

Change in Capacity Factor, 1997, 2008, and 2017 (Generation Output/Potential Output)

Source: EIA-860, EIA-923

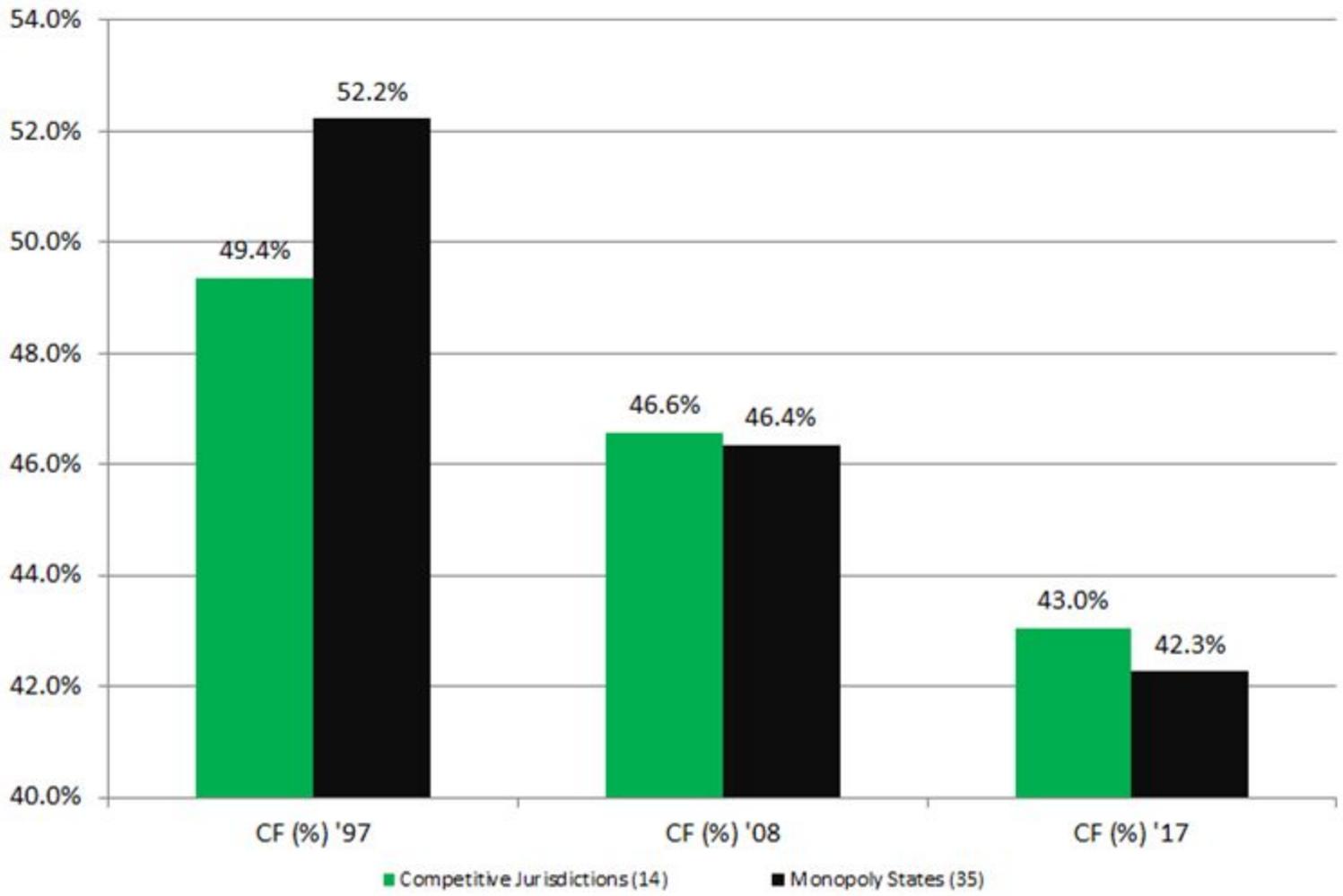


Figure 12 (page 8) of The Great Divergence (September 2018)
Updated through CY2017

The explanation of the Great Divergence between the monopoly states and competitive jurisdictions is not to be found in the similar trend lines moving from coal to gas and negligible differences in patterns of renewables and nuclear resources. There is, however, a knock-on effect that may partially explain the Great Divergence in price direction. Monopoly regulation and competitive markets accord fundamentally different treatment to power plant utilization. The decline in power plant portfolio capacity factor has been larger, both nominally and proportionally, in the monopoly states than in competitive jurisdictions as shown in this figure. The average capacity factor in the monopoly states declined from 52.2% in 1997 to 42.3% in 2017 (the most recent year for which EIA data are available). That is a one-fifth decrease (9.9%) compared to the much more modest decline in average capacity factor in the competitive markets from 49.4% in 1997 to 43% in 2016, a proportional decline of 6.4% or about one-fifteenth. Plant utilization, as measured by capacity factor, has declined in far greater proportion in the group of monopoly states than in competitive markets, due in great part to the shift from coal toward gas. However, as long as rate-based capacity is considered “used and useful”—even if underutilized—full cost recovery is accorded, with consumers absorbing those costs. In contrast, underutilized or uneconomic capacity in competitive markets will tend to experience adverse financial consequences under the same conditions. The difference is that investors, not customers, are the ones bearing the risk of changing market fundamentals.

Notes pertaining to this figure:

Some portion of the average decline in overall capacity factor for utility scale plants is likely attributable to the growing role of renewables—mainly wind and solar—which are both intermittent and characterized by relatively low capacity factors.