

PREMIER'S CLIMATE CHANGE REFERENCE GROUP

RECOMMENDATIONS

OCTOBER 2008

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BACKGROUND

The Climate Change Summit in April 2008 began a Green Paper/White Paper process to develop Victoria's climate change strategy out to 2020.

As part of this process the Premier's Climate Change Reference Group was established to provide the Victorian Government with expert, independent advice on a range of climate change issues.

The group's advice will be used to guide climate change policy in the context of a national Carbon Pollution Reduction Scheme, the opportunities for Victoria in terms of innovation, technology and industry, and the type of support and assistance our vulnerable communities will need to assist their transition to a low-carbon economy.

This paper presents the group's preliminary goals and recommendations for the Government's Green Paper. The recommendations are intended to assist Government in setting its priorities. Policy mechanisms and the appropriate legislation, including a Climate Change Bill, required to meet the Government's goals will then need to be determined on release of the Green Paper.

The group will also provide further comment on the contents of the Government's climate change Green Paper.

Chair

David Karoly, Professor of Meteorology, and Federation Fellow in the School of Earth Sciences at the University of Melbourne.

Members

Kate Auty, Magistrate, and Chair of the Victorian Ministerial Reference Council on Climate Change Adaptation.

Robin Batterham, Group Chief Scientist with Rio Tinto Limited, and President of the Australian Academy of Technological Sciences.

Peter Christoff, Coordinator, Environmental Studies, Faculty of Land and Environment at the University of Melbourne, and member of the Victorian Ministerial Reference Council on Climate Change Adaptation.

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Tony Nicholson, Executive Director of the Brotherhood of St Laurence.

Bob Welsh, Chief Executive of VicSuper.

PREAMBLE

Dear Premier

In May this year, you asked me to Chair the Premier's Climate Change Reference Group and provide high level advice on the climate change priorities for Victoria.

In August, the group met with you at Government House to discuss our initial thinking on those priorities.

I am pleased to present you with a set of seven goals and recommendations to guide Victoria's climate change policy decisions in the near future.

In addition, the group felt there were a number of key principles underlying our recommendations:

- Leadership at a national and international level
- Equity for all Victorians
- Advocacy to the Commonwealth
- Opportunities

We urge the Government to bear in mind these principles at all times when setting the state's climate change policy.

The urgency of climate change cannot be underestimated and we ask the Government to invoke a "call to action" from our communities and businesses. Climate change matters for all Victorians. Government must of course lead by example and implement measures across all its operations.

The group will provide comments on a draft of the Green Paper and its recommendations will be included in the final report.

I would like to thank the group's members for their work in bringing together this document.

I trust you find these recommendations useful and would welcome the opportunity to discuss them with you further.

Regards

Prof. David Karoly
Chair
Premier's Climate Change Reference Group

SUMMARY GOALS AND KEY RECOMMENDATIONS OF THE PREMIER'S CLIMATE CHANGE REFERENCE GROUP

GOAL I: Contribute to substantial, early cuts in emissions and show leadership in the national context

Some members of the Group believe that legislated State-based emissions reduction targets are necessary to ensure that national and State mitigation goals are achieved in both 'covered' and 'uncovered' sectors.

All members of the Group recommend that, at a minimum:

1.1 The Victorian government **advocates** for a national emissions trajectory with:

- A peak in total national emissions by 2010;
- A national emissions reduction target of 25-40% below 1990 levels by 2020; and
- An aspirational national emissions reduction target of at least 80% below 1990 levels for 2050.

1.2 In the absence of national targets consistent with recommendation 1.1, Victoria **commits**, through climate legislation, to an emissions trajectory with:

- A peak in total Statewide emissions by 2010;
- A State emissions reduction target of 20-30% below 2000 levels by 2020, or more if in keeping with a higher national aggregate emissions reduction target; and
- An aspirational emissions reduction target of at least 80% below 1990 levels by 2050.

1.3 **Develop** a Climate Change Action Plan, required under the Victorian Climate Change Bill, to be revised every five years.

1.4 **Implement** an aggressive energy efficiency strategy through public education, financial incentives and regulation for both existing and new Victorian residential and commercial buildings.

