Portable Entitlements: Unlikely to Resolve Transition Dilemma

Federal Energy Regulatory Commission (FERC) staffers Richard P. O'Neill and Marsh Gransee point out in their article, "Supporting Retail Choice and Resource Adequacy under Wholesale Market Choice: A Portable Entitlements Program," the importance of an active demand side in competitive wholesale electricity markets and suggest a “portable entitlements program” as a way to satisfy resource adequacy and allow for a smooth transition to retail choice.

I heartily agree with the authors that demand response is a critical component of a competitive wholesale market. I disagree with their characterization of what is required to achieve demand response and with the workability of their portable entitlements program.

O’Neill and Gransee correctly point out that most electricity consumers pay prices that differ significantly from real-time market prices, but incorrectly generalize that “deciphering an electricity bill to discern the actual price of energy is difficult, if not impossible.” They point to budget billing as one of the culprits.

My view is that budget billing is a practical mechanism for making critical price signals palatable to consumers. Budget billing programs allow consumers to spread their payments evenly over the year (with a true-up at the end of the year), but do not hide the underlying costs incurred by the consumer during each billing period. (See Figure 1.) I am not aware of any budget billing program that does not provide the consumer with information on usage and costs incurred as the year progresses. In a sense, the bill received by a customer on budget billing is like a credit card bill. Most people look at the new credit card charges fairly carefully, although they may pay only the minimum required. Consumers who look only at the “amount due” line on their electricity bills are unlikely to respond to detailed price signals, no matter how efficient.

The authors also state that “[m]ost [customers] have meters that are read once a month or less frequently and consequently cannot be compensated for responding to real-time competitive price signals that vary significantly over the day” [emphasis added]. This statement confuses the information that is recorded by the meter with how often it is read. The critical factor is how detailed the record of a consumer’s energy use is (e.g., by hour), not how often the meter is read. An interval meter can record hour-by-hour (or more frequent) consumption history and a monthly download of this information can be used to calculate the bill. Although some utilities are implementing systems that interrogate such meters more frequently, old-fashioned readings by a meter reader making his/her monthly rounds also work. As the authors point out, a customer with an interval meter could...
Figure 1: Otter Tail Power Bill
check hourly prices on the Internet and no expensive real-time direct signal to the customer would be required.

A Particularly Well-Designed Bill for Customers on Budget Billing

At left (Figure 1) is Otter Tail Power Company’s bill for a residential customer on budget billing (called Even Monthly Payment, or EMP). The bill shows the price per kWh (by block) for general use and for the customer’s appliances on a load control program. It shows his current Even Monthly Payment, the costs incurred this month, and his balance for the year to date (a credit after 11 months) in the EMP program. The bar chart and information on average temperatures allow the customer to track changes in monthly use and likely causes. Finally, the bill provides information on the relative shares of generation, transmission, and distribution in the total cost of service.

There are also devices that display prices (not real-time) and current use. These are particularly useful to consumers who want to know, for example, what it is costing to keep the air conditioner on a little longer, or to set the thermostat a little lower. This type of feedback is much more important than how often the meter is read or the bill rendered. Customers with pre-paid meters are able to monitor their usage and the current price and tend to reduce consumption as a result.

O’Neill and Gransee offer their portable entitlements program as the answer to retail choice critics who argue that transaction costs and price risks are too high under retail competition, and that, as I interpret their words, the market will make insufficient investment in new generation. Such a program, as described in their article, would not solve these problems and, indeed, is not workable.

As I understand the authors’ proposed portable entitlements program, the provider of last resort (POLR) would forecast the total POLR load and acquire a portfolio of resources and financial hedges designed to supply that load, with deviations handled in the spot market. A POLR customer who wanted to switch to a new supplier would shift to the new supplier the obligation to purchase a proportional slice of the POLR’s portfolio. If this customer came back to the POLR, the POLR would initially cover the returning load with spot purchases and perhaps later (the article is not clear) with a portfolio of resources and hedges. The returning customer would be required to have an interval meter.

This proposal raises more questions than it answers:

- The authors refer to a customer’s slice of the portfolio as an “entitlement,” suggesting that it is a valuable commodity. If that is true and the cost of the slice is lower than market price, why would a customer want to shift to a new supplier?
- On the other hand, if the slice is more expensive than the market price, why would a new supplier be willing to accept a new customer who comes with this expensive baggage? One possible answer is cherry-picking. The slice of resource portfolio that the customer brings is apparently to be based on the pool-wide load profile. If the switching customer has a load profile that is less expensive to supply, the new supplier may make a windfall by buying low to serve the customer and selling the unneeded portion of the slice high. This is not an efficiency gain, however, but just a transfer of money from the POLR to the new supplier (and the switching customer, depending on the terms of their new contract).
- Why does the slice move with the customer who chooses a new supplier, but not move back when that customer returns to the POLR? The risk of getting stuck with an out-of-market slice should a customer desert the new supplier is likely to discourage new suppliers from participating in the retail market.
- How does the POLR’s arranging for a portfolio of resources for customers who have not chosen a new supplier enhance resource adequacy? If the other load-serving entities...
have no similar responsibility, there is no guarantee that sufficient resources will be available to serve all loads.

- How would the portable entitlements program improve demand response? Granted, the proposal specifies that customers who leave and then return to the POLR must have interval meters, but the program does not appear to require real-time or even time-of-use pricing for these customers. O’Neill and Gransee provide a long list of possible advantages of interval metering. None of these advantages depends upon the existence of a portable entitlements program.

In short, the portable entitlements program seems unlikely to smooth the transition to retail competition, promote customer switching, ensure resource adequacy, or improve demand response. I am not a big advocate of retail choice for small customers because I doubt that it is worth the hassle, but I am in favor of better price signals (and more complex metering) and better bill design. More extensive use of rate structures similar to the standard real-time pricing programs with a fixed price for a customer baseline quantity and variable price for increments and decrements would go a long way toward giving more efficient price signals to consumers and encouraging demand response without exposing customers’ entire bill to market price volatility. Demand-response programs such as those in effect in New York are another way to enhance the demand side of the market. Direct load control programs, in which a utility or retailer curtails operation of specific customer equipment when market prices are high, achieve demand response without special metering.

Endnotes:
3. It is true that some utilities’ bills make it difficult to identify the price of a marginal unit of electricity. However, there is evidence that, over time, consumers observe changes from month to month in the total amount of their monthly bills and adapt their expectations of the unknown cost of operating various appliances. See, for example, Richard J. Sexton and Terri A. Sexton, Theoretical and Methodological Perspectives on Consumer Response to Electricity Information, J. CONSUMER AFFAIRS, Winter 1987: 21, 2, at 238–257.
4. See, for example, my article in the April 2003 issue of ELEC. J., Making Every Electricity Consumer a Market Participant: Putting Demand Back into the Equation.
5. See www.nyserda.org/demandresponse.html.

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**Meetings of Interest**

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