



Independent Pricing and Regulatory Tribunal

# Strengthening the Foundation for Australia's Energy Future

IPART's submission to the  
Draft Energy White Paper 2011

Electricity  
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# 1 Overview

IPART welcomes the development of a strategic policy framework to guide the further development of Australia's energy sector.

IPART is the economic regulator of electricity and gas retail prices for small customers in NSW that have not entered into a market contract with a licenced retailer. We are well placed to comment on energy policies, the implications they have for the cost of providing electricity to end-use customers and the impact that rising electricity prices has on households and small businesses in NSW.

In our view, the Draft Energy White Paper (White Paper) process provides an opportunity to consider the multiple and often competing policy objectives that State and Commonwealth Governments pursue in relation to energy, the cost impacts of these objectives and how best to fund these objectives. It is also an opportunity to consider the regulatory settings that guide investment in the energy sector, particularly investment on the energy network and investment in low emission technologies, with the need to reach a more appropriate balance between the needs of investors and end-use customers. Consideration should also be given to the arrangements that are currently in place to assist vulnerable households to manage their energy bills, their cost effectiveness and how they should be funded over time.

In this context, we would like to comment on:

- ▼ Improving productivity by limiting future network cost increases, including:
  - the economic regulation provisions within the National Electricity Rules.
  - the governance of State-owned corporations.
  - the appropriate deployment of time-of-use or smart meters.
  - setting reliability standards efficiently and with regard to the willingness of the community to pay for specified standards.
- ▼ Improving arrangements for setting network prices.
- ▼ Evaluating the efficiency and cost effectiveness of Commonwealth and State green schemes and ensuring that they are complementary, well-designed and valued by society.
- ▼ Addressing electricity affordability and customer protection.

Our recommendations set out below.

## Improving productivity by limiting future increases in network cost increases

- 1 The National Electricity Rules should be changed :
  - to allow the AER to adopt its best estimate of efficient costs
  - to allow the AER to set its best estimate of the WACC
  - to include only efficient expenditure in the Regulatory Asset Base so that customers do not pay for inefficient capital expenditure
  - to improve the incentives for efficient expenditure under the NER for all network operators, and particularly for State-owned corporations.
- 2 The merits review process under the National Electricity Law should be broadened to limit cherry-picking opportunities.
- 3 The governance arrangements for the State-owned electricity distributors should be evaluated in light of IPART's 2010 review of SOC productivity.
- 4 The roll-out of time-of-use meters should be at the discretion of the customer or its retailer rather than being mandated by governments or distributors.
- 5 In setting network reliability standards:
  - Governments should have regard to customers' willingness to pay and conduct a cost-benefit analysis.
  - To facilitate the least-cost delivery of a specified standard, distribution network standards should be expressed on a probabilistic basis.
- 6 The National Electricity Rules and guidelines governing embedded generation should be updated to ensure that:
  - Small-scale embedded generation is incorporated into the regulatory framework.
  - Embedded generators share the benefits that they deliver to networks through avoided costs, however any additional payments or subsidies for embedded generators should be a matter of government policy .

## Improving the consultative processes for annual network price changes

- 7 IPART intends to propose that the National Electricity Rules be changed to set network prices earlier and with greater consultation with customers and retailers.

## Evaluating the efficiency and cost effectiveness of green schemes

- 8 With the introduction of a carbon price the need for a Renewable Energy Target scheme (RET) should be reviewed. If the RET is retained, then the design of the scheme should be reviewed to minimise the cost impacts to electricity customers including:
  - review which electricity customers bear the costs of the RET
  - eliminate the Solar Credits Multiplier in the Small-scale Renewable Energy Scheme
  - cap the Small-scale Renewable Energy Scheme
  - review the upfront deeming of certificates in the Small-scale Renewable Energy Scheme
  - ensure that the type of generation eligible to create certificates under the LRET is consistent with the renewable energy objectives of the scheme.
- 9 The national energy efficiency scheme should be designed to encourage cost effective energy efficiency measures.

## Electricity affordability and customer protection

- 10 We continue to support the removal of price regulation in markets where competition exists. Retail competition offers the best protection to customers that retail prices will not materially exceed the efficient cost of supply.
- 11 Retailers, regulators and governments should improve the availability, simplicity and clarity of customer information about energy pricing and market reforms to facilitate retail competition.
- 12 We recommend consideration of more light-handed regulatory frameworks, including price monitoring, during the transition to a deregulated market.
- 13 Energy affordability measures should be reviewed to ensure they are complementary, comprehensive and well-targeted.

## 2 Improving productivity to limit future network cost increases

We support the White Paper's focus on improving the productivity of the energy sector. We are concerned that increased network costs are leading to a decline in the productivity of the electricity industry, as evidenced by our recent review of the productivity of the electricity networks.<sup>1</sup> Improving the productivity of the sector will lower the costs of providing energy to customers<sup>2</sup> and can play a role in reducing the issues associated with the affordability of electricity for vulnerable customers.

We consider that there is a range of network-related productivity improvements available in the energy sector. These issues are discussed below.