1.5 **Facilitate** agreement and ongoing review of five yearly sectoral emissions reduction trajectories and associated implementation.

1.6 **Establish an independent, statutory Victorian Climate Mitigation Advisory Council (VCMAC)**. The Council would:

- Provide independent advice to government on strategic directions for climate mitigation policy, including trajectories and targets, and development and review of the State Climate Action Plan;
- Facilitate sectoral roundtables and associated consultation assisting in the development of policies implementing Statewide targets and trajectories; and
- Report on implementation of mitigation policies and community-based targets.

GOAL II: Limit the disproportionate impacts of climate change and associated costs of mitigation and adaptation on vulnerable households and communities

2.1 **Investigate** the climate change-related structural change and social impacts in the Victorian economy.

- 2.2 **Implement** a climate assistance program for low-income households that includes the provision of information, energy efficiency measures, material assistance, and the strong engagement of those households in seeking solutions, with the program to commence prior to the start of the national emissions trading scheme.
- 2.3 **Establish** inclusive programs to assist low-income and other vulnerable groups such as migrant and indigenous communities to meet their anticipated future energy and water needs.
- 2.4 **Ensure** transport infrastructure planning considers the needs of low-income, vulnerable and regional communities.

GOAL III: Climate change issues are explicitly considered and systematically integrated in all major decisions at State, regional and local levels of Victorian government

- 3.1 **Establish** a process to ensure climate change factors are explicitly considered in all Victorian State and local government decisions.
- 3.2 **Establish** a regular review and audit of Victorian legislation, including all State and local government regulations and policies, to ensure their harmony with current climate change mitigation and adaptation requirements.
- 3.3 **Advocate** to the Commonwealth for a National Sustainability Policy which provides incentive payments for State and local governments to implement sustainable policy in line with agreed principles, and penalties for jurisdictions that act counter to agreed principles and national policies.

GOAL IV: An informed and engaged community actively changing behaviour in response to climate change

- 4.1 **Develop** a purposeful behaviour change information campaign, targeted at different community sectors.
- 4.2 **Establish** a comprehensive user-driven information service to report on climate change mitigation and adaptation opportunities, requirements and needs for local governments and communities.
- 4.3 **Establish** regular business and industry forums to increase information sharing and develop strategies to assist Victorian businesses reduce emissions and adjust to the Carbon Pollution Reduction Scheme.
- 4.4 **Implement** incentives for the community to purchase fuel-efficient vehicles in a way that does not disproportionately impact low-income households.

GOAL V: Ensure that the positive economic and social opportunities afforded by climate change mitigation and adaptation are recognised and utilised

- 5.1 **Increase** the level of research and development for new and innovative technologies in energy and transport.

- 5.2 **Accelerate** the full commercialisation of new energy supply technologies to create a truly balanced energy portfolio that meets Victoria's emissions reduction needs and targets.
- 5.3 **Accelerate** the deployment of energy efficiency technologies in residential and commercial applications.
- 5.4 **Establish** a major Statewide initiative, using regulatory change and government funding assistance, to ensure the achievement of 7 Star energy standards for all Victorian residential built stock by 2020, with building codes for new buildings adjusted to meet world's best practice energy efficiency standards by 2015.
- 5.5 **Increase** Victoria's skills base through additional training places and university partnerships, in areas such as energy efficiency, carbon accounting, and low-emissions technology.
- 5.6 **Increase** Victoria's natural absorption of carbon through forestry, agriculture and other biosequestration.
- 5.7 **Develop** urban and regional planning policies that encourage low-emission transport options, sustainable building design and green urban areas.

GOAL VI: Build capacity in government, industry, communities and regions to adapt to climate change

