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John McLaren  
Chief Advisor, Regulation Branch, Commerce Commission  
By email: [regulation.branch@comcom.govt.nz](mailto:regulation.branch@comcom.govt.nz)

**Cross-submission, Proposed Default Price-Quality Paths for EDBs from 1 April 2015**  
Molly Melhuish. [melhuish@xtra.co.nz](mailto:melhuish@xtra.co.nz), 04 568 4873, 027 230 5911

## **Introduction**

I welcome the opportunity to comment on industry submissions on the Default Price Path 2015. My perspective is well described in the Domestic Energy Users Network's comment on the Electricity Authority's (EA) Framework For Distribution Pricing. (Though DEUN is in recess at present, I remain in regular contact with several of its active members.)

I recognise that the Framework related to price structures, which are the responsibility of the EA rather than price levels regulated by the Commerce Commission (ComCom), However the DEUN perspective relates equally to both – we call for electricity to be affordable and sustainable, and call for consumers to be offered choices which include ability to better control their power bills. It is now distribution pricing which will probably have the greatest impact on power bills over the next few years.

“DEUN ... considers that network pricing is now allowing over-investment in assets (as is the case for generation). The consultation paper does not address preferences of domestic consumers, or impacts of pricing on them. Our preferred solution is for network companies to offer consumers choice between price-responsive tariffs, and flat-charge bundled tariffs based on the postage-stamp principle. DEUN calls for funded research on how current pricing is impacting on domestic consumers, and how adverse impacts might be mitigated. We believe it appropriate to partly fund this through the Electricity Levy, as domestic consumers contribute substantially to it.”<sup>1</sup>

The call for cross-submissions on the inputs to the DPP- from-2015 process is an opportunity to put a domestic-consumer perspective onto the regulation of distribution price levels.

## **Submissions**

The dominant theme of several submissions relates to the price limit, where some lines companies are to have their price rises capped. The price limit is driven mainly by the revenue growth forecast.

- Meridian: Demand forecasts are a crucial input to the revenue growth assumptions – Transpower's and MBIE's forecasts should inform ComCom's model.
- Horizon: “We suggest the Commission has not recognised the impact that localised generation such as solar thermal and solar photovoltaic is having on the electricity use per residential consumer, with historical experience being more compelling than the notion of a potential uptake in electric cars sometime in the future.”
- Network Tasman: We see not the static demand per ICP, but a steady and indeed increasing fall in demand, over a whole decade. This is from “responsiveness to rising

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<sup>1</sup> DEUN Submission, Decision-making and economic framework for distribution pricing methodology review, consultation paper 22 June 2012

delivered electricity prices and an exponential growth of PV installations. We see little reason for this trend not to stay put throughout RCP3”.

- Powerco: “the rate of decline has accelerated. We believe that the consumption trend is mainly being driven by technological advances in appliance efficiency, climatic warming and growth in residential photovoltaic (PV) installations rather than changes in price.”
- “Unison has experienced a trend decline in energy use per consumer in the residential category of around 1% per annum over the past ten years. Per user consumption has declined from 7,600 kWh per annum to 7,000 kWh”
- Wellington Electricity gives a particularly strong criticism, saying the low revenue forecast will reduce its revenue by \$16 million in the current regulatory period, impacting on the ability to serve the customer base, and necessitate short-term decision making.

I agree with these companies in that the Commission’s assumption that demand per ICP will stabilize is at odds with recent experience nationwide – demand is observably falling everywhere, with no indication it will stabilize. I think Powerco is partly right that technological improvements are driving the consumption trend, but I think changes in price are also important.

I think price response in the market clearly segments in two – consumers who can afford to invest or are willing to change their behaviour, to reduce the impact of price rises, and consumers who are sufficiently budget-constrained that they simply use less electricity than they need – turning thermostats down, or turning heaters off entirely.

I agree that technical improvement is also driving reduced household electricity sales – not only insulation of houses and improved appliance efficiency, but also the very rapidly rising use of rooftop photovoltaic – in line with Australia, and European countries despite their poorer solar resource. A number of studies address this “utility death spiral”, and warn that unless distribution companies evolve, they face continuing loss of value.

The question then is not whether demand is now falling, but whether the industry should be allowed extra price rises to “keep them whole”. I urge caution.

### **Smart grid and energy efficiency investments**

Technological change at the consumer end of the supply chain creates opportunity as well as revenue risk. Smart distribution grids are central to enabling lines companies to manage this evolving technology.

I could find only one submission, Counties Power, that refers to smart grid investments; they note that the DPP paper makes no mention of smart grids at all. yet only Counties Power (not actually DPP-regulated) addresses such opportunities – improved customer service through reduced outages, consumer access to accurate power usage data, distribution companies able to monitor power quality.

“We believe that the Commerce Commission should be providing financial incentives for distributors to start investing in future smart grids ... for the benefit of their consumers and to further improve network quality and efficient energy utilization.”

This directly addresses the 54Q obligation to improve energy efficiency and reduce line losses. The submissions on the present consultation paper barely mention that, but the submission by EnerNOC on the April issues paper says three issues must be addressed before distribution companies will be likely to efficiently balance supply-side and demand-side investment:

- Revenue decoupling
- Balanced incentives for capex and opex
- Explicit incentives for demand-side management.

