Flexible Electricity Pricing: Opportunities for Customers

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At its simplest, flexible pricing involves charging different rates for electricity at different times of the day. Flexible pricing seeks to provide customers with more choice and control over their electricity usage and electricity bills. It gives customers incentives to use electricity at times when there is less demand for electricity, thereby reducing the need for expensive energy infrastructure upgrades – a cost that is otherwise passed on to all customers.

Flexible pricing is not new. One early example of flexible pricing is the Economy 7 tariff, which was introduced in England and Wales in 1978 as a new off-peak tariff. It offers cheaper electricity for seven hours at night. At the time of its introduction, the night rate was said to be 20% cheaper than most night-time tariffs that were available at that time. The Economy 7 tariff is still in use today, even though the England and Wales electricity supply industry has gone through significant changes in the intervening 35 years, including privatisation; restructuring to separate generation, transmission, retailing and distribution functions; changes to the fuel mix used in generation; the creation of a wholesale market; and retail competition.

To support the tariff, a two-register Economy 7 meter was required – one to register day usage, and one to register usage during the seven hours when the night rate would apply. Most meters included a time switch to switch between the meter registers; in some regions radio tele-switching was deployed, based on data transmitted on a BBC radio signal frequency. Nowadays, interval meters can record the usage in the appropriate time periods to support the Economy 7 tariff, without switching between meter registers.

In Victoria, the term 'flexible pricing' is being reserved to describe new tariffs that are now being implemented. These supplement the many existing Victorian tariffs which price electricity differently at different times of day or in different seasons. These include controlled load tariffs; the two-rate 'Winner' tariff; and various small business tariffs. The current market offers from electricity retailers already include a range of such tariff options.

Where a customer has onsite generation such as solar PV, and is paid for net export based on a feed-in tariff, then effectively that customer is also subject to variable pricing: where they would otherwise be paid for net export, their marginal tariff for energy consumption is the feed-in tariff.

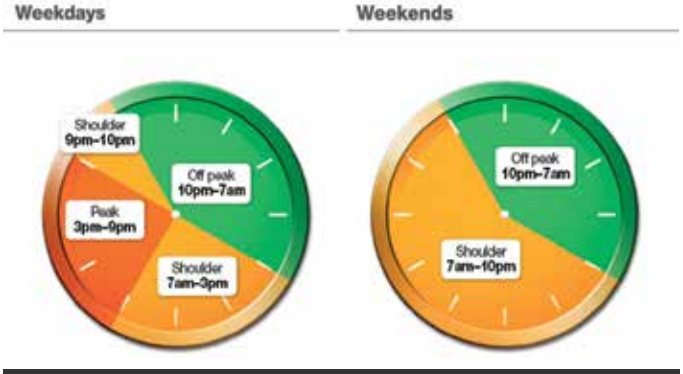

Figure 5: Structure of the Victorian flexible pricing plan
Source: www.switchon.vic.gov.au

For example, a Victorian residential customer on a Premium Feed-In Tariff is paid 66 cents or more for every kWh of electricity that is exported from their eligible solar installation. This means that up to the level of their instantaneous generation, consumption at the premise costs the customer at least 66 cents/kWh, since that is the revenue foregone through consuming the generated electricity rather than exporting it.

In March 2010, the Victorian Government announced a moratorium: the electricity distribution businesses agreed to delay the introduction of new flexible pricing tariffs until more work was done to protect vulnerable Victorians. It was announced that the moratorium would enable a joint assessment between government, industry and consumer groups to:

- ensure that the current best practice customer protection framework for Victorians continued to apply in conjunction with new tariffs;
- consider the need for electricity concessions in light of the costs of the roll-out and potential equity impacts of new tariff arrangements;
- examine options for the introduction of time-of-use pricing arrangements, including a pilot pricing trial to assess impacts;
- review the impact of time-of-use tariffs on Victorian families; and
- investigate the need for an extensive customer education campaign to provide clear information about smart meters, the new tariffs and what this means for Victorians.