- 6.1 **Establish guiding principles**, aims and objectives for adaptation activity
- 6.2 **Close knowledge gaps**, by ensuring:
- Biennial reporting on indicators of climate vulnerability and adaptation activity;
 - Ongoing research into, and monitoring of, climate vulnerability and resilience, including climate modelling for Victoria every five years, and reporting and mapping of integrated vulnerability assessments;
 - Five yearly reviews of Victoria's social, economic and ecological vulnerabilities to climate change based on updated climate scenarios; and
 - Research into, and assessments of, climate threats to Victoria's biodiversity, aquatic systems and water resources; agriculture and forest industries; energy sector; settlements and infrastructure; human health; and potential climate impacts on vulnerable and low income groups and communities.
- 6.3 **Focus adaptation activity** by considering it in relation to five broad parameters, including Coastal Victoria; Victorian Cities; Rural Victoria; Industrial Victoria; and Victoria's Environment.
- 6.4 **Develop and implement** Victorian Adaptation Strategies, using a layered approach, including:
- the statewide ***Victorian Climate Change Adaptation Strategy (VCCAS)***, to be completed by the Victorian Climate Change Adaptation Council in 2010 and reviewed and revised every five years thereafter;
 - Local/regional Adaptation Plans, as a legislative requirement for Victorian local governments, developed and revised over a five year cycle;
 - Sectoral adaptation responses; and
 - Systematic and regular review of existing laws, regulations and protocols to assess their responsiveness to climate adaptive needs.

6.5 **Establish an independent, statutory Victorian Climate Change Adaptation Council (VCCAC)** to oversee Statewide adaptation activities including Victorian climate adaptation research; Statewide and regional strategic development and implementation and associated public consultation, and associated monitoring and reporting.

6.6 **Ensure Local Government participation** in the development of local adaptation strategies, and associated monitoring and reporting, through amendments to the *Local Government Act*.

6.7 **Meet** adaptation costs and ensure funding, including by:

- Facilitating an economic assessment of adaptation costs and benefits;
- Requiring Victorian government agencies, local governments, and Victorian industries and communities, to regularly assess and cost their adaptation needs;
- Calling for the establishment of a national ***Climate Fund***, using ETS revenue; and
- Establishing a Victorian ***Climate Fund*** to support adaptation actions.

GOAL VII: Legislate to ensure effective and enduring action to combat climate change

7.1 **Introduce** a Victorian Climate Change Bill and associated legislation that would directly address the Goals and recommendations from the Premier's Climate Change Reference Group.

GOAL I: Contribute to substantial, early cuts in emissions and show leadership in the national context.

BACKGROUND

The Intergovernmental Panel on Climate Change (IPCC) and prominent climate scientists have emphasised the need for global emissions to peak and then fall by 2015. The most recent data indicates a dramatic increase in emissions – thereby increasing the urgency for an absolute halt to emissions growth.

If atmospheric concentrations of greenhouse gases are to be stabilized at 450ppm, the IPCC has indicated that emissions reductions of between 80-95 per cent below 1990 levels are required by 2050. This level is itself inadequate to hold global temperatures below two degrees Celsius with a high degree of confidence.

Two degrees of warming would lead to significant damage to Victoria's agricultural and ecological systems, and in the longer term, significant coastal impacts via sea level rise.

ISSUES

Recognising that the most recent scientific projections indicate that the current national emissions target of a 60 per cent reduction by 2050 is insufficient to prevent dangerous anthropogenic climate change, a long-term target of 80-95 percent below 1990 levels by 2050 would more appropriately signal the magnitude of the emissions reduction challenge.

The current national and State targets of 60 per cent reduction by 2050 are not supported by scientific arguments drawn from the IPCC, nor arguments based on equity principles associated with a fair distribution of access to the global atmospheric commons.

In addition, short and medium term emissions reduction targets and trajectories are required to ensure early and deep cuts.

In the context of a national Carbon Pollution Reduction Scheme (CPRS) and associated emissions targets, it is important for Victoria to advocate a strong long-term target to the Commonwealth. Some members would also support State based targets, while others were unclear how such a target would operate in the context of national policy settings.

The Nous study, *Understanding the Potential to Reduce Victoria's Greenhouse Gas Emissions (2007)*, undertaken for the Victorian Government, indicated that a reduction of Victoria's emissions by 30 per cent below 2000 levels is feasible given current technologies and with little encouragement from a carbon price, cultural change, financial incentives, or regulatory or technological forcing. This suggests a more ambitious emissions reduction target is well within reach.

Overseas examples of subnational governments seeking 'best practice' and 'first-mover' advantage – including in California, and in some European nations – indicate that significant investment in 'low-carbon' industries can be mobilised and associated economic and employment growth can be accelerated by providing clarity about ambitious short, medium and longer targets and also material assistance by government.