### 2.1 The economic regulation of network businesses

We consider that recent network costs increases<sup>3</sup>, which are responsible for most of the recent retail price increases, may be higher than necessary due to aspects of the regulatory framework which are contributing to inefficient outcomes. The cumulative effect of the economic regulatory provisions of the NER is rapidly increasing network prices, which flow through to retail prices and customer bills. In our view, the current regulatory framework:

- ▼ constrains the AER's ability to apply what it considers to be the best estimate of the efficient operating and capital costs
- ▼ provides strong incentives for network business to invest capital in the network, potentially beyond efficient levels, because the prescriptive requirements of the NER may lead to excessive returns
- ▼ allows the businesses to earn a return on all capital invested regardless of its efficiency and prudence, by requiring the AER to roll all capital expenditure into the asset base. This weak incentive for productivity improvement is exacerbated by inadequate governance arrangements in NSW (refer to Section 3.2)
- ▼ provides opportunities for the businesses to 'cherry pick' particular issues through the appeal process.

We note that the AEMC is currently reviewing rule change proposals relating to the economic regulation provisions within the NER and the reliability standards nationally and specifically in NSW. We also note that the Standing Committee on

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<sup>1</sup> IPART, *Review of Productivity Performance of State-Owned Corporations*, July 2010.

<sup>2</sup> Relative to where they would otherwise be.

<sup>3</sup> For further information on recent increases in capital expenditure on the NSW distribution network refer to IPART, *Changes in regulated electricity retail prices from 1 July 2011 – Final Report and Determination*, June 2011.



Energy and Resources (SCER) is reviewing the merits review processes within the National Electricity Law (NEL). We support these reviews.

### 2.1.1 The NER should be changed to allow the AER to adopt its best estimate of efficient costs

The National Electricity Rules should be changed to allow the AER to adopt its best estimate of efficient costs.

Under the NER's version of the 'propose-respond' model, the AER is precluded from making a decision that it considers to be its *best* estimate of a business' efficient costs. This is because the AER must accept the spending forecasts proposed by the network companies if it is satisfied that the proposals "reasonably reflect" efficient, prudent and realistic costs.<sup>4</sup>

In practice, there is often a wide range of reasonable estimates for a business' operating and capital expenditure requirements. Under the NER, if a business presents a spending proposal that lies in the upper bound of that range, which it has every incentive to do, the AER must approve it if it is satisfied that it is "reasonable," even though its best estimate is a lower forecast. If the AER refuses to approve expenditure proposed by a network company, it can only amend that expenditure to the **minimum extent necessary** to enable it to be approved in accordance with the NER.<sup>5</sup> This brings the expenditure within the reasonable range of estimates, but it may not impose the AER's best estimate of efficient costs.

The AER's task is made more difficult because the monopoly network businesses will always have better information on their business than the regulator, placing the AER at a disadvantage. The Productivity Commission notes that the use of benchmarking to determine operating and capital cost allowances can reduce the problems stemming from "forensic analysis" of the network businesses proposal in the presence of information asymmetry.<sup>6</sup> However, as the Productivity Commission acknowledges; if the NER restricts the AER to examining the proposals on a 'line by line assessment', then it reduces the capacity for benchmarking to determine alternative estimates.

We consider these aspects of the NER create risks of bias towards higher network prices rather than balanced and efficient prices, and outcomes favouring the commercial interests of the monopoly businesses rather than customers' interests and efficient overall outcomes.

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<sup>4</sup> National Electricity Rules, clauses 6.5.6(c) and 6.5.7(c).

<sup>5</sup> Clause 6.12.3(f) of the National Electricity Rules.

<sup>6</sup> Productivity Commission, *Electricity Network Regulation – Issues Paper*, February 2012, p 21.

### 2.1.2 The NER should be less prescriptive in relation to setting the network businesses' returns

The National Electricity Rules should be changed to allow the AER to set its best estimate of the WACC.

The current NER is overly prescriptive about the approach for determining the network businesses' regulated returns (the weighted average cost of capital, or WACC). While we support the businesses earning a commercial return on their investments, we are concerned that an overly prescriptive determination of the WACC can lead to excessive returns.

The Rules do not allow the AER to set its **best estimate** of the WACC; the AER can only change the parameters where they would be inappropriate, noting that there are still prescribed limits on the scope of these changes. Further, the AER must use a single point estimate which limits its discretion to tailor outcomes to the specific circumstances. Where the AER exercised discretion in regard to the averaging period, it was appealed by the NSW and Tasmanian network businesses. The Australian Competition Tribunal ruled that the AER has only limited grounds not to accept the averaging periods proposed by the businesses.<sup>7</sup> The practical outcome of the appeal on this selected narrow issue was to increase allowed revenue by over 10%.

### 2.1.3 The Rules should require the AER to test whether capital expenditure spent in a period is efficient before including it in the asset base (an ex-post review)

The National Electricity Rules should be changed to include only efficient expenditure in the Regulatory Asset Base so that customers do not pay for inefficient expenditure.

We support setting ex-ante levels of efficient operating and capital expenditure, but consider that the regime should be strengthened by incorporating an ex-post review to include only efficient expenditure in the Regulatory Asset Base in addition to consideration of other capital expenditure incentive mechanisms.

Under the NER, the AER must allow all capital expenditure incurred in a regulatory period to be included in the opening regulatory asset base for the subsequent period.<sup>8</sup> This means that even if capital is spent inefficiently or imprudently, businesses will earn a return on and of that expenditure in future years, increasing electricity prices for many years.

