

# *Executive summary*

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## Chapter 1: Introduction

Victoria has a wealth of renewable resources, yet less than 2 per cent of the state's primary energy consumption is derived from wind, biomass and hydroelectricity. There are significant opportunities to further develop renewable energy projects in Victoria, based on proven technology such as wind power, as well as emerging technologies such as geothermal, tidal and wave power. The Committee received the inquiry reference on the approvals process for renewable energy projects in Victoria in December 2008. The report focused on wind farms, as no other types of large-scale renewable energy projects have been approved and constructed to date.

Proponents raised concerns about the timeliness of key decisions made in the approvals process, delays created by the need for Cultural Heritage Management Plans prior to planning approval, accessing grid connections and difficulties obtaining native vegetation offsets. Proponents recommended better coordination between the various government departments and agencies involved in planning approvals and greater clarity regarding the scope and level of environmental assessments required.

Local councils advised that they do not currently have the capacity, expertise and resources to act as the responsible authority for wind farm projects of less than 30 megawatts. Councils identified the cumulative impacts of wind farms and monitoring and enforcement arrangements as significant issues. Community concerns created by wind farms were also examined by the Committee.

## Chapter 2: Victoria's renewable energy resources

Renewable energy accounts for a small fraction of total electricity generated in Victoria. The impact of falling water levels on hydroelectricity generation has translated into renewable energy production falling to 1.8 per cent of total electricity generated in Victoria, in 2009. The largest source of renewable energy in Victoria came from wind (35 per cent), followed by biomass (32 per cent) and hydroelectricity (32 per cent) in 2008. Geothermal, solar and tidal energy combined, account for less than 1 per cent.

Wind farms with a total capacity of 428 megawatts are currently operating in the south west of the state, South Gippsland and near Ballarat. Additional projects totalling three times that capacity have also been approved. Biomass, primarily firewood, is mainly used in Victoria for low cost space heating. The largest renewable generator in the state is Maryvale Mill which utilises the wood waste from the pulp mill. Hydroelectricity has traditionally been the main source of renewable energy in Victoria. The most recent hydroelectricity station commissioned was at Bogong in October 2009, with a capacity of 140 megawatts. The geothermal, solar and marine industries (tidal and wave), are in their infancy but have the potential to generate significant quantities of renewable energy.

## Chapter 3: Policy and regulatory framework for renewable energy projects in Victoria

In examining the approvals process for, and the likely future drivers of, renewable energy projects in Victoria, the Committee was required to consider a complex, diverse and evolving regulatory and policy framework.

This chapter introduces the international, national and state policy context for renewable energy projects and outlines the policy settings and funding regimes that seek to stimulate investment in renewable energy at the State and Federal levels. It sets out key assessment processes for renewable energy projects in Victoria, focusing on planning and environmental approvals. It also provides an overview of the stationary energy sector and identifies Victoria's unique regulatory arrangements.

Key elements of policy and legislation impacting upon renewable energy projects in Victoria remained unresolved during the course of the inquiry, including the Federal Government's proposed emissions trading scheme and long-term energy policy at the State and Federal levels. The regulatory framework within which Victorian renewable energy projects operate was under revision. Reviews were being conducted into environmental regulation in Victoria, state-based wind farm guidelines, proposed national wind farm guidelines, Victorian planning legislation, the impact of federal climate change and renewable energy policies on energy market frameworks and the Federal Government's expanded Renewable Energy Target (RET) scheme.

Evidence provided to the Committee highlighted the expanded RET as providing the major impetus for investment in renewable energy through to 2020. However, it was generally agreed by stakeholders that the expanded RET scheme would favour the development of the wind industry, over other less developed or more costly renewable energy technologies. There was a general consensus in submissions to the inquiry that the Federal Government's proposed emissions trading scheme, the Carbon Pollution Reduction Scheme, had the potential to play a long term role in stimulating investment in renewable energy technologies, but would have limited impact in the short to medium term. In the Victorian context, the State Government provides Energy Technology Innovation Strategy grants for renewable technologies and has allocated \$50 million to build a solar photovoltaic plant in the north west of the State.

## Chapter 4: Other jurisdictions

The Committee investigated two types of renewable energy project approvals processes in response to the second term of reference. It examined the predominantly council based process in South Australia and the more centralised department of planning approach of New South Wales. The peak renewable energy industry association regards Victoria as the most difficult jurisdiction in which to obtain development approval for wind farms.

The South Australian Government is more aggressive in its promotion of renewable energy than the Victorian Government. In June 2009, the South Australian Government increased the State's renewable energy target to 33 per cent by 2020, such that it is higher than the national expanded Renewable Energy Target of 20 per cent renewable energy by the same date. The South Australian Government created the RenewablesSA Board to provide a high-level and integrated approach to renewable energy investment in the state. The South Australian Government has also initiated a

high-profile strategic planning process with respect to its transmission system in order to open up the Eyre Peninsula for wind power generation.