In particular, a key option for emissions reduction is in energy efficiency. Substantial savings can be obtained through a comprehensive energy efficiency program. A key element of this is to ensure low energy footprint buildings in the commercial and

residential sectors for new and existing buildings. In particular, the office sector is a key priority as it is responsible for 27 per cent of commercial building emissions and 4 per cent of Australia's total greenhouse gas emissions.

State-based targets would ensure effective mitigation, especially in 'uncovered' sectors. These targets should be legislated to ensure their formal support and compliance, and supported with measures and processes that will ensure these targets are achieved. Implementation should take into account sectoral capacities (as per the Princeton wedges approach) with implementation paths and measures guided by sectoral stakeholder involvement and public consultation.

Developing and implementing effective emissions targets requires new institutions for consultation and deliberation to foster widespread community agreement over the paths for change.

The process of advising government on State targets and emissions reduction trajectories should be undertaken by a statutory, independent Victorian Climate Mitigation Advisory Council. For proposed emissions reduction targets to be credible and defensible, they must be supported by the best and most recent science.

If the sectoral paths defined using a Princeton wedges approach to Statewide emissions reduction are to be realised, stakeholders in each sector will need to agree about the best path to adopt – in investment and action – to collectively meet sectoral and Statewide targets. Such a process of consensus building should be institutionalised, resourced, and recognised in policy by government.

RECOMMENDATIONS

Some members of the Group believe that legislated State-based emissions reduction targets are necessary to ensure that national and State mitigation goals are achieved in both 'covered' and 'uncovered' sectors.

All members recommend the Victorian Government:

1.1 **Advocate** for a national emissions trajectory with:

- A peak in total national emissions by 2010;
- A national emissions reduction target of 25-40% below 1990 levels by 2020; and
- An aspirational national emissions reduction target of at least 80% below 1990 levels for 2050.

1.2 In the absence of national targets consistent with recommendation 1.1, **commits**, through climate legislation, to an emissions trajectory with:

- A peak in total Statewide emissions by 2010;
- A State emissions reduction target of 20-30% below 2000 levels by 2020, or more if in keeping with a higher national aggregate emissions reduction target; and
- An aspirational emissions reduction target of at least 80% below 1990 levels by 2050.

1.3 **Develop** a Climate Change Action Plan, required under the Victorian Climate Change Bill, to be revised every five years.

1.4 **Implement** an aggressive energy efficiency strategy through public education, financial incentives and regulation for both existing and new Victorian residential and commercial buildings.

1.5 **Facilitate** agreement and ongoing review of five yearly sectoral emissions reduction trajectories and associated implementation.

1.6 **Establish an independent, statutory Victorian Climate Mitigation Advisory Council (VCMAC)**. The Council would:

- Provide independent advice to government on strategic directions for climate mitigation policy, including trajectories and targets, and development and review of the State Climate Action Plan;
- Facilitate sectoral roundtables and associated consultation assisting in the development of policies implementing Statewide targets and trajectories; and
- Report on implementation of mitigation policies and community-based targets

GOAL II: Limit the disproportionate impacts of climate change and associated costs of mitigation and adaptation on vulnerable households and communities.

BACKGROUND

Climate change will have a disproportionate impact on vulnerable communities, including low-income households, what will find it difficult to cope with the additional physical, economic and social stressors.

Significant impacts are likely to include:

- Increased price of goods and services from the introduction of the CPRS and other mitigation measures;
- The impact of changing climatic conditions for example rising food prices due to reduced rainfall and drought; and
- Extreme weather events and the impact of changing climate on specific sectors including agriculture.

ISSUES

In order to address these impacts, the provision of information and material assistance to certain types of vulnerable households to help them increase their resilience to climate impacts should be pursued.

The Victorian Government should claim and utilise national funding derived from the CPRS, and other resources, to address the impacts of national climate change programs.

In order to address these impacts, material assistance and information should be provided to certain types of vulnerable households and communities to help them increase their resilience to climate impacts. Early and effective action also depends on the identification of risks and the development of plans which address the increased impacts that low-income and vulnerable households face from heatwaves, storm surge, high wind events and severe storms.