In our view, the regulatory framework alongside governance arrangements for the State-owned electricity distributors provides strong incentives for network business to invest capital in the network, but imposes little discipline on the businesses to ensure that this expenditure is efficient or prudent and valued by the customer. This is in contrast to outcomes in a competitive market. We consider that this regime

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<sup>7</sup> Australian Competition Tribunal, Application by EnergyAustralia and Others (includes corrigendum dated 1 December 2009) [2009] A Comp T (12 November 2009) at [104].

<sup>8</sup> Schedule 6.2, Clause 6.2.1(c)(2) and (e) of the National Electricity Rules.

should be strengthened by incorporating an ex-post review of the efficiency of that expenditure before it is included in the Regulatory Asset Base.

We recognise that any ex-post review needs to be appropriately defined, but consider that it imposes an important discipline on the regulated monopolies to ensure that their expenditure is prudent. Having regulated distribution businesses under an ex-post review framework, we are confident that it works in practice without materially jeopardising investment certainty, particularly under a well-designed framework.

#### **2.1.4 The merits review process should be changed in the National Electricity Law**

The merits review process under the National Electricity Law should be broadened to limit cherry-picking opportunities.

The review process provided by the National Electricity Law (NEL) allows the network businesses to seek review of specific aspects of the AER's determination to achieve more favourable outcomes. To date, the businesses have sought review of elements of every decision the AER has made on their regulated returns. In NSW, the distribution network businesses sought review of the averaging period for the risk free rate of return in their WACC calculation, which resulted in an additional \$1.9 billion in allowed revenue over 5 years (out of a total of \$18 billion).<sup>9</sup>

The current merits review process involves the Australian Competition Tribunal reconsidering the merits of the AER's decision. This review is limited to particular grounds and can only be made with the Australian Competition Tribunal's leave.<sup>10</sup> We recognise that a limited merits review – in contrast to a wholesale (de novo) review – has the benefit of focusing on the issues in dispute. However, it means that the Australian Competition Tribunal is not able to properly consider the merits of individual component decisions in the context of the AER's whole determination, or the effect that modifying these decisions may have on outcomes, in particular electricity prices. Therefore, it cannot consider, for example, whether the businesses will still face appropriate incentives regarding infrastructure investment from other aspects of the AER's decision.

We consider that where a business contests a specific regulatory decision, the review body should be able to consider this decision in the context of the whole determination, and not be confined to the specific item(s) contested by the business or interveners. This would give further incentive to the network businesses in considering whether they could end up worse off rather than, as at present, knowing that they will be neutral or better off, as a result of a review. We consider that customers should play a greater role in the merits review process.

We note that the Standing Council on Energy and Resources (SCER) has initiated a review of the merits review provisions in the National Electricity Law. We support

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<sup>9</sup> Australian Competition Tribunal, Application on EnergyAustralia and Others (includes corrigendum dates 1 December 2009)(2009) AComptT (12 November 2009).

<sup>10</sup> National Electricity Law, Part 6, Division 3A, Subdivisions 1 and 2.

this review and maintain our view that the **limited nature** of the merits review framework may lead to an unbalanced process and that the SCER should make changes to it by amending the NEL.

## **2.2 Enhance productivity of State-owned corporations (SOCs) by strengthening governance and supervision arrangements**

The governance arrangements for the State-owned electricity distributors should be evaluated in light of IPART's 2010 review of SOC productivity.

IPART's recent review of the performance of State-owned corporations (SOCs) in NSW<sup>11</sup> found that SOC productivity declined significantly in recent years, with the biggest declines amongst the electricity distributors. While the NSW SOC governance framework - the key policy tool for promoting continued improvements in the SOC's cost-efficiency and productivity - is based on sound principles, NSW has increasingly departed from these principles. There is now a significant gap between how corporatisation principles were envisaged to apply and how they are being applied in practice.

One result of the gap is greater imposition of policy requirements on SOC decisions without regard to the impacts on business value and broader economic efficiency. Another result is poorly defined expectations of, and accountability for, performance due to lack of clarity on the relative priority of the various commercial and non-commercial requirements on SOC's. Finally, there is diminished emphasis on improving efficiency and productivity, and seemingly the role and capability of government (specifically, NSW Treasury acting on behalf of shareholders) in promoting them.

The NER does not discriminate between public and private ownership, even though the respective governance structures differ markedly. When governments own the assets, they have a conflicting range of objectives which make the governance arrangements for the distribution and transmission businesses more complicated. For example, Treasury as shareholder may prioritise different objectives from those of the portfolio ministry. Shareholders of privately owned assets focus solely on the financial return of their invested capital.

Strengthening of both the governance arrangements for state owned corporations and the incentives within the NER are needed to ensure declining energy sector productivity does not result in higher electricity prices.

## **2.3 Pursuing cost effective opportunities to deploy time-of-use and/or smart meters**

The roll-out of time-of-use meters should be at the discretion of the customer or its retailer rather than being mandated by governments or distributors

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<sup>11</sup> IPART, *Review of the Productivity Performance of State Owned Corporations*, July 2010.

In recent years Australia has experienced declining utilisation of its energy infrastructure. This is driven by the growth in peak demand outpacing the growth in underlying energy consumption. Expenditure is being incurred to provide additional generation and network capacity, with this capacity being used for only a fraction of the time. This additional expenditure is reflected in generation and network prices, and ultimately in electricity bills for customers.

There are opportunities for improved utilisation of energy infrastructure including minimising peak demand through **cost effective** deployment of time-of-use and/or smart meters.

