

SUSTAINABILITY

Enron and the Energy Transition to Renewables

by Bruce C. Rudy



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We need a new breed of integrated energy merchant organizations to accelerate our energy transition to renewables.

December 2021 marks the 20th anniversary of the Enron bankruptcy providing us the opportunity to revisit stories of failed corporate governance and corrupted ethics at the former energy company. This is important, and we must not forget the governance failures that led to Enron's collapse.¹ However, if we only focus on the failures of leadership within Enron, we risk missing a strategic narrative that has been nearly forgotten over the last two decades- the critical role Enron played in the growth of natural gas in the United States electricity market.

In 1985, when Enron was formed as the result of the merger between InterNorth and Houston Natural Gas, natural gas represented 11.8% of the U.S. electricity net generation. By 2001, when Enron declared bankruptcy, natural gas had grown to represent 17.2% of the U.S. electricity net generation, an increase of over 347 billion kilowatt-hours of electricity produced.² As of 2020, natural gas represented the largest fuel source of electricity generation in the U.S. (40% of the fuel mix), an increase of over 978 billion kilowatt-hours of electricity produced from natural gas in 2001.³ Importantly, during this same time period (1985 to 2020), coal fired electricity production in the United States decreased by 628 billion kilowatt-hours. This is important because natural gas emits 50 to 60 percent less carbon dioxide than coal when combusted.⁴ Enron was not solely responsible for the U.S. transition to natural gas during this timeframe, but it played a major role in this outcome. And, as we head towards another energy transition, we need organizations that can play the same role Enron and its competitors played if we are to have any hope of moving from fossil fuels to renewable energy sources in the time needed to thwart the devastating effects of climate change.

Enron was an integrated energy merchant organization. What made energy merchants unique was that they specialized in the energy sector, owned and operated physical assets (e.g., pipelines, powerplants, oil & gas developments) and offered an array of financial tools, thus integrating the financial commodity market with the physical supply of energy.⁵ Because these organizations possessed physical assets and the deep knowledge associated with operating them, they were able to provide financial services more effectively to companies in the energy sector, oftentimes assuming the risk of future changes in

commodity prices required to fund the development of new energy infrastructure. The array of funding and financial tools offered by energy merchants, and bolstered by investment banks, allowed the natural gas sector to grow rapidly. In short, energy merchants, led by Enron, were critical in financing the growth of natural gas within the U.S. energy portfolio.

With the collapse of Enron in 2001 and the subsequent dismantling of many of its competitors, investment banks such as Goldman Sachs and J.P. Morgan stepped in to provide financial services to the energy industry. While these firms could provide the array of financial products offered by Enron, they did not possess the physical asset infrastructure in the energy industry that allowed them to do the types of deals Enron had historically executed. Any hope of these organizations assuming significant commodity risk was destroyed once and for all with the passage of the Dodd-Frank Act, and specifically the Volcker Rule, in 2010.⁶ By this time, the natural gas industry was growing primarily as the result of low cost and plentiful shale gas plays that fracking techniques unlocked.⁷ The innovative cross commodity financial and physical transactions championed by Enron became much less frequent.

As we move towards a future where we must transition our energy supply away from fossil fuels, we need the energy merchants to return to help finance the transition. Until now, the predominant tools utilized to bring more renewables onto the grid have been policy based.⁸ State and federal tax incentives have been the most popular instrument to incentivize investment in wind and solar infrastructure.^{9,10} And like policy incentives used in the past to expand railroads and pipelines, they have worked well in establishing a base of renewables in the United States. But policy alone will not allow the United States to meet its greenhouse gas reduction goals. It is time for energy merchants to re-emerge to speed up the adoption of renewables via innovative, market driven structures.

What would an energy transition merchant look like? Imagine a firm that owns an array of physical energy assets such as wind turbines, natural gas cogeneration facilities and battery storage. Then, add to it a set of financial capabilities and a deep understanding of the U.S. electricity market that would allow it to develop financial tools and derivatives specifically designed to capitalize on the inefficiencies in this constrained network. Innovation would ensue and be more sustainable because it would be market, and not

policy, driven. Don't forget that Enron created the Renewable Energy Credit (REC) in 1997 which remains the basis of much of the market in carbon offsets.¹¹ Creative, market-driven innovation was already happening in the renewables space at energy merchants. Their return would drive similar innovations and catalyze the growth of renewables in the U.S.

Enron was the culprit of major financial and ethical transgressions for which its leadership was punished. The 20th anniversary of its failure will no doubt be highlighted as corporate greed run amok. But do not “throw out the baby with the bath water.” Enron was also a cutting edge, innovative organization that played a crucial role in moving the U.S. away from coal and toward natural gas as the primary electricity producing fuel source. We need new energy merchants to drive the same transformation to renew

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