

## Becoming an Electricity Retailer

*RDANI is investigating renewable energy options in our region, with the view to improving business competitiveness through lower energy costs, minimising the carbon tax and capturing the community benefits of local electricity production. During this investigation, the option of establishing a local energy retailer to supply renewable energy and better serve the community has emerged.*

### Why Establish a Local Renewable Energy Retailer?

Under our current system, energy (including renewable energy) can only be sold to customers on the grid through a licenced retailer.

A renewable energy generator in our region who wishes to supply their electricity to customers must consider four issues:

1. **Grid access charges.** Because the poles and wires are owned by Essential Energy (a NSW Government entity), energy suppliers including renewables will be charged for network use when putting their electricity into the grid and distributing it to customers.
2. **Sale price.** The price a renewable generator gets for the electricity produced is likely to be less than 10 cents per kWh (compared to the retail price of more than 30 cents per kWh). It is made up of Renewable Energy Certificates (RECs) for each MWh generated, plus a negotiated **power purchase agreement** with a retailer.
3. **Technical aspects.** Is their level of electricity production and their proximity to the existing grid suitable? High levels of power output may need to be transformed via an (expensive) sub-station before it can be fed into a local grid. Higher capacity wires (66 or 132 kV as opposed to typical local 11-22 kV) may be required. What is the distance of new line



needed to access the grid? The costs of these requirements may be prohibitive.

4. **Retail.** Under our current system, the previous three points are virtually moot because **generators cannot supply electricity to customers without becoming a licenced retailer, or striking a deal with an existing retailer** to take their electricity and on-sell it. The system does not provide much incentive for small renewable energy generators to supply their electricity into the grid.

**The low electricity purchase price issue** may be overcome if local entities with less of a 'profit imperative' and a good regional reputation set up as retailers and supply electricity to local businesses and households.

Such a retailer could write back to back supply and take off contracts but would still be exposed to market spikes and thus need the normal suite of hedging contracts or insurance.

Local retailers could source their electricity from locally generated renewable supplies (see the RDANI paper on energy from biogas), and perhaps also buy it in the wholesale market (the National Electricity Market).

Electricity from biogas can be produced at a cost of around **7-10 cents/kWh**, which implies scope for a local retailer with community-based, rather than pure profit-based aspirations to provide electricity to the local community below the current retail price of 31.29 cents/kWh.

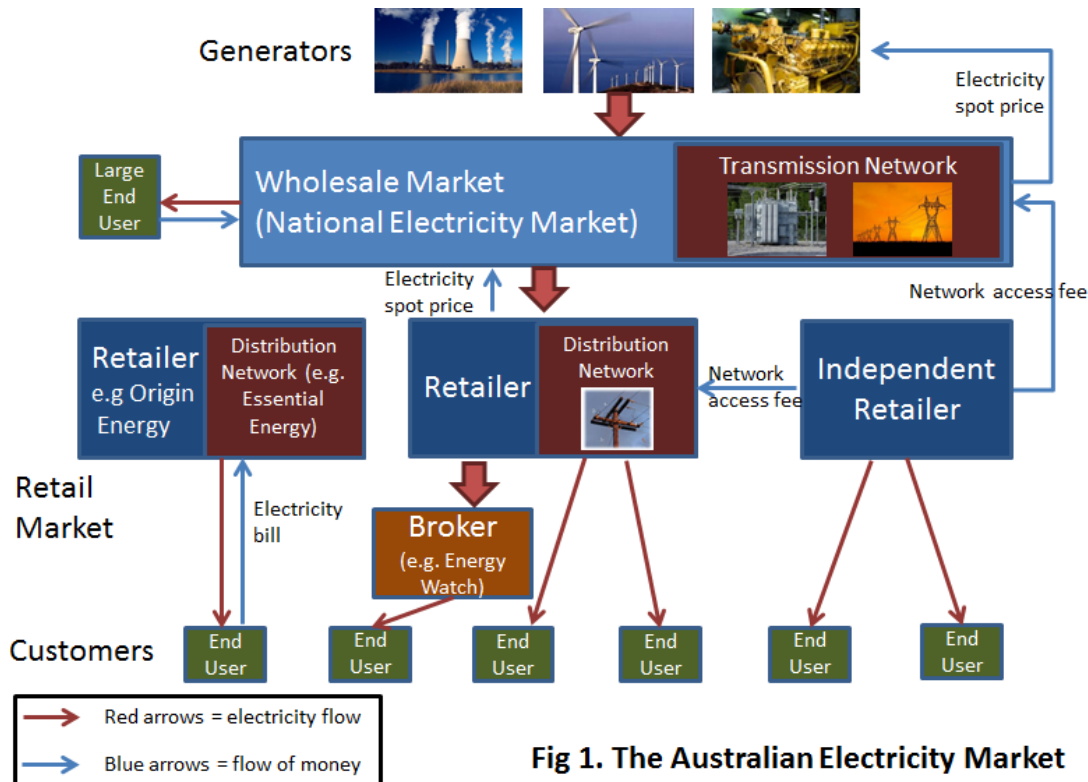
**The grid access issue** would then require the local retailer to negotiate a satisfactory access fee with Essential Energy at a level which allows the retailer to remain viable and deliver electricity to customers at a competitive price. Note that **Essential Energy can only grant grid access to licenced retailers**, and the process of obtaining a licence may be prohibitive for small operators.

