

considered as stakeholders shape the approach electric utilities pursue in participating in an environment where disruptive technologies may transform the provision of services and the providers of these new services.

One significant difference between the electric sector and the telecom restructuring example is the value of the respective infrastructure following the disruptive threat. In the telecom situation, the original copper wire phone network is of no/low value in a wireless, Internet protocol, landline world. However, the value of the electric grid to the customer is retained in a distributed generation environment as the grid provides the highway to sell power generated by the DER and the back-up resource infrastructure to deliver power required when the DER is not meeting the load obligation of its provider. In essence, while a wireless user does not need a landline, an electric consumer-generator will not be able to and will not necessarily want to achieve full independence from the “wired” utility grid. So, while the telecom example is a tale of responding to the threat of obsolescence, the near-term challenge to the electric sector is providing the proper tariff design to allow for equitable recovery of revenue requirements to address the pace of non-economic sector disruption.

Strategic Implications of Distribution 2020 Disruptive Forces

The threats posed to the electric utility industry from disruptive forces, particularly distributed resources, have serious long-term implications for the traditional electric utility business model and investor opportunities. While the potential for significant immediate business impact is currently low (due to low DER participation to date), the industry and its stakeholders must begin to seriously address these challenges in order to mitigate the potential impact of disruptive forces, given the prospects for significant DER participation in the future.

One example of a significant potential adverse impact to utility investors stems from net metering. Utilities have witnessed the implementation of net metering rules in all but a handful of states. Lost revenues from DER are being recovered from non-DER customers in order to encourage distributed generation implementation. This type of lost revenue recovery drives up the prices of those non-participating customers and creates the environment for ongoing loss of additional customers as the system cost is transferred to a smaller and smaller base of remaining customers.

Utility investors are not being compensated for the risks associated with customer losses resulting from increasing DER. It is difficult to identify a rate case in which the cost-of-capital implications of net metering were considered. At the point when utility investors become focused on these new risks and start to witness significant customer and earnings erosion trends, they will respond to these challenges. But, by then, it may be too late to repair the utility business model.

DER is not the only disruptive risk the industry faces. Energy efficiency and DSM programs that promote lower electricity sales pressure earnings required to support capital investment. Without a tariff structure that properly allocates fixed vs. variable costs, any structure for lost revenues would come at a cost to non-participating customers, who will then be more motivated to find alternatives to reduce their consumption. While it is not the objective of this paper to outline new business model alternatives to address disruptive challenges, there are a number of actions that utilities and stakeholders should consider on a timely basis to align the interests of all stakeholders, while avoiding additional subsidies for non-participating customers.