The Committee concluded that the New South Wales approvals process is more integrated than the Victorian one. Proponents are provided with early advice on requirements for the granting of planning approvals. Designated project managers have recently been appointed within the NSW Department of Planning to facilitate renewable energy projects. An ambitious target has been set for the processing of applications – within four months. The Committee was advised that the environmental assessment relating to projects, including renewable energy projects is more rigorous in NSW as a result of being integrated into the planning framework. Wind farm proponents indicated a preference for the NSW process for connecting to the distribution grid.

## Chapter 5: The planning approvals process

Delays in key decisions being made in the approvals process impact on the investment decisions of the wind industry. The Committee calculated that it takes 4½ – 31 months for the Minister for Planning to approve wind farm applications in Victoria and between 8½ – 51 months for local councils and/or the Victorian Civil and Administrative Tribunal. In comparison, the average time taken in New South Wales is 7 months and 5–6 months in South Australia. The Committee has recommended that statutory deadlines be introduced to improve the timeliness of decision making in relation to wind farms.

The Committee concluded that the current 30 megawatt threshold that demarcates responsibility for wind farm applications between the Minister for Planning and local councils is outdated and increases the complexity of the approvals process. Local councils advised that they currently do not have the capacity, expertise and resources to act as the responsible authority for wind farm projects. Consequently the Committee has recommended that the Minister for Planning be the responsible authority for all wind energy facilities including the subsequent monitoring and enforcement of planning provisions. Local councils are currently responsible for all monitoring and enforcement regardless of the size of wind farm projects in Victoria.

Evidence to the inquiry highlighted the need for better coordination between decision making agencies and the accountability of state government departments involved in the planning approvals process. The Committee has recommended that a departmental Project Manager be appointed to oversee each renewable energy facility project. It has also recommended that a Technical Reference Group be established and integrated into the assessment process for all renewable energy facilities.

The role of planning panels was criticised by some proponents and community members. However the Committee concluded that planning panels allow the community to express their views on wind farm applications in a direct and immediate way. The planning panel process could be significantly streamlined in three ways – with the application of standard development approval conditions, wind farm experts being appointed to planning panels and the publication of planning decisions and benchmarks set by planning panels on wind farm projects.

Both proponents and local councils identified the need for greater policy guidance on evaluating the cumulative impacts of multiple wind farms as well as other major developments. The Committee has recommended that the Department of Planning and Community Development develop strategic regional plans to assist local councils and communities manage such cumulative impacts.

## Chapter 6: Community consultation and the social impacts of wind farms

The construction of wind farms in Victoria and other Australian jurisdictions has elicited passionate and contrasting responses from the community. Community groups and individuals outlined their concerns to the Committee, including the impact of turbines on property values and the health of people and livestock.

Local councils highlighted both the negative and positive impacts of wind farms on their area. Although investment in the region was welcome, the projects also impacted on local tourist industries, created accommodation shortages and social tension.

The Committee recommended that community led approaches to identifying suitable sites for wind farms and the establishment of community engagement committees may address some of the negative social and economic impacts of wind farm developments. The Committee recommended that the Sustainability Victoria publication *Wind energy: myths and facts* be revised based on local experiences of wind farms and current research; and widely distributed to dispel some of the myths that are perpetuated by wind farm opponents. The Committee also recommended that the *Policy and planning guidelines for development of wind energy facilities in Victoria* identify issues that are exempt from consideration by Planning Panels including greenhouse gas abatement and the efficiency of the technology.

## Chapter 7: Aboriginal cultural heritage

Victoria's *Aboriginal Heritage Act 2006* was identified by members of the wind industry as an obstacle for investors in renewable energy projects. While some wind farm companies described the Act as 'inflexible', an Aboriginal party described it as 'very good' as it provides 'certainty' for all parties.

Wind farm developments will often require the preparation of a Cultural Heritage Management Plan (CHMP) under the Aboriginal Heritage Act. Issues raised by proponents with the Committee primarily related to the CHMP framework and the requirement that a CHMP must be approved before a planning permit can be issued. According to members of the wind farm industry, CHMPs must be finalised too early in the approvals process, before detailed plans of a wind farm development are complete.

The Committee noted that integrating Aboriginal cultural heritage considerations into the initial stages of project planning is consistent with a best practice approach to protecting Indigenous heritage. However, the Committee was also concerned that the current framework, in which detailed wind farm designs are only produced after a CHMP has been approved, may result in little clarity for proponents, Aboriginal parties or government as to the likely dimensions of a wind farm project – and therefore its impacts on cultural heritage.