Currently meters form part of the regulatory asset base of the distributors, such that the costs of the meters and installation are recovered from all electricity customers through higher network prices.<sup>12</sup> Under the current NER the customer base will pay for the meter replacement costs regardless of the benefits that they deliver in terms of reduced network expenditure. As such there is little financial risk to the network businesses.<sup>13</sup>

We support the take-up of time-of-use and/or smart meters through a competitive market and at the discretion of the customer or its retailer. Customer initiated uptake of time-of-use meters (with the customer potentially paying for the installation of the meter) could target those customers with the greatest willingness or ability to shift their demand. It is likely that individual customers will be in a better position to gauge their ability to respond to price signals than government. However distributors may be well placed to propose the installation of time-of-use meters for specific customers or retailers, but we still consider that take up should be at the discretion of the customers or retailers. Retailers may also be in a position to manage the demand of their overall customer base through programstargeted at individual customers or groups of customers.

Importantly, improving the productivity of the electricity sector requires the benefits from deploying time-of-use and/or smart meters to exceed the costs.

## 2.4 Network reliability standards

At present reliability standards are determined by each jurisdiction and are typically set out in the network operators' licence conditions. These standards prescribe the minimum required levels of service provision and are a key driver of the level of expenditure, particularly capital expenditure, required on the distribution network.

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<sup>12</sup> The experience in Victorian may represent an example whereby productivity has declined as a result of the Government mandated roll out of time-of-use meters given that the costs have been incurred (in terms of the costs of the meters and installation) yet the benefits in the form of reduced network expenditure are still to be realised.

<sup>13</sup> Under the current NER, the distributors would fund any expenditure greater than the regulated allowances during the regulatory period but earn a return on and of capital from the beginning of the next regulatory period until the meter is fully depreciated, regardless of the efficiency of that expenditure.

All else being equal, the higher the standards for reliability and customer service, the higher electricity prices paid by all customers.

#### **2.4.1 The quality of network standards – their reliability and security – should reflect what customers value and are willing to pay for**

Governments should have regard to customers' willingness to pay and conduct a cost-benefit analysis before altering reliability standards.

The reliability standards set out in the network operators' licence conditions reflect judgements made by Government (on the community's behalf) of the level of service (and the associated cost) valued by the community.

Given the increasing importance of access to a safe and reliable supply of electricity, it is likely that the community's expectations in relation to reliability and service provision will increase over time. However, higher standards come at a cost in terms of increasing the expenditure required on the network. Therefore in making this judgement Government needs to consider the trade-offs between the:

- ▼ benefits from higher standards in terms of reduced 'blackouts' and the benefits to the wider community from a more reliable supply of electricity, and the
- ▼ costs associated with these standards and the resulting impact on individuals in terms of affordability and the productivity and wealth of the community.

In determining these standards governments should consult with electricity consumers - both business and residential customers - to understand the different benefits they enjoy from a more reliable supply of electricity and the extent they would be willing to pay for these benefits through higher energy prices.

#### **2.4.2 Standards should be set using a probabilistic approach**

To facilitate the least-cost delivery of a specified standard, distribution network reliability standards should be expressed on a probabilistic basis.

Currently the standards in NSW include requirements on how distribution businesses must plan their networks in addition to specifying the reliability standards (a 'deterministic' approach). The NSW planning requirements include matters such as the level of redundancy that should be provided for in different parts of the network. In contrast other jurisdictions set their standards by reference to performance of the network, including the duration and number of outages (a 'probabilistic' approach). This approach focuses on specifying the outputs that distribution network businesses are required to meet.

The AEMC engaged the Brattle Group to examine the approach to setting electricity distribution reliability standards and outcomes in Australia, New Zealand, Great Britain, Italy, the Netherlands and the US. The Brattle Group found that:

Whilst the Australian approach to regulating distribution reliability is generally very much in line with other jurisdictions ... NSW appears unique in applying input standards that are driving investment decisions<sup>14</sup>

We are concerned that the deterministic approach that is applied in NSW does not necessarily allow the specified performance of the distribution network at least cost. It is imperative that any regulatory settings encourage the objectives to be achieved at least cost to the community. We therefore recommend that reliability standards be specified on a probabilistic basis.

## 2.5 Facilitating efficient investment in embedded generation

The National Electricity Rules and guidelines governing embedded generation should be updated to ensure that:

- small-scale embedded generation is incorporated in the regulatory framework
- embedded generators share the benefits that they deliver to networks through avoided costs, however any additional payments or subsidies for embedded generators should be a matter of government policy.

In our recent review of solar feed-in tariffs we found that at current levels of installation PV has relatively little impact on peak demand and is unlikely to materially reduce **system-wide** distribution network costs. However they may be net benefits that are time and location-specific.<sup>15</sup>

We also considered that the National Electricity Rules and guidelines governing distributors should be updated to ensure that they incorporate small-scale embedded PV generation. This would allow appropriate network benefits (and costs) attributable to PV units to be directed to PV customers, thereby facilitating the efficient deployment of PV (and other distributed generation) on the network.

Importantly, allowing embedded generators to share in any time and location-specific benefit (and costs) that they may provide on the network does not mean providing subsidies (that is, payments in excess of any network benefits created). We consider that the provision of subsidies to reflect wider non-network benefits or as a form of industry assistance should be a matter of government policy. The need for and purpose of a subsidy should be clearly justified, and subsidies should be measured and monitored. We consider that this industry support is best provided transparently from government revenue, rather than through electricity prices given the regressive nature of higher electricity prices.