Social inclusion should be a hallmark of these programs. A significant opportunity exists to enable low-income households to participate in the responses to climate change. An early, well-planned and integrated approach will improve the well-being of people living in poverty and lead to multiple benefits for householders, the economy and society, including by:

- Restricting low-income households' vulnerability to extremes of heat and cold and concomitant impacts on health and human services;
- Improving energy and water efficiency in all Victorian public housing by 2015; and
- Improving access to public transport services.

A State-wide program of assistance is urgently required if it is to limit the regressive impacts associated with the national CPRS. Actions should begin before the introduction of the CPRS in 2010. Action should focus on essential services and include using energy and water audits, and retrofit programs to reduce future energy and water bills, with a priority on the early inclusion of vulnerable households and communities in these activities.

A well designed program of early action, with strong engagement from affected households, would allow low-income community members to develop ownership of responses to climate change, empowering the community and enhancing social capital. It could also have ancillary benefits relating to the provision of employment and

economic development in affected regions and communities.

The Group believes that a climate assistance program involving energy efficiency measures and material assistance for low income households would have greatest benefit if it were to begin well before the start of the CPRS in 2010.

RECOMMENDATIONS

- 2.1 **Investigate** the climate change-related structural change and social impacts in the Victorian economy.
- 2.2 **Implement** a climate assistance program for low-income households that includes the provision of information, energy efficiency measures, material assistance, and the strong engagement of those households in seeking solutions, with the program to commence prior to the start of the national emissions trading scheme.
- 2.3 **Establish** inclusive programs to assist low-income and other vulnerable groups such as migrant and indigenous communities to meet their anticipated future energy and water needs.
- 2.4 **Ensure** transport infrastructure planning considers the needs of low-income, vulnerable and regional communities.

GOAL III: Climate change issues are explicitly considered and systematically integrated in all major decisions at State, regional and local levels of Victorian government.

BACKGROUND

Sound environmental policies and associated decisions are sometimes undermined by countervailing decisions in other areas of government that indicate a lack of integration and coherence across the whole-of-government. Such incoherence can limit or thwart effective implementation and the achievement of intended targets.

An holistic approach to government decision-making is required to ensure that:

- Climate change impacts are considered systematically at all points of government decision making;
- Climate change-related policy making occurs in an integrated fashion across all departments and agencies, and between State and local government; and
- Other laws, regulations, policies and government decisions do not hamper or undermine the achievement of climate mitigation and adaptation goals.

ISSUES

In Victoria, as elsewhere, considerations of climate change impacts, and the aims of mitigation and adaptation actions, are currently imperfectly integrated into government thinking and action. The consequence is a degree of unnecessary confusion, unintended negative outcomes, and increased difficulty in achieving proclaimed aims and goals.

Achieving such integration involves a range of institutional measures including establishing processes for the systematic consideration of the climate change related consequences of any government actions, and repeated regular review of existing legislation, regulations and policy across State and local government to ensure harmony with proclaimed aims, principles, goals and targets.

Attributes of an integrated and holistic climate change review process would include:

- Principles to guide State government departments and agencies, local governments and government suppliers in the areas of energy intensity, greenhouse gas emissions, climate-related environmental impacts assessment, urban and regional planning;
- Whole-of-government review and audit of Victorian climate change policies, and an institutionalised commitment to repeating this process every five years;
- Processes for policy advice and appraisal in an ongoing fashion through a council or reference group to allow appropriate adjustment of sustainability objectives over time;
- A legislated requirement that all Victorian government entities and suppliers act in accordance with these principles, aims, and processes;
- Legislated reporting requirements to ensure transparency and accountability in relation to the implementation of Victorian climate policy; and
- Consistency and complementarity with national policies.

A National Sustainability Policy (NSP) process, enacted in a similar way to the National Competition Policy (NCP) has the potential to transform our society into one which is environmentally sustainable and socially equitable. It could help us to act out of recognition that our economy and society are founded on the benefits of our natural environment – a favourable climate, clean air and water, biodiversity and fertile soil - and that we can only survive within the limits of that environment.

A NSP would include an agreement to implement National Sustainability Policy and Related Reforms (Implementation Agreement) which sets out the reform obligations accepted by all national, State, Territory and local governments and provides for payments by the Commonwealth to the States, Territories and local governments where they achieve satisfactory progress with the implementation of the related reforms.