The Committee recommends that the CHMP framework should be amended to incorporate a two-part approach for the wind farm industry. In order for a planning permit to be granted, an initial heritage assessment would be mandatory, as well as consultation with Registered Aboriginal Parties or Indigenous parties, who have traditional or family links to Aboriginal cultural heritage in the relevant area. An approved CHMP, if necessary, would be required later in the process, prior to the commencement of construction. Under this approach, a preliminary heritage assessment and

consultation with Aboriginal parties would occur at the commencement of the planning process in order to integrate Aboriginal cultural heritage into the planning process as a site constraint. However, more detailed assessments, the formulation of recommendations, a management regime and contingency planning would occur once detailed project plans were available.

## Chapter 8: The environmental assessment process

In response to part (a) and part (c) of the terms of the reference, the Committee investigated issues associated with the assessment of the environmental impacts of renewable energy projects. In particular, the Committee investigated issues associated with the Environment Effects Statement (EES) process, the native vegetation and flora and fauna approval processes, and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC) process. The Committee acknowledges the number of inquiries and reviews at both a State and Federal level that are either currently underway or have been recently completed with implications for these issues.

The Committee heard divergent views on these issues. Many proponents argued that environmental regulations are becoming more stringent, onerous and costly to comply with, and raised several concerns regarding the implementation of regulations, particularly in relation to native vegetation offsets. Community groups argued that environmental regulations are failing to adequately address their concerns regarding wind farm projects, and raised concerns about the adequacy of environmental assessments. Councils highlighted perceived inefficiencies and a lack of coordination between the various environmental approvals processes associated with wind farm projects.

The Committee heard a number of criticisms of the EES process, including that the process adds to an already complex approvals process, is overly discretionary, and lacks clarity and certainty. In particular, the Committee concluded that the EES process needs to provide much clearer guidance on when an EES is required and the scope and level of assessment required in each case. The Committee is currently inquiring into the EES process, which will provide an opportunity to further consider such guidance. The Committee recommended that the Victorian Government incorporate a tiered assessment process into the EES process. Clear guidance should be provided on the level of detail of assessments and the assessment standards and methodologies that apply to each tier.

There were significant implementation problems with the Native Vegetation Management Framework (NVMF) according to many proponents. The Committee concluded that most of these problems were associated with the offset process. The Committee emphasised that native vegetation should be seen as a significant site constraint and that the issues raised by proponents, such as time delays in finding offsets, will only arise if proponents cannot avoid clearing in the first instance. However, the Committee acknowledged that if clearing has been deemed acceptable under the NVMF, the issues raised by proponents are legitimate and should be addressed. The Committee sees merit in some of the recommendations of the Victorian Competition and Efficiency Commission that aim to address implementation issues, but has concerns about the recommendation to extend the use of offsets on public land reserved primarily for nature conservation. The Committee recommended that the Victorian Government further investigate the concept of establishing 'offset reserves' on a regional basis and using BushBroker franchises to expand the supply of offsets as a matter of urgency. The Committee also recommended that the government investigate the NSW BioBanking scheme, particularly in relation to any measures that could address delays in finding offsets while ensuring the protection of native vegetation.

A number of community groups raised concerns about the adequacy of environmental assessments for wind farm projects. The Committee believes that there is likely to be both perceived and real issues associated with the adequacy of assessments undertaken for renewable energy projects. The Committee concluded that the quality of the decision making process associated with the approval of these projects is highly reliant on the quality of the work of environmental consultants. The Committee made a number of recommendations to address the adequacy of environmental assessments.

The Committee was advised of two separate issues in relation to the approvals process for renewable energy projects under the EPBC Act (Cth). Some proponents argued that the EPBC Act allows third parties to apply to the Federal Environment Minister to reconsider a matter that has previously been determined, which creates significant delays, while the Environment Defenders Office argued that the 'assessment bilateral' agreement process has failed to create a higher standard of impact assessment in Victoria. The Committee concluded that the provisions of the EPBC Act that allow the Federal Environment Minister to reconsider a decision about whether an action is a 'controlled action' are appropriate and are unlikely to substantially affect the approval process for renewable energy projects. The Independent Review of the EPBC Act made a number of recommendations to address the second issue. The Committee agreed in principle with the recommendations of the Independent Review and noted that the current inquiry into the EES process in Victoria will provide a greater opportunity for the Committee to analyse and make recommendations in relation to the 'assessment bilateral' arrangements that apply to Victoria.

## Chapter 9: Connecting to the transmission and distribution network

In investigating the process for connecting renewable energy generators to the electricity network, the Committee found that access to the grid is a major constraint for investment in renewable energy.