Allowing networks to reduce charges to generators where electricity is produced and consumed locally **needs a change in the rules**, and such a change is currently being debated

In Germany, grid infrastructure is not owned by a single government entity, but by many private entities. Some renewable energy generators also own their own distribution networks, and perform the retail function.

### What Does the Current Electricity Market Look Like?

Australia is moving toward an ‘unbundled full competition’ model, where generation, transmission and distribution functions are separated (see Fig 1).



**Fig 1. The Australian Electricity Market**

In Southern and Eastern Australia (NSW, Vic, Qld, SA, Tas, ACT) a National Electricity Market (NEM) has been established with the following features:

- 5,000km distance span;

- 46,000 MW of installed generation;
- \$10 billion of electricity traded annually;
- More than 8 million end-use customers.

The NEM operates under a set of national rules and market development activities set out by the Australian Energy Commission (AEMC).

The Australian Energy Regulator (AER) regulates elements of the wholesale electricity market including the transmission and distribution network charges. Retail energy markets have been regulated by state governments, however from 1 July 2012, the AER will start to take on the retail regulation function. This is part of the transition to national regulation of the energy market.



In NSW, the Independent Pricing and Regulatory Tribunal (IPART) has been responsible for the regulation and licencing of electricity retailers.

In the Northern Inland NSW market, the previously State owned Country Energy retail function was purchased by private company Origin Energy. Operation of the poles and wires (i.e. electricity distribution) is still undertaken by a State owned entity, Essential Energy (following a name change from Country Energy).

Note that other retailers can also tout for business within our region. There are currently 29 licenced electricity retailers in Australia.

The **spot price for electricity is extremely volatile**, and can vary enormously according to demand from negative 100 cents/kWh to a capped maximum of 1,250 cents/kWh, though the average in 2012 is around 5-9 cents/kWh. The prices in the NEM are established every 5 minutes, and the spot price determined as the average price every half-hour. Retailers manage this price volatility on behalf of their customers through price hedging activities (similar to the operation of the Futures Market), and also via vertical integration which means

some retailers also own generating businesses, so profits in one business can be used to supplement losses in the other.

**The current retail electricity market is essentially an oligopoly, a market with a relatively small number of electricity suppliers. Small generators/retailers may find it difficult to establish and access the grid due to the licencing costs/requirements, and possibly the physical/technical costs of feeding their electricity into the grid.**

Even so since 1995 the number of retailers in NSW has increased from 3 to 14 and is growing all the time.

## Applying to Become an Electricity Retailer

Under the IPART licencing application process (which is likely to be similar once the AER take over retail regulation), an applicant must supply the following information/assurances:

- Applicant legal identity;
- Contact details;
- Management Board details;
- Details of the customer type to be supplied (small or large retail, or both);
- Timing of proposed entry into the market;
- Proof the applicant is a fit and proper entity under the Corporations Act 2001;
- Evidence they can securely finance the activities to be performed under the licence over the following 12 months;
- Evidence of technical and operational capacity to meet licencing obligations, and that customer contracts meet statutory obligations;
- Details of arrangements with companies which supply services related to licencing obligations;

- Details of experience in the energy sector or other relevant industry;
- Details of energy licences held in other jurisdictions.

Each licence covers a designated supply district.