A Victorian Sustainability Policy would both place the State in a leadership position in advocating a NSP, and provide it with an early adopter advantage in a national Implementation Agreement that provides for payments from the Commonwealth where States achieve progress towards sustainability obligations.

RECOMMENDATIONS

- 3.1 **Establish** a process to ensure climate change factors are explicitly considered in all Victorian State and local government decisions.
- 3.2 **Establish** a regular review and audit of Victorian legislation, including all State and local government regulations and policies, to ensure their harmony with current climate change mitigation and adaptation requirements.
- 3.3 **Advocate** to the Commonwealth for a National Sustainability Policy which provides incentive payments for State and local governments to implement sustainable policy in line with agreed principles, and penalties for jurisdictions that act counter to agreed principles and national policies.

GOAL IV: An informed and engaged community actively changing behaviour in response to climate change.

BACKGROUND

Three factors often impede positive action around climate change:

- A lack of collective understanding of the urgent need for action;
- A lack of information about what such actions might involve; and
- A lack of support to ensure and maximise effective, coordinated community, or industry-sectoral response.

The Victorian community generally understands that climate change is a problem but is unsure of the severity of this problem. In addition, many Victorians – and Victorian businesses – feel relatively isolated and powerless to tackle the problem.

Lack of information and failure to encourage and assist behavioural change will increase the cost to the Victorian economy of meeting its emission targets. This occurs because information barriers are a key market failure that will impede uptake of very cost effective emission reduction options (particularly, energy efficiency measures).

ISSUES

The Victorian Government needs to be able to put a compelling proposition to the community for change which although requiring a redesign of the way we do certain things in life, will not fundamentally change our quality of life.

Government should target the presentation of climate change issues and its approach into a compelling proposition to the audience in each segment of the community. Segments could be sliced in a number of ways including working families, younger people recently engaged in the workforce, single mature age people in the workforce, small to medium size business owners including sole traders and large businesses including finance institutions in Victoria, and people retired from the workforce.

Building on the development of branding Victoria as a climate change leader, a short-term policy priority for Victoria is to build a behavioural change campaign that segments and targets the community with information that empowers them to become part of the climate change solution. This would need to be sustained like previous campaigns aimed at improving social outcomes (e.g. road safety). Additional and targeted policies will be required in the short-term to complement the information campaign and CPRS to ensure market failures to socially cost effective emission reduction options are removed.

International experience has shown that in isolation, these campaigns are not particularly effective at reducing emissions or energy consumption. It is the combination of these campaigns with regulatory guidance, fiscal/price incentives, and forms of targeted material assistance, that best work to ensure that information and market failures are countered.

In this work, a central user-driven information service can supplement local government and community networks. Support must be provided by the State for networks of local governments, community groups and NGOs across Victoria to adapt and implement strategies for climate change mitigation and adaptation.

The State should support the development of innovative community responses to climate change by:

- Supporting new community enterprises that deliver climate change, employment

and social outcomes, including incentives for the development of enterprises which may be attractive to the private sector;

- Supporting new and existing community sector programs which link household financial stability and energy efficiency; and
- Utilise existing State based government programs such as neighbourhood renewal to link climate change outcomes with programs to address disadvantage and promote social inclusion.

RECOMMENDATIONS

- 4.1 **Develop** a purposeful behaviour change information campaign, targeted at different community sectors.
- 4.2 **Establish** a comprehensive user-driven information service to report on climate change mitigation and adaptation opportunities, requirements and needs for local governments and communities.
- 4.3 **Establish** regular business and industry forums to increase information sharing and develop strategies to assist Victorian businesses reduce emissions and adjust to the Carbon Pollution Reduction Scheme.
- 4.4 **Implement** incentives for the community to purchase fuel-efficient vehicles in a way that does not disproportionately impact low-income households.

GOAL V: Ensure that the positive economic and social opportunities afforded by climate change mitigation and adaptation are recognised and utilised.

BACKGROUND

Substantial economic and employment opportunities are likely in the context of the national CPRS – it is important that Victoria be prepared to take advantage of the potential benefits. Areas of opportunity to consider include education, industry and regional development, new markets and services, and procurement.