The DPP price limit (weighted average price cap, WAPC) creates a simple disincentive to pursue any activity that reduces per-ICP kWh demand, or facilitate embedded generation. It also makes their revenue more volatile. EnerNOC considers the D-Factor as used in New South Wales and proposed in the recent consultation paper, and considers it complex and not very effective. They proposed a simple decoupling of distributors' revenues from kWh sales, as recommended for decades by the Regulatory Assistance Project (a US-based consultant), and widely adopted in the US and elsewhere. This is an approach I have advocated since the late 1990s, but so far emphatically rejected in New Zealand.

I agree with EnerNOC that revenue decoupling mechanisms should be explored, urgently - but cautiously. A discussion on pros and cons of this, including some consumer viewpoints, is at [http://www.smartgridnews.com/artman/publish/Business\\_Business\\_Case/Utility-death-spiral-Is-decoupling-a-dumb-idea-6597.html#.U\\_4oyjN-20](http://www.smartgridnews.com/artman/publish/Business_Business_Case/Utility-death-spiral-Is-decoupling-a-dumb-idea-6597.html#.U_4oyjN-20)

“Network-driven demand-side management” is internationally accepted as valuable, and was the subject of IEA Task Force 15, in which New Zealand was represented. Its 2008 report<sup>2</sup> noted five opportunities for network-driven DSM in New Zealand –

- demand-side alternatives for transmission grid support
- demand-side alternatives to defer distribution investment
- targeted distribution load-shifting, responding to price incentives or security issues
- demand-side bidding in the wholesale market to help remove network constraints
- through price signals at the distribution network level.

The report continued -

“...distribution network companies have a regulatory obligation to consider demand side alternatives when considering new investments. There are, however, currently no requirements for these companies to call for proposals for demand side solutions, or to accept a demand side proposal if it is more economic than a traditional network solution.”

It is this finding that led me to examine distribution asset management plans, to see if they recognise opportunities to incentivise DSM. So far only The Lines Company uses price signals to do so – to the distress of many of their customers – and there seems little if any positive incentive to encourage investment to reduce the social impact of doing so.

The third issue mentioned by EnerNOC is explicit incentives for demand-side management. This is widespread in many overseas regulatory regimes – a very recent study by a Boston

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<sup>2</sup> [http://www.ieadsm.org/Files/Tasks/Task%2015%20-%20Network%20Driven%20DSM/Publications/IEADSMTaskXVResearchReport4\\_Secondedition.pdf](http://www.ieadsm.org/Files/Tasks/Task%2015%20-%20Network%20Driven%20DSM/Publications/IEADSMTaskXVResearchReport4_Secondedition.pdf)

energy efficiency research organization goes into detail on the need, and opportunities:

“DISRUPTION BECOMES EVOLUTION: CREATING THE VALUED-BASED UTILITY<sup>3</sup>

“Today, after more than a century of slow evolution and little power system changes, a confluence of factors within the industry now result in electric utilities now facing multiple technological and business disruptions” ... Utilities should work with regulators to make demand response a part of the normal portfolio of products offered to their customers and establish a rate structure that supports it.”

The need to consider alternatives to capital investment in networks has long been a concern of the Sustainable Energy Forum. Just one example is its July 2005 submission on the Electricity Commission’s discussion paper “Options for Enabling Transmission Alternatives”.<sup>4</sup>

“The central issue of the EC consultation document was whether alternatives to proposed transmission upgrades can be counted on to eventuate in the present “market” environment, and whether the EC should “procure” the alternatives directly or indirectly. This SEF submission concludes that a mix of “enabling transmission alternatives”, as well as pricing methodology and market design are needed to ensure a proper balance of risk between competing suppliers of the relevant energy services.”

## Conclusion

International literature is clear that a transition is impending, from conventional electric utilities regulated as low-risk entities, to a business model in which the most successful utilities are those that offer choices to their consumers and even to energy service businesses that offer ways for utilities and consumers to reduce costs.

Regulation in the new commercial environment could be backwards-looking, to provide distribution companies some certainty, but missing opportunities to reduce costs and environmental impacts of continuing investment in large-scale traditional electricity supply.

The majority of submissions to the DPP issues paper and the present DPP consultation take a traditional utility view, that regulation should allow higher prices in response to falling demand that threatens the distribution company’s profitability.

For more than a decade, I have been advocating a different model, that both network companies and electricity gentailers should open the way for end-use investment, to reduce the overall cost of electricity supply and to promote more environmentally sustainable options.

Indeed the most comprehensive presentation of that viewpoint was at the NZ Energy Conference in 2002, “End-use Energy Options for a Reliable Electricity Supply”.<sup>5</sup>

I have little reason to change my position today.

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<sup>3</sup> <http://www.512cmg.com/wp-content/uploads/2014/07/CMG-Creating-the-Valued-Based-Utility-30-June-20141.pdf>

<sup>4</sup> Available on the SEF archive: [http://www.sef.org.nz/papers\\_archive.html](http://www.sef.org.nz/papers_archive.html)

<sup>5</sup> <http://www.sef.org.nz/papers/melhuish2002.pdf>