Currently the National Electricity Rules apply an effective subsidy paid by all electricity customers to embedded generators by allowing them to receive payments

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<sup>14</sup> The Brattle Group, *Approach to setting electricity distribution reliability standards and Outcomes*, January 2012, p 13.

<sup>15</sup> IPART, *Solar Feed-in Tariffs - Final Report*, March 2012.

for avoided use of the network system, avoided network costs.<sup>16</sup> This is regardless of whether these payments bear any resemblance to the actual direct net benefits to the network.<sup>17</sup>

### 3 Improving the arrangements for setting network prices

IPART intends to propose that the National Electricity Rules be changed to set network prices earlier and with greater consultation with customers and retailers.

Around half of a customer's retail bill reflects underlying network costs. Currently, retail prices tend to reflect the structure of the underlying network price. For example, if the network price has a fixed (service availability) component and a variable (per kWh) component, then the applicable retail price tends to have the same structure after adding the other relevant costs.

Under the regulatory framework, network companies have discretion to set their prices (and components) as long as they meet the average price change and any other pricing principle requirements. The practical outcome is that networks have a high level of discretion in setting prices. This means that they could significantly change the structure and charges to classes of customers from year-to-year.<sup>18</sup>

Currently, the National Electricity Rules require distributors to post network prices on their website by early June for a 1 July implementation, where possible. This timing leaves little time for regulated retail prices to be proposed and approved by jurisdictional regulators and then even less time for the retailers to develop their market offers (usually having regard to the regulated retail prices).

This issue was raised by the AEMC in its Directions Paper, but was identified as being outside the scope of that review. We intend to submit a rule change proposal to the AEMC for network prices to be set earlier with greater consultation with customers and retailers. We will consult with the AER, distributors and retailers before submitting the rule change proposal.

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<sup>16</sup> National Electricity Rules, Chapters 5 and 6.

<sup>17</sup> For example, the Energy Networks Association (ENA) notes that "Predetermined rebates for embedded generators risk cross subsidising one segment of the economy with no countervailing benefit and to the exclusion of other, more cost effective demand side options." ENA, *Embedded Generation: ENA Policy Framework Discussion Paper*, November 2008, p2 2.

<sup>18</sup> Within the constraints imposed by the NER.



## 4 Improving the cost effectiveness of green energy schemes

Once the carbon price is operational, many of the existing mitigation programs ('green schemes') at the state and territory levels will need to be redesigned and some may become redundant.<sup>19</sup> For example, the NSW Government committed to cease its GGAS scheme if a carbon price was introduced.

We support the Commonwealth Government's commitment to review the current set of 'green schemes', particularly those that are not complementary to the carbon price. IPART has previously established a framework for the required analysis.<sup>20</sup>

In addition to emission reductions objectives many of the existing green schemes have additional objectives ranging from industry assistance through to addressing social hardship. This has implications for the efficiency and cost effectiveness of the schemes in achieving emissions reductions. Given that reducing emissions in the electricity sector and in the wider economy comes at a cost with implications for electricity prices, government budgets and ultimately economic growth, it is important that emissions reduction is done in the most efficient and cost-effective way.

We are concerned that many of these green schemes may be adding unnecessary costs to energy bills without necessarily addressing any market failure that will not be addressed by a carbon price and may be creating investment-distorting complexities in energy markets.

Further, we are concerned that many green schemes are currently funded through electricity prices and therefore do not face the same scrutiny as schemes funded directly through government budgets. We consider that all subsidies should be actively monitored to ensure that they are efficient, effective and delivering value for money.

### 4.1 Reviewing and improving the Renewable Energy Target scheme

With the introduction of a carbon price the need for a Renewable Energy Target (RET) scheme should be reviewed. If it is retained the Commonwealth Government should improve the design of the RET.

The RET was introduced in 2001 and amended in 2009 and is designed to ensure that 20% of Australia's electricity supply will come from renewable sources by 2020.<sup>21</sup> In

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<sup>19</sup> As the Wilkins Report noted: "Currently, there are in excess of 200 relevant programs around Australia in the States and Territories. Many have the potential to interfere with an emissions trading scheme. The States and Territories, over a decade, filled the policy vacuum left by the Commonwealth Government." Mr Roger Wilkins AO, *Strategic review of Australian Government Climate Change Programs*, 31 July 2008, p 2.

<sup>20</sup> IPART, *Final Report – Review of NSW Climate Change Mitigation Measures*, July 2009.

January 2011 the RET was split into 2 parts—the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES).

Both the LRET and SRES are intended to reduce emissions of greenhouse gases in the electricity sector and encourage the additional generation of electricity from renewable sources.<sup>22</sup> In terms of reducing emission of greenhouse gases, the RET is not complementary to the carbon price.

The costs associated with complying with the RET have been a major driver of increasing electricity prices, particularly from 1 July 2011. In 2012 the costs of complying with the RET will increase further such that electricity customers will be paying for the costs of generating renewable energy equivalent to 33.1% of eligible sales under the LRET and the SRES.<sup>23</sup> This is significantly higher than was forecast when the RET scheme was designed.