## Electricity Retailer Obligations

In NSW, IPART requires regular reporting by electricity retailers to ensure they comply with regulations and the NSW Electricity Supply Act 1995. This includes:

- 6 monthly reporting to IPART for new retailers;
- 12 monthly reporting for other retailers;
- Must report any compliance breaches;
- Report operating statistics (customers numbers, telephone enquiry services, supply discontinues/re-continues, complaints, marketing activities, customer transfers, security deposits held, payment methods, electricity sales volumes);
- Audits are conducted by IPART;
- Standard retail affairs must be kept separate from other activities including electricity supply;
- Maintain internal systems to comply with licence requirements.

## Electricity Retail Licence fees

- Application fee = \$1,500;
- Annual licence fee = \$10,000 plus \$4,000 per 1% of market share.

## Licence Assessment Process

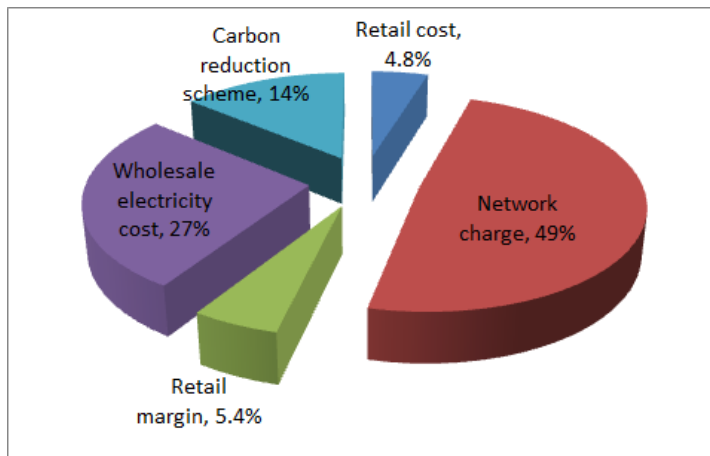
In NSW under the IPART process, applications are subject to public consultation on behalf of the Minister for Energy. A recommendation is then made to the Minister. This process can take 3-6 months.

## What Costs Does an Electricity Retailer Face?

There are four broad categories of costs:

1. Retail operation costs – meter reading, billing, marketing etc.
2. Network costs – the costs of their transmission networks which take electricity directly from generators on high-voltage lines, and distribution costs which are the costs of lower-voltage lines delivering electricity to customers. For a small local renewables generator, this may require costly transformers and line upgrades if they wish to supply into the customer grid;
3. Wholesale electricity costs of electricity purchased in the NEM;
4. Carbon tax and green energy scheme related costs.

In 2012-13, it is expected that these costs for mainstream retailers in NSW will be as set out in Fig 2:



**Fig 2. Components of NSW Retail Electricity Prices in 2012-13 (IPART 2010)**

## Electricity Retail Profits

State regulators impose limits on the prices electricity retailers can charge households and small businesses. Retailers must submit to the regulator an estimate of their expected costs for the coming period. The

regulator sets the price the retailer can charge so as to cover these costs plus a ‘reasonable margin’ which ranges from 3 to 10% depending on the state.

It is estimated that electricity retailers make a gross margin of around \$150-200 per customer.

**In NSW in 2012-13, the electricity retailer profit margin is expected to be 5.4%.**



## Can Local Electricity Retailing Work?

Perhaps, however there are several issues that will determine whether or not setting up a local electricity retailer is financially and technically possible:

1. Can the entity meet the IPART/AER technical, financial, business systems and reporting requirements?
2. At what price can they source electricity to supply to customers? Can they source it more cheaply from local renewable energy generators (e.g. a biogas plant) than from the wholesale market (NEM)?
3. What price will they have to pay for grid access to distribute the electricity to customers?
4. Can they provide electricity at a price to local customers that will allow them to gain sufficient market share?
5. Should they invest in their own distribution system, if grid access charges are prohibitive?
6. Does local government have the systems in place to become a retailer, as they once were under the old County Council system?

## A New Model to Overcome The Small Renewable Retailer Issue

A new model known as ‘Virtual Net Metering’ has been proposed to allow smaller renewable electricity generators/retailers to supply electricity to local communities. This model has the following features:

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- A new 'second tier' class of retail licence is established;
  - Supply is only local, so customers/the retailer are not benefitting from distant grid infrastructure without making a contribution to its up-keep;
  - The generator and/or retailer pays a lower local transport charge to the local grid owner (Essential Energy);
  - The renewable energy supply should not be a large portion of network capacity, else upstream augmentation of the network may be required which is inequitable if the renewable generator is paying a discounted grid access charge;
  - A renewable supplier could however augment the network at their own cost if required;
  - Such a system would encourage renewable community-supply generation and retail activity.