







- Phasing out of targets after 2024 based on a constant penalty (Approach 1, Option 2);
- Recognition of those who invested under the different conditions of the Victorian Renewable Energy Target;
- Ensuring that renewable generation installed prior to 1997 does not receive a base-line that results in wind-fall gains;
- Unrestricted source eligibility including biomass and solar water heaters; and
- No regulations favouring specific technologies.

In relation to penalty prices, the COAG Working Group needs to deal with competing issues. The penalty price should be high enough to attract new investment in renewable energy projects while allowing the market maximum flexibility in determining the timing and nature of these developments.

A penalty price set too high will decrease the wholesale electricity price for all generation, because it increases the effective subsidy being applied to renewable generation and thereby displaces other generation in the competitive wholesale market. This will have significant flow-on impacts for investment in non-renewable generation. Against that, a penalty price set too low will result in fewer renewable projects being brought forward.

In trying to strike the right balance, an appropriate penalty price could be the entry price for the most likely new renewable generation source that will be developed under the scheme – wind.

The Discussion Paper appears to have given little consideration to a number of other key issues that need to be considered in the scheme’s design. These include transmission and networks constraints; provision of back-up generation and short term equipment supply issues.

#### 1. Risks to reliability

IPRA notes that in its Comprehensive Reliability Review of 2007, the Reliability Panel assessed the ability of the current National Electricity Market (NEM) ‘energy-only’ design to deliver reliability at the expected level for the market. We note that the Reliability Panel established that the ‘energy-only’ market design, with a market cap of \$10,000 per MWh, would deliver the reliability standard of 0.002% Unserved Energy (USE) only if there were no distortions to the market. The Review also recognised that the already significant range of carbon reduction and renewables distortions to the market had the potential to reduce reliability of supply into the future.

The extension to the renewable obligations proposed under RET represents a circa 400% increase on those imposed by the current Mandatory Renewable Energy Target scheme, which is already a

significant distortion. It imposes highly subsidised energy into the generation mix, the result of which will be a reduction in the wholesale energy price. Consequently, non-renewables generation investments, including those emitting low or zero carbon, will find it harder to achieve revenue sufficiency, and will be delayed. This mechanism reduces system reliability.

Further, the intermittent nature of many renewables sources drives a requirement for alternate capacity in the market, with a lower prospect in prices due to the price depression the renewables obligation causes.

Customer certainly potentially face lower wholesale energy costs as a result, at the expense of existing investors, but have to spend heavily in subsidy to renewables, and to otherwise uneconomic capacity to achieve the target.

## *2. Transmission and networks constraints*

With the introduction of an expanded RET, and even assuming an optimistic level of geothermal generation, the substantial majority of the target is likely to be met by intermittent wind generation. Furthermore, most of this will be placed in South Australia, Victoria and Tasmania. This poses specific challenges in relation to transmission and network grid stability, and congestion management.

Renewables opportunities are not always optimally sited (geothermal energy from the Cooper Basin a case in point) and in these cases will invoke an additional hidden cost for end consumers in the price of transmission investment necessary to get the generation to the site of the demand.

Already, we have witnessed a down-grade in capacity and increased congestion on the Victoria-South Australia interconnector following upgrades to satisfy the Lake Bonney Wind Farm in late 2007. This situation will, unless extensive network augmentation is undertaken in the very short term, be repeated across the broader transmission and distribution network with the introduction of an expanded RET.

The clear outcome of increased constraint levels is the amplified stress being placed on the transmission and distribution networks and their ability to deliver energy within the NEM reliability standard. In addition, increased constraints will increase the cost of new generation investment, especially at a time when Australia's electricity generation fleet is expected to undergo a major change with the introduction of an emissions trading scheme under the Carbon Pollution Reduction Scheme.

Dealing with this will not be easy. Existing regulatory frameworks and economic tests allow for extensive analysis and consultations before new or augmented transmission/network projects can be approved by the Australian Energy Regulator. Following that,

Local Government approvals are required, along with land-owner consents. This can take anywhere up to three years. Only at that stage can the physical works begin, and depending on the scope and nature of works, these could take an additional 1-2 years.

The time involved in these processes does not lend itself to the provision of new capacity within the same time frame as new renewable projects can be developed.

In developing design options for an expanded RET, this issue needs to be taken into consideration. As a starting point, renewable energy should be assessed on the basis that it bears the full cost of their implementation. That is, new sources of mandated renewable generation should pay for the additional ancillary services they cause to be required, and the cost of transmission needed to get their product to market. Two cases are instructive here:

- Firstly, geothermal generation located in the Cooper Basin faces enormous transmission distances to bring this generation to any substantial load centre. Applying further subsidy to this form of renewable generation creates further distortion, and potentially results in inefficient renewables investment, let alone overall efficient energy supply.
- Secondly, wind generation introduces variability into a system requiring additional frequency control. Increasing levels of intermittent renewables generation imposes a cost on the wider market that should be borne by the intermittent renewables generation itself if efficient renewables investment, let alone efficient energy investment, is to occur.

### 3. *Retail Price Caps*

The maintenance of retail electricity price caps, especially in New South Wales and Queensland poses a specific challenge for the introduction of the expanded RET. As the liable parties, energy retailers need to be able to pass the additional costs through to consumers. The unwillingness of State Governments to remove price caps increases the likelihood that retailers will be unable to pass on the additional cost.

This will place unnecessary financial pressure on retailers, potentially leading to credit risk concerns. Given the extent of counter-party hedging in the NEM, retailer credit worthiness directly effects other parts of the supply chain, and hence the financial well-being of electricity market.

A simple design element that would reduce the potential of this occurring is to ensure RET penalties take into account the overall retail price framework, especially where price caps are in place.

#### 4. Short-term equipment supply issues.

One of the biggest challenges facing the implementation of the expanded RET will be the availability of renewable energy generation equipment especially wind turbines and transformers. As part of one of the world's largest owner/operators of wind generation IPRA has extensive experience in developing wind projects. Currently we estimate that it will take three years from project financial approval to commercial operation. Most of this is consumed by waiting-periods for equipment. Moreover, with the likely surge in demand for such equipment, this time frame will only increase.

In the context of the expanded RET, the scheme needs to be designed to ensure that liable parties are not penalised for factors beyond their control – the global lack of availability of renewable energy equipment.

## Summary

IPRA acknowledges the Government's policy intent behind the expanded RET scheme. While we welcome the intent to absorb the plethora of state-based schemes within a single national-based RET, expansion of the market distortion created by these schemes is not welcomed, and threatens the effective delivery of electricity supply.

IPRA suggests the scheme's design should focus on least-cost elements as a means of mitigating the RET's inherent distortionary impacts. As part of this, new sources of mandated renewable generation should be assessed on the basis that it bears the full cost of its implementation.

The challenges of meeting the expanded RET target will require considerable further analysis, particularly in relation to the issues raised – reliability risk, transmission/network, equipment availability and price caps.

IPRA would welcome the opportunity to further discuss any of these issues. If further information is required, please contact Patrick Gibbons, Regulatory Policy Manager on (03) 9617 8300.