Importantly the electricity actually generated from renewable sources will be significantly lower than what electricity customers are paying for. That is, while customers are paying for over 33% of electricity to be sourced from renewable technologies in 2012, the proportion of electricity actually being generated by renewable technologies under the mandatory schemes is likely to be around 10%.<sup>24</sup> This disconnect primarily results from the design of the SRES which allows households to generate renewable energy certificates upfront (rather than over the life of the solar panel) and the Solar Credits Multiplier which allowed households to create up to 5 times as many certificates as actual renewable energy generated.

#### 4.1.1 Improving design issues common to the SRES and LRET

The Commonwealth Government should consider the cost effectiveness of the RET, the distributional impacts, and the administration of the scheme in terms of the legislated timing of the release of the binding targets.

We have concerns over:

- ▼ The cost effectiveness of the scheme, particularly the SRES. While the SRES may be consistent with supporting the uptake of small scale low emission technologies, it is not achieving emissions reductions or even renewable energy production at least cost. In contrast, it is promoting very expensive emissions abatement and relatively expensive renewable energy production, which has a considerable impact on retail prices.

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<sup>21</sup> The RET expands on the previous Mandatory Renewable Energy Target (MRET), which began in 2001.

<sup>22</sup> *Renewable Energy (Electricity) Act 2000* (Cth), Section 3.

<sup>23</sup> The Renewable Power Percentage for 2012 is 9.15% and the Small Scale Technology Percentage is 23.96%. Source: <http://www.orer.gov.au/Latest-Updates/2012/February/3>

<sup>24</sup> This is calculated using the RPP of 9.15% plus the STP of 23.96% (adjusted for the upfront deeming of certificates and the solar credits multiplier which reduces it to less than 1%).

- ▼ Distributional impacts of the RET, given that it represents a significant transfer of costs from renewable generators (including households installing solar panels) to electricity customers. Industry assistance is best provided transparently from government revenue, rather than through electricity prices given the regressive nature of higher electricity prices.
- ▼ The administration of the scheme, specifically the legislated timing of the release of the binding target – the Office of the Renewable Energy Regulator (ORER) is required to release the RPP (the target for the LRET) and the binding STP (the target for the SRES) for a year by 31 March of that year. This means that a quarter of the year has passed (and customers have been billed) before the retailer knows the costs of meeting its obligations under the RET and SRES.

#### 4.1.2 Improving design issues specific to the SRES

The Commonwealth Government should:

- eliminate the Solar Credits Multiplier from the Small-scale Renewable Energy Scheme
- cap the Small-scale Renewable Energy Scheme
- review the upfront deeming of certificates in the Small-scale Renewable Energy Scheme.

The design of the SRES, combined with generous State and Territory Government financial incentives, has put the annual costs of complying with the SRES at almost 3 times that of the LRET. The costs of complying with the SRES were a major driver of the retail electricity price increase from 1 July 2011.

Our specific concerns about the SRES are:

- ▼ The Solar Credits Multiplier – the solar credits multiplier allows for the creation of ‘phantom’ renewable energy certificates. Under the Renewable Energy Target scheme, 1 certificate should represent 1 MWh of renewable energy generated. However, with the Solar Credits Multiplier, 3 certificates can currently be created for every 1MWh of small-scale solar electricity generated. The retailers then have an obligation to buy these ‘phantom’ certificates and pass on these costs to customers. This means that customers need to pay for renewable energy that was not generated.
- ▼ The uncapped nature of the SRES – under the SRES, retailers will need to buy all certificates created<sup>25</sup> and there is no limit on the number of certificates that can be created. In 2012 retailers will need to buy certificates for around 33.1% of the electricity sold in Australia, yet the scheme’s target is 20% by 2020.
- ▼ The upfront deeming of certificates – when a system is installed, certificates can be created up-front for 15 years of deemed renewable energy. While this makes the

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<sup>25</sup> ORER aims to set the STP to clear the market of certificates.

scheme simple in its administration, it introduces a disconnect between the timing of creating certificates and the generation of renewable energy, with current electricity customers paying today for renewable energy deemed to be generated over the next 15 years.

#### 4.1.3 Improving design issues specific to the LRET

The Commonwealth Government should ensure that the type of generation eligible to create certificates under the LRET is consistent with the renewable energy objectives of the scheme.

On 7 February 2012 Commonwealth legislation was passed to allow waste coal mine generators to create Large Scale Certificates<sup>26</sup> from 1 July 2012.<sup>27</sup> RET targets were increased to ensure that waste coal mine generators do not contribute to the 20% target for renewables in 2020 and displace genuine renewable generation.

This has the effect of further contributing to electricity prices increases for small and medium sized electricity customers. The Commonwealth Government should consider whether including waste coal mine generators in the LRET is consistent with the renewable energy objectives.

## 4.2 Energy efficiency schemes

The national energy efficiency scheme should be designed to encourage lowest cost energy efficiency measures.

Energy efficiency projects offer a low cost means of achieving reductions in carbon emissions. While a carbon price will encourage additional energy efficiency, the Commonwealth Government has indicated that it intends to develop a national energy efficiency scheme.

The risk is that poorly designed energy efficiency schemes can add to total energy costs if they are costly to administer, poorly targeted, or encourage high-cost energy efficiency options.

The NSW Energy Savings Scheme (ESS) is a tradeable certificate scheme<sup>28</sup>. The ESS is broadly based and recognises a wide range of activities. This helps ensure the most cost-effective options are pursued and costs of administration are minimised.

