



The continental United States at night. Credit: USGS

As has been widely reported over the past week, some Texas electricity customers are now facing [astronomically high electricity bills](#) as a result of the recent power grid crisis. Under the Texas system, which is as close to a fully deregulated system of electricity provisioning as we have in the U.S., retail customers are allowed to choose their retail electricity providers and have the option of changing their provider whenever they want (at least most of the time). Among other things, these retail providers offer different pricing plans. This is quite different than the traditional public utility model under which retail customers have a single provider that operates under a regulated monopoly franchise or as a municipally owned utility and typically offers a single rate structure.

Apparently, many of the Texas customers now facing extremely high bills used [Griddy](#) (you can't make this stuff up) to procure their power. For a monthly fee of \$9.99 Griddy provides its customers with retail electricity at a price that mirrors the wholesale cost of electricity established by the auctions in the ERCOT electricity market. As one of the purest forms of dynamic marginal cost pricing of electricity that one can find, Griddy offers customers an opportunity to adjust their demand in response to price signals. This form of marginal cost pricing of electricity for retail customers has long been the holy grail of economists and market designers seeking to develop competitive markets for electricity. If customers can actually see and respond to the true marginal cost of electricity, the argument goes, the price system will work its magic and ensure that supply and demand are balanced and that the market is efficient. Such an approach surely has its virtues, but it can be a problem when the one big machine that is the electricity grid is forced to operate well outside of normal operating conditions. And it also reflects the view that electricity is like any other commodity and should be priced accordingly, rather than a key system of provisioning that

is essential for everyday life.

As the Griddy [website](#) states:

The grid is an interesting and magical thing. It takes energy from generators (a mix of natural gas, coal, wind, solar and nuclear energy) and moves it along the poles and wires (that are maintained by your TDU [Transmission Distribution Utility]) to your home or business. And voila! You can power your lights.

The wholesale price of electricity is set by the grid operator, ERCOT, and can change every five minutes depending on supply and demand. When there is excess energy on the grid, prices drop and can even go negative, which means you are getting paid to use electricity (awesome!). And when demand is high like on hot summer days or winter storms, prices can spike. The highest the price can go to is \$9/kWh (which has only ever happened 0.005% of the time.) Most of the time though, 96.9% to be exact, it is below the Texas Average of 6.8¢/kWh.

But last week, the “interesting and magical thing” that is the Texas grid was pushed to the breaking point and prices jumped to \$9/kWh, a reflection of the \$9,000/mWh price cap in the wholesale markets. Given the arctic conditions across the state, of course, most customers had little choice but to keep using their electricity.

Now facing bills in the thousands of dollars (one Griddy customer reported [a bill of \\$16,752!](#)), some of these customers will end up in severe financial crisis if they do not get some relief.

On Sunday, The Texas Public Utility Commission came to the rescue, [issuing two orders blocking retail providers from sending bills or disconnecting customers](#). Some Texas politicians are now calling for [federal relief for Texan’s utility bills](#). Central planning never looked so good.

To be sure, the alternative to this extreme form of marginal cost pricing—flat electricity rates that are set at a level that will cover the average costs of providing electricity service—have their own problems and have long been criticized by economists (most famously perhaps by [Alfred Kahn](#), the former Chair of the New York Public Service Commission and the father of airline deregulation who once referred to airplanes with his characteristic wit as “[marginal costs with wings](#)”).

But we should not discount the fact that many customers may not view electricity as a

commodity. Rather, they (we) often take it for granted as part of the basic infrastructure of everyday life and many of us prefer a stable and predictable monthly bill. This is especially true for older customers, low-income customers, and others who are confined to their homes because of illness or, say, a pandemic. So, while it may be true that more price-mediated demand response can make the power grid more responsive and help to balance supply and demand, we need to think long and hard about safeguards and protections during extreme events for certain classes of customers and should proceed carefully as we start defaulting customers into [systems of variable rates](#) as California, Massachusetts, and other states are doing. Prices for electricity, like the prices for other essential services, are more than just signals and the [ways in which we decide to make prices for these essential services](#) (that is, the ways in which we design and use regulation and markets to generate prices) have serious implications for people and their ability to get on with their lives.

The other big question looming behind the Texas meltdown is whether Texas customers have actually benefited from deregulation and retail choice. This has been a long-standing debate in the [extensive literature on electricity restructuring for two decades](#). Competition, according to the proponents of deregulation, will do a better job of disciplining prices and delivering savings to customers because it will avoid all of the pathologies of rate regulation, and especially the tendency of regulated utilities to over-invest in their physical assets and overcharge customers. But the record on deregulation so far has not exactly been a huge victory for consumers. Yesterday, the [Wall Street Journal reported on its own investigation](#) that found Texas electricity bills to be \$28 billion higher for those customers who have participated in the deregulated retail market than for those who have been able to stay with a traditional public utility. As noted in my previous [post](#), sorting all of this out will take time and the debate over electricity pricing and market governance will surely go on, but one thing we have been reminded of over the past week is how high the stakes are as climate disruption intensifies.