In December 2011, the Victorian Government publicised that it had reached an agreement with the electricity distributors to delay the widespread introduction of flexible pricing rates until 2013. This was to ensure that before such offers were widely available, customers would have the right tools in place to make informed energy choices. Tools such as web portals and in-home displays would allow customers to make comparisons of any new pricing options.

Throughout 2012, the Victorian Government was to undertake full assessment of customer impacts and make any necessary changes to customer protections to provide the best opportunity for households and businesses to benefit from flexible pricing.

Peak – the price of electricity is higher during the 'peak', typically on weekday afternoons and evenings, when the demand for electricity is the highest.

Shoulder – the price of electricity is lower than the peak rate and higher than the off-peak rate, when there is a reduced demand for electricity.

Off-peak – the price of electricity is lowest, when the demand for electricity is the lowest.

These new flexible pricing tariffs in Victoria are enabled by smart metering. Uptake is voluntary – residential customers can remain on their current rate or choose to switch to flexible pricing. Households that switch to flexible pricing can switch back to their previous rate structure with the same retailer without incurring an administration fee (until 31 March 2015).

Source: website http://www.switchon.vic.gov.au

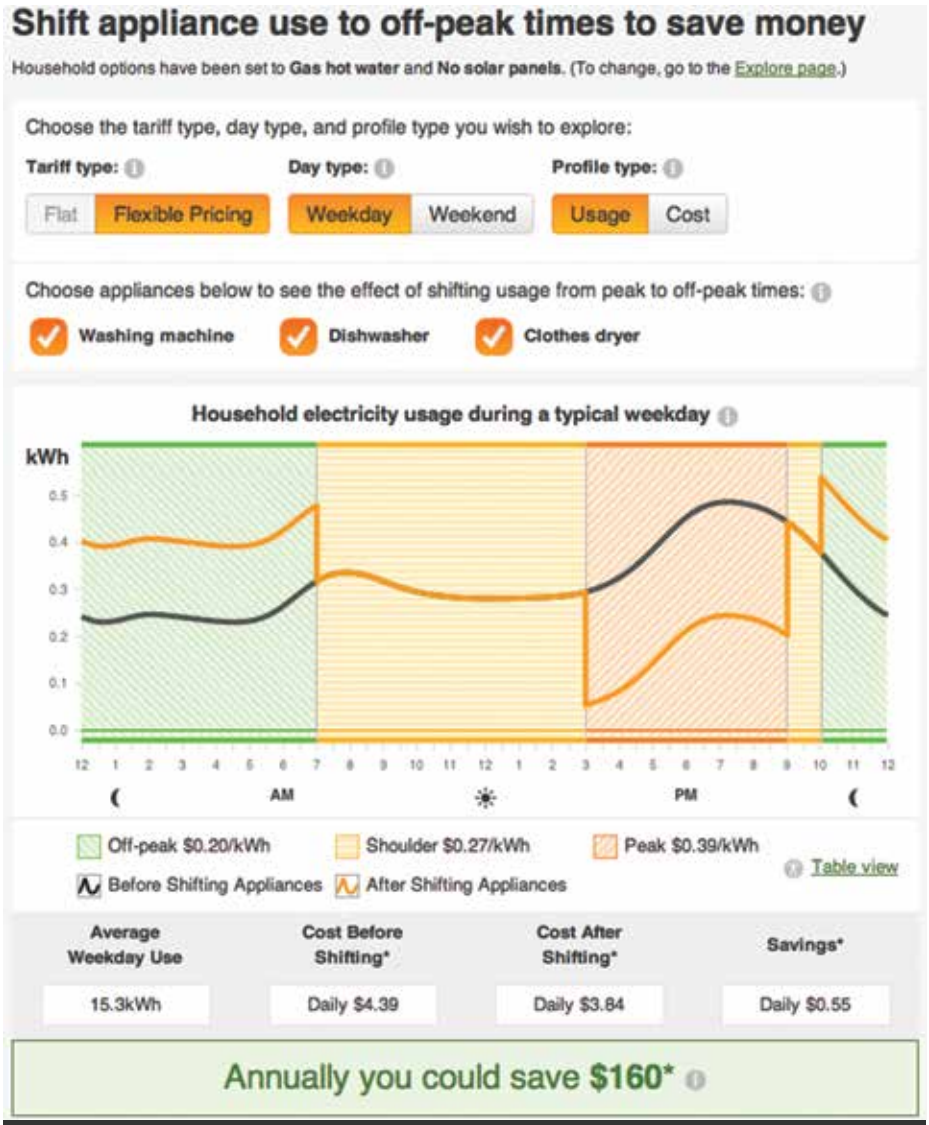

Figure 6: Illustration from the Victorian Government's 'Flexible Pricing Profiler' of potential cost saving from shifting usage of electricity to a lower priced period
Source: www.switchon.vic.gov.au

The Victorian Government undertook a customer impact study, which showed that vulnerable or disadvantaged groups have almost the same potential to benefit from new pricing rates as other electricity customers. If they change their energy usage in response to flexible pricing, most customer groups will benefit, and the impact of flexible pricing will be different for each individual customer.

The Victorian Government has introduced a *Flexible Pricing Profiler* at http://www.switchon.vic.gov.au/tools-and-calculators/flexible-pricing-profiler (Figure 6) where residential customers can:

- learn how the flexible pricing rates (peak, off-peak and shoulder) will work;
- view the typical Victorian household electricity usage over a weekday or weekend day; and
- see how shifting the time of day that major electrical appliances are used can result in saving money.

The *My Power Planner* tool at http://www.switchon.vic.gov.au/tools-and-calculators/my-power-planner further allows residential and small business customers to:

