Facilitation of low emission and renewable technologies; roles for the State Government include information provision, provision of feed-in tariffs (utilising world's best practice models such as Germany's gross feed-in tariff), and funding support for small scale and medium scale renewable energy generation projects¹⁴.
- Implementation of the 'smart grid', a critical tool to support the integration of renewable energy generation into the electricity system, through computerising, connecting and integrating energy transmission, distribution and consumption.

¹⁰ Energy Supply Association of Australia (2007) *Electricity Gas Australia* (Energy Supply Association of Australia: Melbourne) as contained in Garnaut R (2008) *The Garnaut Climate Change Review – Final Report* (The Garnaut Climate Change Review) Accessed from <http://www.garnautreview.org.au/index.htm>.

¹¹ ACIL Tasman pp12 (2008) *The impact of ETS on the energy supply industry* (Energy Supply Association of Australia) Accessed from http://www.esaa.com.au/reports_studies.html

¹² Losses are dependent on the end users' geographic location relative to the nearest node on the transmission network and distribution losses are dependent on the supply voltage (HV or LV) and whether or not the site has its own transformer and the type of feeder servicing the site (long or short). Typical for transmission losses are approximately 1.5% and distribution losses 3.5%.

¹³ McLennan Magasanik Associates (2008) *Final Report to Garnaut Climate Change Review: NEM Market Failures and Governance – Barriers for New Technologies* <http://www.garnautreview.org.au/index.htm>

¹⁴ NAGA 2009, *Towards Zero Net Emissions for the NAGA region*, pp76-78 www.naga.org.au

- Identification, trialling and promotion of the skills and training required to support the shifts in infrastructure, regulations, and incentives to enable a diversified energy system to develop in Victoria.

Recommendation: *The State Government work through COAG with the National Electricity Market to address institutional barriers (market failures) to installation of low emission and renewable technologies through minor changes to rules and regulations.*

Recommendation: *The State Government facilitates low emission and renewable technologies through information provision, provision of world's best practice feed-in tariffs, and funding support for small scale and medium scale renewable energy generation projects.*

Recommendation: *The State Government supports the establishment and operation of the smart electricity grid.*

Recommendation: *The State Government supports the identification, trialling and promotion of the skills and training required to enable a diversified energy system to develop in Victoria.*

Transport

'Towards Zero Net Emissions for the NAGA region' indicates that emissions from transport comprise 20.9% of the region's total emissions in 2005-6. Melbourne's transport system is predominantly supported by petroleum based fuels, and electricity (for trains and trams) supplied predominantly by brown coal fired power generators. Opportunities exist to minimise the emissions associated with transport by reducing the reliance on coal-based electricity for public transport, and by decreasing the intensity of emissions generated by other road based transport. For example, significant reductions in transport emissions could be achieved by constructing renewable energy or gas-fired power plants for use by public transport.

Recommendation: *The State Government construct renewable energy or gas-fired power plants for use by public transport.*

A number of sustainability objectives (including climate change, health, liveability and economic efficiency through reduced road congestion) can be achieved through the shift from private vehicle use to other sustainable forms of transport, including walking, cycling and public transport.

Shifting people's transport from private vehicles to sustainable forms of transport including public transport will be supported by improved public transport infrastructure and services, as well as provision of cycling infrastructure. The *Victorian Transport Plan*¹⁵ foreshadows the allocation of \$100 million for *improvements to cycling infrastructure to increase safety and connectivity, and deliver high quality, safe bike lanes and more priority routes in inner Melbourne, metropolitan centres and regional areas*. There is opportunity for local government to link the development of individual sustainable transport plans with the overarching Victorian Government approach to deliver an integrated system.

Recommendation: *The State Government facilitate linkages and integration between state-wide infrastructure provision, and local governments' development of local sustainable transport planning.*

Emissions from private vehicle use can also be reduced through incentives to encourage drivers to adopt more fuel efficient vehicles (including hybrid and electric vehicles), and through government subsidies and amendments to the car registration system (higher costs for registering less efficient vehicles).

Recommendation: *The State Government provides incentives for drivers to adopt more fuel efficient vehicles, and amends the car registration system to institute higher costs for registering less efficient vehicles.*

¹⁵ Government of Victoria (2008) *Victorian Transport Plan* <http://www4.transport.vic.gov.au/vtp/projects/cycling.html>

Green skills green jobs

There are numerous opportunities to support the transformation to a low carbon future through the development of green economy skills and jobs. These include both new industries, as well as delivery of clean energy services that support energy efficiency and renewable energy generation. The development of the green skills, green jobs and green industries sectors will support multiple objectives and span mitigation, adjustment and adaptation principles.

To embrace the opportunities, there is the need to link the development of green jobs, with regional strategies and with skills development. There is a crucial role for the State Government in provision of pre- and post-qualification training, as well as supporting research into audits of existing skills and industries to match green job development opportunities with industries and regions.

Recommendation: The State Government provide pre- and post-qualification training, and audits of skills and industries to support the transformation to a low carbon economy.

