



Divergence Paper Update  
By Dan Allegretti

In 2017 and 2018 RESA published two papers by the late Dr. Phil O'Connor: *Restructuring Recharged The Superior Performance of Competitive Electricity Markets 2008-2016* (April 2017) and *The Great Divergence in Competitive and Monopoly Electricity Price Trends* (September 2018) (written jointly with Muhammad Asad Khan). Unlike other recent studies which have attempted to draw conclusions from an examination of more limited data solely within competitive markets

to conclude whether competition is benefitting consumers the authors looked at a broader set of data.

In *Restructuring Recharged* Dr. O'Connor begins with a fascinating and enlightening history of the restructuring of the electric power industry. Understanding where we began and how we arrived where we are provides the reader with the essential foundation for examining the success of competitive markets and customer choice in electricity. Dr. O'Connor then takes us from this history into the numbers (predominantly based on EIA data) with review of the price divergence between restructured and traditional monopoly states, the attraction of investment capital and the performance of merchant generation facilities in both types of jurisdictions. His conclusions are compelling as he explains the superior performance of customer choice policies and the unsustainability of the monopoly model in a world in which technological innovation is driving down demand for electricity and requiring investment to adapt to this constant change. Looking to the future, Dr. O'Connor shares his observations on innovations in the power sector that will occur in the information age and how competition is the essential driver to realize the enormous potential from advanced meters and ever more sophisticated data and information systems. He summarizes the many ongoing policy initiatives to expand and improve customer choice and the dimensions across which we can expect restructuring to evolve both within the jurisdictions that already have competitive markets and even within some of the traditional monopoly regimes.

In *The Great Divergence* the authors examine electricity price data across the United States in both competitive and regulated monopoly states and across a decade of time to reach a compelling set of conclusions. The insight from this paper is that by looking past price comparisons between or within particular states (or within particular years) a more profound trend emerges: states that rely on regulated monopoly service have seen prices rise over time at a far steeper rate than those states that restructured to adopt competitive retail choice. In other words, regardless of the experience of any individual customer at any particular point in time the economic benefit to states that made the public policy decision to implement competition and choice is a significantly lower weighted average cost of electricity than would be the case had they continued to rely upon regulated monopolies structures. The paper refers to this startling trend as "The Great Divergence." O'Connor and Khan dive into this data and explore some potential explanations for why the competitive jurisdictions have done so much

better over time and uncover two important insights.

First, the authors noted that across the ten-year term they examined the growth in aggregate electric consumption has been flat or declining. This decrease in consumption has the effect of producing over-capacity in terms of available electric production. In the traditional regulated cost of service model in which the utilities generally own most of the production facilities, they observed that consumers continue to bear the cost of this utility production capacity, whereas within a competitive market construct (in which the utilities are wires-only delivery service entities and don't own the generating assets) the customers are free to escape paying for any excess capacity by exercising choice, thereby forcing investors (not rate-payers) to bear the cost of capacity that is no longer needed. As the authors put it "Central to the Great Divergence is that the monopoly model increases price precisely because there is weak demand."

The second insight into the Great Divergence also has to do with production capacity. Specifically, the authors point to the lower rates of capacity utilization in regulated versus choice states. The explanation here is one of incentives. So long as a plant is used and useful its fixed costs can be recovered in a regulatory rate-of-return paradigm, whereas plants in competitive markets have no captive rate-base and only those with high utilization rates can remain competitive. Again, the ability to exercise choice puts the investment under constant economic pressure, leading to a more efficient production fleet.

Sadly, for all of us, Dr. O'Connor passed away in September of 2018. RESA, however, has undertaken to continue to maintain the relevance of his work by periodically updating the price trend and related data that O'Connor compiled in these two whitepapers and is posting this data for all to reference on its website. The most recent data continue to support the same insights and conclusions the authors presented in 2017 and 2018.

Looking back at the introduction of choice in telephony the changes over time have been astounding. When choice was introduced the main driver for consumers was the attainment of savings on long distance calls measured in cents per minute. Critics of competition pointed to rate comparisons between new entrants like Sprint and MCI versus the rates still offered by Ma Bell. What they failed to grasp at the time was how competition would drive innovation in products, technology and in consumer behavior. Early innovations like call-waiting, call-answering and caller ID seemed underwhelming. Over time, however competition in telephony has produced remarkable change, with products and services like email, texting, GPS navigation, internet search, music and video streaming and more that were beyond the imagination of early critics. As we look to the future of electric choice there is no way to know what comparable sorts of innovative changes and benefits electric competition will produce. What is clear, however, from the data we can see today, is that competition is producing clear economic benefits in those states which have adopted choice. Just how far beyond these early benefits competition will take us is for now a question of how far our imaginations can take us.