- compare flat and flexible electricity offers;
- create their own 'power profile' based on their typical usage; and
- explore the new flexible pricing options, and see if they could help save money.

Benefits to customers

Besides giving customers the incentives to manage the times at which they use electricity, flexible pricing initiatives may also generate more customer interest and motivation to benefit in other ways, through:

- learning about and beginning to understand their usage – through web portals of retailers and distributors and in-home displays and other means;
- shopping around for competitive offers: with the existing retailer or by contacting another retailer or using a comparison service;
- managing usage through greater understanding and control;
- possibly shifting usage to lower priced periods;
- taking account of running costs when purchasing new appliances; and
- retiring or replacing old appliances.

Some people will find the choices that are available to be confusing. Those of us who are more knowledgeable can help friends, family and neighbours that are vulnerable or not computer literate or not so knowledgeable on energy use, just as we would help them with other aspects of their lives where we have better understanding and expertise.

As The Brattle Group wrote, "Imagine a world in which Joe Smith drives up to the gas pump in his large SUV, fills up his truck, and drives away without paying a dime. The gasoline is not free, but Smith won't know how much he purchased or how much he owes until a month later because he has a monthly account with the gas station. When his wife drives up to the pump in the family sedan, she goes through the same procedure; as does their high school senior, who drives up to the pump in her compact coupe. The Smiths get a combined bill a month later and don't know how the charges accumulated. Was it Joe's driving, his wife's driving, or their daughter's driving that accounted for the lion's share of the bill? What makes life even more interesting for the Smiths is that none of their cars have a speedometer or a gas gauge. They get no feedback at all on how to manage their gas bill.

Are the Smiths living in some type of parallel universe? No. If we were to change the gas station to an electric utility in this hypothetical situation, the Smiths are living in the world as we know it today, and as our parents and their parents have known it for the past century. But this may be about to change ..." (*The Impact of Informational Feedback on Energy Consumption: A survey of the experimental evidence*, by Ahmad Faruqui, Sanem Sergici and Ahmed Sharif, May 2009)