ISSUES

There are tremendous opportunities for Victoria in industry development to innovate in low and no-emission technologies and in decentralised energy production using renewable energy technologies. Further, decentralised energy production also reduces the impact of failures in vulnerable centralised production.

A particular focus will need to be developed for promoting innovation in regional Victoria. Opportunities may be realised through:

- Establishing regional and sectoral stakeholder groups to identify key development opportunities; potential barriers and the necessary incentives;
- Supporting the entrance of rural and indigenous groups into the carbon market by providing expertise and material support for new biosequestration initiatives; and
- Provision of technical expertise, capacity building and financial assistance to support the implementation of transition strategies in priority areas.

New markets and services will be driven across a range of sectors through emissions trading. These include:

- Energy services and specialist suppliers such as appliance manufacturers, technologists and technicians;
- Carbon trading and contracting services;
- Carbon accounting, reporting and verification services; and
- Associated technologies such as smart metering, data management and remote monitoring.

In addition, there is significant scope for encouraging vocational training programs for up-skilling to provide workforce needed for retro-fitting of energy efficiency measures and renewable energy technology. Training programs and short courses for business should be developed to reflect the projected demand for new green job growth in areas such as energy efficiency, carbon accounting, compliance monitoring, sustainable investment, climate science and engineering; and energy technologies.

Substantial additional emission reductions can be gained from improving the energy efficiency of Victoria's building stock. A major Statewide initiative to drive and partially fund the achievement of 7 Star energy standards for all Victorian residential and commercial built stock by 2020, would have significant economic and employment benefits for all Victorians. It would reduce energy costs for low income communities and households and would lead to a significant reduction in emissions by that date. Successful implementation would depend on a combination of public incentives, private (banking) assistance, changes in energy tariffs, and regulatory amendments.

There are significant opportunities in biosequestration and other revegetation programs which will provide mitigation benefits as well as economic benefits through the

production of offsets. Victoria to seek to investigate ways of increasing the level of sequestration in forestry and agriculture.

RECOMMENDATIONS

- 5.1 **Increase** the level of research and development for new and innovative technologies in energy and transport.
- 5.2 **Accelerate** the full commercialisation of new energy supply technologies to create a truly balanced energy portfolio that meets Victoria's emissions reduction needs and targets.
- 5.3 **Accelerate** the deployment of energy efficiency technologies in residential and commercial applications.
- 5.4 **Establish** a major Statewide initiative, using regulatory change and government funding assistance, to ensure the achievement of 7 Star energy standards for all Victorian residential built stock by 2020, with building codes for new buildings adjusted to meet world's best practice energy efficiency standards by 2015.
- 5.5 **Increase** Victoria's skills base through additional training places and university partnerships, in areas such as energy efficiency, carbon accounting, and low-emissions technology.
- 5.6 **Increase** Victoria's natural absorption of carbon through forestry, agriculture and other biosequestration.
- 5.7 **Develop** urban and regional planning policies that encourage low-emission transport options, sustainable building design and green urban areas.

GOAL VI: Build capacity in government, industry, communities and regions to adapt to climate change.

BACKGROUND

Climate adaptation is now recognised as a necessary complementary response to greenhouse gas mitigation. Adaptive actions are intended to increase our capacity to respond to climate risks, increase our resilience, and therefore reduce impacts. Without further adaptation, the impacts of climate change on Victoria's social, economic and ecological systems are likely to be substantial.

Climate adaptation will be undertaken by a broad combination of individuals and communities, local organisations and companies, and local, State and national governments and their agencies. If it is timely and innovative, climate change adaptation will create net economic and social benefits and further opportunities. It will limit climate-related costs and losses, and enable communities and industries to better accommodate the impacts of mitigation measures – such as energy price increases arising in response to the CPRS.

In this context, leadership by the Victorian Government is essential in preparing for the impacts of climate change.

Local government also has a significant role to play in the development and implementation of climate adaptation strategies at the Statewide and also regional levels – particularly in relation to the facilitation of community participation as well as through the delivery of material resources and information to their communities.