Sustainable consumption

The transformation to lifestyles in a carbon constrained future requires fundamental changes to our consumption of goods and resources; we are currently living substantially unsustainable lifestyles. There is a role for all governments in acknowledging that we must make fundamental changes in our shift to sustainable lifestyles.

NAGA members have been actively delivering programs in their local communities to support and encourage sustainability behaviour change, in partnership with state government departments and agencies. The State Government's contribution through funding programs (such as Sustainability Fund), and research (both community views and opinions in Green Light reporting, as well as delivery and evaluation methodologies) is acknowledged. There is a strong and ongoing need for State Government provision of resources, research and funding.

Recommendation: The State Government continue to provide resources, research and funding to support sustainability behaviour change.

There is also a significant role for regulation, including minimum energy performance standards. To effectively drive innovation as well as removing poorly performing appliances, a shifting baseline system, similar to that implemented in Japan, where the most energy efficient appliance sets the *minimum* standard that must be achieved after a set period of time¹⁶, should be implemented; Victoria can play a lead role in working through COAG to achieve global best practice in national standards.

Recommendation: The State Government work through COAG to achieve global best practice in minimum energy performance standards, including improving minimum benchmarks over time.

Adaptation

We are facing simultaneous global challenges: climate change, peak oil, environmental degradation (to land, water, marine systems, natural resources including fisheries, forests, and to the ecological services essential for human life), rising population and increased pressure on infrastructure, resources and space. In this global context, and with climate change impacts already being felt, adaptation and mitigation actions are strongly linked; their implementation should be integrated to ensure adaptation actions are not counter to mitigation objectives.

Adaptation to climate change will require transformation of our systems, behaviours and lifestyles, not just revising existing systems. A critical contribution by all governments is in providing the leadership to acknowledge the need for transformation, and providing the vision for economies and societies in a climate-changed, and carbon-constrained future.

Adaptation requires the development and ongoing support for strong communities. This requires delivery of community building measures; local government are well placed, with provision of adequate resources, to deliver these programs in partnership with community groups, including providing ongoing training to members of the community in small group facilitation and leadership skills. Developing community capacity

¹⁶ Nakagami, B. and Litt, B., 1997, *Appliance standards in Japan*, **Energy and Buildings** 26: 69-79.

requires a commitment to building and maintaining relationships; research; and a willingness to experiment and report the results – both the wins and losses, the successes and failures. Building community capacity and community relationships requires commitment of resources beyond the timeframes of short-term grants and annual programs.

Recommendation: The State Government provide resources for delivery of community capacity building programs, and research.

NAGA has undertaken work to identify and collate existing information on the climate change impacts both on NAGA members' own functions and activities (local government sector) and on the region's communities. The State Government's provision of information and resources in this area is valuable (including for example science-based research on regional impacts, as well as work on health and community welfare impacts); local government requires resources and ongoing research support to develop and implement integrated risk management and adaptation plans for their own operations and for their communities.

Recommendation: The State Government support local governments' development and implementation of integrated risk management and adaptation plans through provision of resources and research.

The NAGA region (a largely metropolitan region, in which 25% of Melbourne's population lives), was significantly affected by the bushfires in 2009. The impacts of these fires were catastrophic, and are being documented and analysed in great detail. The complexity of climate change adaptation issues, and the at times conflicting needs of different individuals, communities and sectors was demonstrated.

Biodiversity represents one area of conflicting needs. The poor state of much of Victoria's biodiversity and natural systems has been documented in the *State of the Environment* report¹⁷. The risk to biodiversity in bushfire-prone regions is compounded, both from direct climate change impacts, and from more intense pressures to clear vegetation, particularly as climate change impacts are likely to lead to more severe, more frequent bushfires. Clearing vegetation for bushfire protection, particularly clearing understorey vegetation will have further significant impacts on habitat and biodiversity values that are already vulnerable with reduced ecosystem resilience. There is an urgent need to acknowledge that ecosystem conservation on private land in some areas may be limited, and in that context to review the State's network of biodiversity reserves, and habitat linkages.

Recommendation: The State Government review the impacts on habitat and biodiversity of climate change, and vegetation clearance on private land, as well as the State's network of biodiversity reserves, and habitat linkages.

Conclusion

NAGA supports the objectives, long term goals and priorities that have been identified in the Green Paper. The Green Paper claims Victoria is a leader in implementation of climate change actions and response: the State Government should contribute to maintaining this position by identifying international best practice and innovative policy and program responses and outlining how these can and will be applied in Victoria. It is essential to build both strong leadership and community capacity to acknowledge that our lifestyles are unsustainable and to facilitate change by effectively address these issues. Local governments, and their regional alliances, will play a key role in implementing these programs and assisting the transformation of local economies to a carbon-constrained future.

Recommendation: The State Government identify international best practice and innovative policy and program responses, to support the claim that Victoria maintains its position as a leader in climate change actions and responses.

Judy Bush
NAGA Coordinator

29 September 2009

¹⁷ Commissioner for Environmental Sustainability Victoria, 2008, *State of the Environment Report Victoria*
<http://www.ces.vic.gov.au/CES/wcmn301.nsf/childdocs/-FCB9B8E076BEBA07CA2574F100040358?open>