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<sup>26</sup> *Renewable Energy (Electricity) Amendment Act 2009* (Cth), which amended the *Renewable Energy (Electricity) Act 2000*.

<sup>27</sup> *Renewable Energy (Electricity) Amendment Regulations 2011* (Cth) (No.6).

<sup>28</sup> 1 The NSW scheme operates in the residential, commercial and industrial sectors and uses a diverse range of calculation methodologies. Validation of energy savings are done by independent 3rd party auditors and are paid for by the participants. This helps ensure the most cost-effective options are pursued and costs of administration are minimised. In 2010 we commissioned a consultant, Databuild, to review of the costs and benefits of the ESS. In summary Databuild found that the average total costs for each ESC created was \$15 while the value of the energy saved was conservatively estimated at \$40.

## 5 Electricity affordability and customer protection

There are a number of different aspects to electricity affordability and customer protection. As the White Paper notes, it is important to clearly distinguish between retail price regulation as a form of customer protection and the provision of government assistance to support vulnerable customers.

Retail price regulation exists to ‘protect’ customers from retailers exerting market power (in the form of higher prices, or lower service quality) where competition does not exist. Retail price regulation is not a substitute for the provision of assistance to support vulnerable customers.

In the past many jurisdictions employed retail price regulation as a measure to protect customers from ‘price shocks’. Over the past 5 years retail price regulation has evolved and in NSW (and some other jurisdictions) it no longer protects customers from price shocks or the unwinding of historical cross-subsidies. Rather, in NSW, retail price regulation actively promotes individual prices being set at cost reflective levels. As such we support the White Paper’s theme that it is not in the long term interest of customers for prices to be held below the **efficient** cost of supply and we support the removal of retail price regulation where there is competition.

### 5.1 Retail price regulation

We continue to support the removal of price regulation in markets where competition exists. Retail competition offers the best protection to customers that retail prices will not materially exceed the efficient cost of supply.

We note that in 2012 the Australian Energy Market Commission (AEMC) is scheduled to examine the competitiveness of the NSW market and provide advice to the NSW Government about whether or not to deregulate electricity prices. Ultimately, the NSW Government will decide whether or not to continue with price regulation.

While retail price regulation remains, it is important that regulators facilitate the development of the competitive market while protecting customers from abuses of market power. Therefore, regulators should ensure that their frameworks support evolving competition.

To assist governments in making the decision to remove retail price regulation, we recommend reviewing the transition to deregulated markets in Victoria to guide other jurisdictions in their transition away from retail price regulation. For example, the government should examine the adequacy, effectiveness and efficiency of the regulatory arrangements that were put in place in Victoria at the time price regulation was removed.

We support the White Paper's position that frameworks for retail price regulation should not impose additional risks on retailers resulting from the introduction of the carbon price. In this context, IPART has developed a regulatory framework that is aimed at minimising the risks to retailers associated with the introduction of the carbon price as well as other green schemes.

### **5.1.1 Improving customer information about energy pricing and market reforms**

Retailers, regulators and governments should improve the availability, simplicity and clarity of customer information about energy pricing and market reforms to facilitate competition.

We recommend consideration of more light-handed regulatory frameworks, including price monitoring, during the transition to a deregulated market.

We recommend that retailers, regulators and governments improve the information available to customers, in terms of the simplicity and clarity of information presented to customers about market offers to allow them to 'shop around' effectively. We also support the Commonwealth Government's commitment to improve the availability of energy price information to customers and public understanding of the implications of energy market reforms.<sup>29</sup> Our experience is that customers have limited understanding of the cost components of their energy bills.

We do not consider that retail price regulation offers protection against price shocks or solves energy affordability problems. Nevertheless, it could be the case that the State Governments rely on retail price regulation to enhance customer confidence around the justification for price increases. To the extent that the governments can work together to address information and affordability problems, this could lessen community concerns about electricity prices and reduce the reliance on retail price regulation for these purposes. Further, Governments could consider adopting more light-handed regulatory frameworks including a price monitoring regime in the transition to a deregulated market.

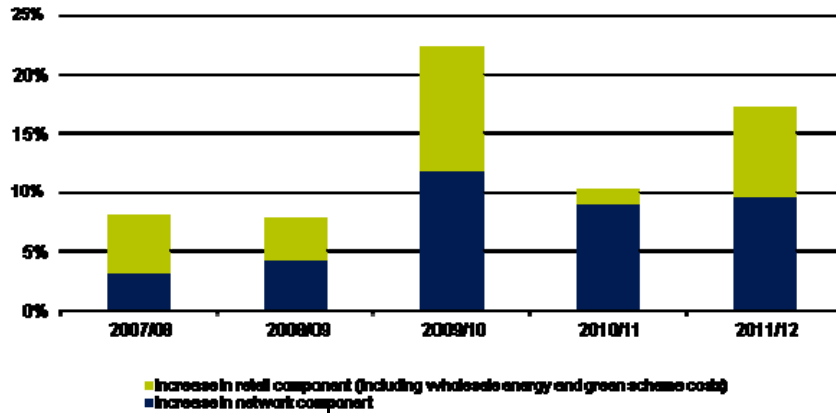
## **5.2 Rapidly increasing electricity prices and customer bills**

Regulated electricity prices have increased by 56% in real terms over the past 5 years in NSW. As Figure 5.1 demonstrates, the majority of the increase in regulated electricity prices for small customers in NSW since 2007 has been driven by increasing network costs. The network cost component of retail electricity bills has increased by 72% in real terms over the past 5 years, with the largest increases over the last 3 years.

