

## Chapter 6

# The New Electricity Business Model

**James M. Van Nostrand**

*West Virginia University College of Law*  
Morgantown, West Virginia

### Synopsis

<b>§ 6.01.</b>	<b>Introduction and Overview .....</b>	<b>153</b>
<b>§ 6.02.</b>	<b>Drivers of the Changing Utility Business Model.....</b>	<b>156</b>
<b>§ 6.03.</b>	<b>Responses by the States .....</b>	<b>159</b>
	[1] — Revisit Net Metering to Make It Less Generous for DERs .....	159
	[a] — Legislative Action.....	160
	[b] — Generic Action by PUC .....	161
	[2] — Revisions to Utility Rate Designs to Make DERs Less Competitive .....	162
	[3] — Implement Revenue Decoupling Mechanisms .....	166
	[4] — Implement Alternative Forms of Ratemaking to Move Away from Frequent General Rate Cases .....	167
	[5] — Articulate New Business Model Based on DERs and “Prosumers” .....	168
	[6] — Provide Incentives for Promotion of Renewable Energy Resources .....	169
	[7] — Provide Incentives for Increasing Investments in Energy Efficiency .....	171
	[8] — Provide Incentives for Reducing GHG Emissions .....	172
	[9] — Promote Battery Storage .....	173
	[10] — Other Initiatives .....	173
<b>§ 6.04.</b>	<b>Observations and Conclusions .....</b>	<b>174</b>

### **§ 6.01. Introduction and Overview.**

With declining costs for distributed solar and more technology-based tools available to customers to manage their electricity costs, the traditional utility business model is eroding. In some states, utilities are transitioning from vertically integrated utilities operating large centralized generation stations into the role of “distribution platform operators” that integrate distributed energy resources (“DERs”), demand response, battery storage and energy efficiency providers. As kilowatthour (“kWh”) sales per customer decline under this model, regulators must also develop a new regulatory model that sets rates based on something other than utility sales. To what extent are

these trends emerging in our region? What are state regulators within our region doing to explore these issues? Are regulators and utilities within our region considering new regulatory approaches, or are they disregarding these changes and protecting the traditional utility business model? This chapter will explore these issues.

The “Reforming the Energy Vision” (“REV”) proceeding before the New York Public Service Commission is probably the leading state regulatory effort focused on the changing utility business model, and the associated evolution of the regulatory model.<sup>1</sup> The REV proceeding, which was initiated in April 2014, is designed to promote more efficient use of energy, and achieve a deeper penetration of renewable energy resources such as wind and solar, wider deployment of “distributed” energy resources (*e.g.*, micro grids, rooftop solar and other on-site power supplies), and storage.<sup>2</sup> As part of that proceeding, the retail electric utility industry is “decentralizing” and the role of the utilities is evolving into being “distribution system platform operators,” charged with facilitating the integration of DERs by third-party providers, as well as stimulating additional investments in energy efficiency measures by energy service companies. As part of the implementation of REV, utilities are also encouraged to consider “non-wires alternatives,” whereby traditional investments in additional transmission and distribution infrastructure are deferred or avoided through strategic deployment of DERs, energy storage or energy efficiency.<sup>3</sup> Another aspect of REV is the movement away from traditional “net metering,” where utilities are required to purchase the output of DERs at retail rates, in favor of utility purchase rates that reflect the value that DERs provide to the system (*e.g.*, energy, capacity, load reduction value, distribution system relief value, and environmental benefits).<sup>4</sup>

---

<sup>1</sup> New York Pub. Serv. Comm’n, Case 14-M-0101, Reforming the Energy Vision (REV).

<sup>2</sup> *Id.*, Order Instituting Proceeding, issued April 25, 2014.

<sup>3</sup> *Id.*, Order Adopting A Ratemaking and Utility Revenue Model Policy Framework, issued May 19, 2016.

<sup>4</sup> New York Pub. Serv. Comm’n, Case 15-E-0751, Value of Distributed Energy Resources (VDER), Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters, issued March 9, 2017.

While New York’s REV proceeding may be the most extensive and innovative in its approach, many states are considering or undertaking similar measures in response to changes and technological advances in the electric utility industry. In some jurisdictions, these are legislative proposals, while in others, depending upon the statutory authority, public utility commissions or public service commissions (collectively, “PUCs”) are implementing measures under existing statutes. These measures relating to the new electricity business model include:

- Revisiting net metering rates to set levels of compensation for DERs that reflect their value to the grid;
- Implementation of revenue decoupling<sup>5</sup> to remove the disincentive for utilities to promote investments in energy efficiency resources;
- Utility proposals to change how rates are structured among the various components on the customer’s bill (*e.g.*, increasing the customer charge and imposing a demand or capacity charge) to reduce the economic incentive for customers to invest in DERs;
- Forms of alternative ratemaking to move away from traditional general rate cases in favor of performance-based approaches that give utilities greater flexibility to respond to changes in electricity markets;
- Imposing procurement obligations, such as renewable portfolio standards, to encourage development of renewable energy resources;

---

<sup>5</sup> Revenue decoupling is a ratemaking mechanism designed to eliminate the disincentive for utilities to promote energy efficiency and conservation. Because utility rates are generally set on the basis of projected sales, utilities have an economic disincentive to promote energy efficiency and conservation, as success in doing so would result in lower utility sales, and the utility under-recovering its revenue requirement, thereby under-earning its allowed rate of return. Revenue decoupling “decouples” sales from profits so that the utility is held harmless from the under-recovery that would otherwise result from a drop in utility sales due to energy efficiency and conservation programs.

- Offering incentives to encourage investment in energy efficiency resources (including energy efficiency resource standards);
- Adopting goals or targets to achieve reductions in greenhouse gas (“GHG”) emissions in order to achieve climate change objectives; and
- Encouraging grid modernization efforts to upgrade the utility network to handle the demands of a decentralized utility business model.

This chapter will examine the various initiatives currently underway in the Appalachian states<sup>6</sup> that explore regulatory issues associated with the transitions underway in the electric industry.

### **§ 6.02. Drivers of the Changing Utility Business Model.**

The utility business model has traditionally involved large central generating units located in areas remote from the customer load, with high-voltage transmission lines to wheel the power from the generating plants to the customers. The system was designed to move electricity only in one direction: from these large generating plants to the customers. Utility rates were set largely on the number of kWhs a utility sold (*i.e.*, utilities were generally encouraged to sell more electricity, and rates were set on the basis of forecasted sales). In contrast, the new utility business model involves the generation of electricity throughout the utility’s service territory, by decentralized, smaller DERs that primarily serve the customer side of the meter, but with some exports to the utility grid. In the new utility model, the power flows in both directions, (*i.e.*, both to and from the customer), and the grid must be modernized in order to effectively integrate DERs. Utility rates can no longer be set solely on the basis of kWh sales, as fewer electrons are being sold to customers due to their ability to generate their own electricity

---

<sup>6</sup> For purposes of this chapter, the “Appalachian states” are those states of relevance to the EMLF organization: (in alphabetical order) Illinois, Indiana, Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.