Victoria's transmission and distribution network was designed prior to renewable energy generation. The Victorian grid was constructed in order to transport electricity from large centralised coal-fired power stations over long distances to major centres of customer demand. As a consequence, renewable energy generators encounter a number of obstacles in attempting to connect to the grid, including an absence of transmission infrastructure in resource-rich areas and a lack of flexibility in the network to accommodate the variability of some forms of renewable energy. One possible solution is the introduction of 'smart grid' technology, which has the potential to make the grid less centralised and more responsive to changes in electricity supply, enabling the incorporation of greater volumes of renewable energy into the network.

In addition to changes in the physical nature of Victoria's electricity infrastructure, reform of the current regulatory and institutional framework is required in order to encourage increased investment in renewable energy. Victoria's electricity sector is part of the National Electricity Market (NEM), a wholesale market for the supply of electricity to retailers and end-users across the eastern seaboard. The current objective of the NEM does not incorporate a reference to 'environmental sustainability'. The Committee concluded that inclusion of environmental considerations in the NEM objective will enable environmental sustainability to be addressed by the institutions governing the market, the national planning body, governments and regulators as a central aspect of their decision making.

The Committee concluded that many of the obstacles to grid connection identified during the inquiry are indicative of broader systemic issues within the stationary energy sector. Renewable energy generators have to negotiate connections to the electricity network with network service providers (NSPs). A number of the issues raised by renewable energy generators with the Committee stemmed from the nature of NSPs as being risk-averse natural monopolies that derive the majority of their income from enhancing their network infrastructure. Issues identified by renewable energy proponents included perceptions of a lack of transparency, power imbalances and information asymmetries in their relationship with NSPs. A number of renewable energy proponents acknowledged that the issues they had identified are intractable because they are inherent in the structure of Victoria's electricity sector.

The process of negotiating connection to the transmission and distribution network is unnecessarily complicated, costly and lengthy. Victoria's transmission planner, the Australian Energy Market Operator (AEMO) has recently introduced more flexibility into the process for connecting to the transmission network. The Committee concluded that there is value in investigating similar approaches to distribution network connections, as this could provide renewable energy generators with a greater capacity to evaluate the information they are given and to influence the timeframes for their connection to the grid.

Since the 1990s, the Victorian Government has been engaged in a reform process driven by a philosophy of maximising efficiency by reducing the involvement of the State and increasing the role of the market in electricity supply decisions. Rather than directly managing energy monopolies, the Government now sees its role as setting policy objectives on behalf of the community and managing the framework of the electricity market. Unlike other States, Victoria's transmission system is planned by an independent planner, the Australian Energy Market Operator (AEMO). However, the Committee concluded that despite the privatised nature of Victoria's electricity sector, there is capacity for the Department of Primary Industries to take a more active role in relation to planning for new network infrastructure for renewable energy at both the statewide and individual project levels.

## Chapter 10: Emerging renewable energy technologies

There is significant potential in Victoria for the generation of renewable energy from a range of sources, other than wind, including geothermal, marine, solar and biomass. Renewable energy technologies, other than wind, are generally at the formative stage in Victoria, and therefore the regulatory framework for such projects is evolving and in some cases has not been established.

There are additional financial risks associated with emerging renewable technologies, which increase investment uncertainty for the industry. The inquiry received evidence that the expanded Renewable Energy Target scheme is unlikely to be sufficient to stimulate the requisite investment in emerging renewable energy sources such as solar and geothermal, at least in the short to medium term.

Representatives of the emerging renewable energy sector informed the Committee that government departments were generally supportive of their projects, but that in comparison with some other States, there was an absence of 'champions' for emerging renewable energy industries within the administration. Representatives from government departments agreed with the proposition that increased leadership capability and senior attention to complex planning issues within government would be beneficial.

The Committee concluded that more could be done to proactively identify and address emerging policy and planning issues in relation to projects in the emerging renewable energy sector. The Committee recommends that an emerging renewable energy technologies expert panel consisting of senior departmental representatives, industry and local government be formed to investigate industry-specific regulatory requirements for emerging developments. If this investigatory work is undertaken while projects are at the exploration and feasibility stages, it could significantly reduce the extended processing times that typically apply when regulators encounter new and unfamiliar forms of development.

Unlike some other forms of renewable energy, technologies for producing energy from biomass have already been established. However, a key challenge for the bioenergy industry is the current absence of national and State policies that include concrete plans for exploring its potential. In addition, the potential of bioenergy is not being realised by existing policies because they do not value heat as a form of energy. The Committee recommends that Victoria's Future Energy Statement should include a commitment to developing a bioenergy strategy that would appropriately value thermal energy and address impediments to, and realise opportunities for, the uptake of bioenergy in Victoria.