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<sup>29</sup> Commonwealth Government, *Draft Energy White Paper*, December 2011, p 166.

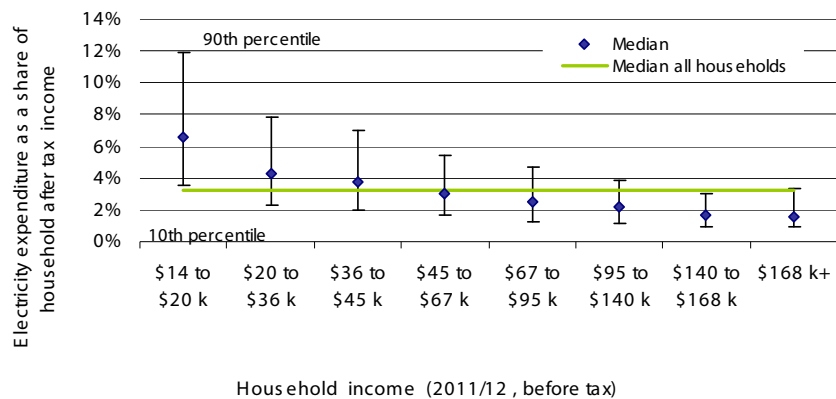
**Figure 5.1 Average increases in NSW electricity prices for small retail customers 2007/08 to 2011/12 (\$ nominal)**



In our recent reviews of regulated retail electricity prices we have used the proportion of household disposable income spent on electricity to assess how these prices increases have affected electricity affordability. Our analysis indicates that, for Sydney and surrounding areas, the vast majority of household electricity bills represent 4% or less of a household’s disposable income. However, affordability is becoming a key concern for some vulnerable groups of customers.

For example, while households with disposable incomes below \$20,000 a year spend on average just over 6% of their income on electricity, there is a large variation in how much of their disposable income they are paying for electricity bills. Some low income but high consumption households are paying more than 10% of their income on electricity (see Figure 5.2).

**Figure 5.2 Electricity bills as a share of disposable income, Sydney and surrounding areas, 2011/12**



**Note:** The income bands are before tax income in 2011/12. The income for the middle of each band is used to calculate disposable income. Disposable income as a share of household income is derived from ABS household income data for 2007/08. Incomes for all bands increase by 3.5% in 2011/12. Distributions are presented without weighting survey responses.  
**Data source:** IPART Household Surveys, 2010 and 2008.

Our analysis for country NSW where recent electricity price increases have been more significant shows that around 8% of households spend more than 10% of their disposable income on electricity.

### 5.3 Customer assistance measures

Energy affordability measures should be reviewed to ensure they are complementary, comprehensive and well-targeted.

Addressing the affordability problem requires effective and cost efficient measures that target the customers most in need of assistance. Governments have a limited budget for customer assistance given the numerous demands across the range of government expenditure priorities. Effective targeting of customer assistance is designed to ensure that this limited budget achieves the greatest results.

Historically both State and Commonwealth Governments have provided financial assistance to households. This has primarily been in the form of income support, including the pension supplement, utilities allowance, energy rebates and emergency assistance. To a lesser extent, governments have also provided funding to assist households with energy efficiency.

The segmented nature of the available information and delivery of customer assistance may make it difficult to identify a vulnerable household that may be experiencing affordability problems and to offer the most effective and cost efficient assistance measures – that is, the appropriate mixture of emergency assistance, ongoing income support and energy efficiency measures for individual households. Effectively targeting households is necessary to achieve ‘value for money’ out of the limited government assistance funding available. Therefore we consider it important that both State and Commonwealth Governments, as well as energy retailers and community organisations, play a role in managing affordability for vulnerable households. This will require funding from both State and Commonwealth Governments, delivered in a coordinated manner.

Improving the effectiveness and efficiency of customer assistance is not necessarily a case of ‘throwing more money at the problem’. Value for money is achieved when the appropriate mixture of emergency assistance, ongoing income support and energy efficiency measures reaches customers most in need. There must be recognition that households will require different forms of assistance depending on their circumstances. For example, emergency assistance (such as EAPA vouchers) may not be sufficient for those households with ongoing affordability issues arising from high energy consumption associated with old and inefficient appliances.

Effective assistance measures are essential regardless of whether there is retail price regulation or a competitive retail market.



## Ensuring that the package of measures is targeted at the customers most in need of assistance

Our customer impact analysis for NSW illustrates that the most vulnerable customers are those households that not only have low incomes but also have high levels of energy consumption. Some of these households may find it very difficult to reduce consumption due to factors such as a high number of household members, inefficient appliances and low quality housing. They are the least able to accommodate rising electricity bills within their household budget, and most likely to face genuine financial hardship as a result of the price increases. Our analysis also identifies that customers in a number of rural areas, including north-western NSW, spend a large proportion of their income on electricity.

In comparison, our analysis shows that most households in the Sydney and surrounding regions earn more than \$45,000 per annum, and for more than 90% of these households electricity bills make up less than 6% of their disposable income. For almost all higher income households (those earning \$140,000 or more per annum) these bills make up less than 4% of their disposable income.

However, we recognise that some low income households with low consumption may also experience financial hardship, and it is important to ensure that these households do not miss out on assistance.