ISSUES

Adaptation issues and needs for Victoria include the need to:

- Define principles, aims, goals and targets for adaptation activity;
- Close knowledge gaps about the State's adaptation needs;
- Meet the adaptation needs of Victoria's ecosystems, communities, and economy, and take advantage of climate adaptation opportunities;
- Address funding requirements and equity concerns raised by adaptation actions and needs, including for vulnerable communities and regions;
- Refine existing institutions and developing new ones to assist in adaptation policy development and implementation; and
- Engage Victorian communities, industries and local governments in cooperative action around adaptation.

RECOMMENDATIONS

Adaptation actions recommended by the *Ministerial Reference Council for Climate Change Adaptation* (and detailed in its separate report) and endorsed by the Premier's Reference Group include:

6.1 Establish guiding principles, aims and objectives for adaptation activity.

6.2 Close knowledge gaps, by ensuring:

- Biennial reporting on indicators of climate vulnerability and adaptation activity;
- Ongoing research into and monitoring of climate vulnerability and resilience, including climate modelling for Victoria every five years, and reporting and mapping of integrated vulnerability assessments;
- Five yearly reviews of Victoria's social, economic and ecological vulnerabilities

to climate change based on updated climate scenarios; and

- Research into, and assessments of, climate threats to Victoria's biodiversity, Aquatic systems and Water resources; Agriculture and forest industries; Energy sector; Settlements and infrastructure; Human Health; and Potential climate impacts on vulnerable and low income groups and communities.

6.3 **Focus adaptation activity** by considering it in relation to five broad parameters, including *Coastal Victoria; Victorian Cities; Rural Victoria; Industrial Victoria; and Victoria's Environment*.

6.4 **Develop and implement** Victorian Adaptation Strategies, using a layered approach, including:

- the statewide **Victorian Climate Change Adaptation Strategy (VCCAS)**, to be completed by the Victorian Climate Change Adaptation Council in 2010 and reviewed and revised every five years thereafter;
- Local/regional Adaptation Plans, as a legislative requirement for Victorian local governments, developed and revised over a five year cycle;
- Sectoral adaptation responses; and
- Systematic and regular review of existing laws, regulations and protocols to assess their responsiveness to climate adaptive needs.

6.5 **Establish an independent, statutory Victorian Climate Change Adaptation Council (VCCAC)** to oversee Statewide adaptation activities including Victorian climate adaptation research; Statewide and regional strategic development and implementation and associated public consultation, and associated monitoring and reporting.

6.6 **Ensure Local Government participation** in the development of local adaptation strategies, and associated monitoring and reporting, through amendments to the *Local Government Act*.

6.7 **Meet** adaptation costs and ensuring funding, including by:

- Facilitating an economic assessment of adaptation costs and benefits;
- Requiring Victorian government agencies, local governments, and Victorian industries and communities, to regularly assess and cost their adaptation needs;
- Calling for the establishment of a national **Climate Fund**, using ETS revenue; and
- Establishing a Victorian **Climate Fund** to support adaptation actions.

GOAL VII: Legislate to ensure effective and enduring action to combat climate change.

BACKGROUND

Increasingly, governments are using legislation to define targets and goals, and to establish new institutions, to combat climate change. Prominent international examples include the UK Climate Change Bill, and sub-national legislation in the United States. The Victorian Government is committed to passing a Climate Change Bill during its current term in office.

ISSUES

There are questions about the appropriate scope of a Victorian Climate Bill articulated in a context that includes medium and long term national emissions targets, national commitments made via the Kyoto Protocol process, and the introduction of major policy initiatives such as national emissions trading under the CPRS.

Climate legislation can be used to achieve several goals. It can:

- Ensure enduring whole-of-government and whole-of-society commitment to mitigation and adaptation;
- Establish institutions that will guide, monitor and report on government, industry and community actions over time;
- Assist in the coordination of activities across State and local government, industry sectors and communities; and
- Provide an overarching framework for organising climate related response and mitigation and adaptation actions.

Associated subsidiary legislation can be used to address specific complementary measures (such as MRETs, and the establishment of specific independent statutory bodies which should also be mentioned in the major Bill).

RECOMMENDATIONS

- 7.1 Introduce a Victorian Climate Change Bill** and associated legislation that would directly address the Goals and recommendations from the Premier's Climate Change Reference Group.