Competition at the Grid Edge
A New Role for the Federal Government in Overseeing Competition Between Utilities and Distributed Energy Resources

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Note: This discussion paper reflects research, analysis and proposals from its author(s). They have been invited to present their own findings, ideas and perspectives to inform and stimulate discussion independent of positions or viewpoints associated with Stanford University or its staff and leadership.
Abstract

The next eight years will bring transformative technological and economic change to the electric power sector. These changes will involve the consumer’s playing a much more active role in shaping the electricity system. The next administration needs to position U.S. sectors, both within electricity and around it, to take advantage of these changes. Doing so will require a shift in how the grid edge, where customers interact with the electricity system, is conceived of and regulated. More than an energy regulatory problem, this is a competition law problem. The next administration should thus extend the work begun under the Obama administration to clarify and articulate the boundary between structurally competitive markets and regulated monopoly in the electricity sector. It should also act through its antitrust merger review authority to push for a level playing field for distributed energy technologies. By clarifying where antitrust law applies and conditioning merger approval on fair treatment of competitors, the next president can do much to spur action by state utility commissions to better take account of competition issues in their decisions. Developing a fair and level playing field for distributed energy will require careful attention both to the unique complexities of electricity and to the limits of antitrust remedies. But by embracing the challenge, the next president will position the United States as the leader in clean energy technologies for the 21st century.
Competition at the Grid Edge

I. Introduction

Open, fair and competitive markets are in the national interest – this is especially true when technological innovation creates the prospect of competition where natural monopoly has prevailed in the past. Rate regulation of industries is essential to constrain monopoly rents if a single firm can most efficiently serve all customers. But rate regulation in industries that do not require it tends to produce suboptimal outcomes because of the incentives and information challenges of the rate-setting process.\(^1\) Competition in the power sector, as in other sectors – most notably telecoms – incentivizes innovation, productivity growth, consumer choice and consumer value.

Today’s electric power sector is at a turning point. Over the past decade, due to technological innovations and cost declines and fostered by long-term government support and sponsored research, a significant number of technologies that fundamentally change the consumer relationship with electricity have seen very large cost declines. The most important of these technologies today is solar PV – where continued declines in prices have led to a dramatic increase in deployment at the household level. But other technologies, most notably battery storage and energy sensor and control technology, are also experiencing dramatic changes in affordability, ease of deployment and adoption.

The greatest challenge for the next administration in the electricity space will be to continue and substantially expand the efforts the Obama administration has made to foster development of a vibrant, competitive marketplace for consumer energy services. By doing so, the administration will do much to create a national market for consumer energy services that will further drive down costs and increase the rate of innovation. Failure to do so is likely to result in balkanized consumer markets, higher costs and much less innovation in service offerings. Given the current magnitude of distributed solar deployment and the rapid growth of energy storage, the difference between these two outcomes has real implications for the achievement of productivity gains and job creation as well as air quality and climate goals.

II. The Current State of Competition at the Grid Edge

To date, rooftop solar and net metering have been the technologies for which competition issues are most acute in the power sector. Net metering, especially when combined with rates that bill for grid capital costs based on customer usage, have led to some erosion of revenues for a small number of utilities and have created deep-seated concern in the boardrooms of many others.\(^2\) The response has been a widespread move by utilities to change rate structures in ways that lower or even remove incentives to deploy customer-sited solar. Some of these efforts have borne fruit, most notably in Nevada and Wisconsin, while others have been less successful, such as in California.

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My work and the work of other academics questions the extent to which these rate cases raise novel antitrust issues. We argue that changes in utility retail rate structures that erect or increase existing barriers to entry for competitors may not be immune from antitrust scrutiny. Further, I have argued that these concerns and their potential impacts on innovation should factor into the review of proposed utility mergers by antitrust regulators.

At the outset, it must be emphasized that the real issues for the electricity industry are not limited to any particular technology. The competition issue is not (just) about solar net metering, although it might seem like that right now. The real issue is customer-side energy services more generally. Energy storage is the next big thing with large year-on-year cost declines and a proliferation of consumer-facing products. Smart homes and businesses are not far behind. Both energy storage and smart homes will become only more valuable as the challenge of integrating ever greater amounts of solar energy into the electricity system becomes more acute.

An all-out focus on solar and net metering risks missing the bigger and much more important question of what to do to (1) avoid erecting barriers to and to (2) perhaps even enable the dynamic innovation that is unfolding on the customer side of the meter. And to be clear, this evolution is occurring at a much more rapid pace than the utility industry can compete with. The most important aspect of this unfolding dynamic is probably the very different product cycles that occur in utility scale power generation relative to Distributed Energy Resources (DER). DER product cycles are annual or shorter. Utility scale product cycles are decadal. This has important implications for rates of innovation, particularly as energy evolves toward a service offering as opposed to a commodity product. As significant, it means that the competitive situation today is unlikely to be representative of where things will be in a decade.

The Obama administration has also shown an increasing willingness to take a position in competition disputes regarding distributed energy. SolarCity, the largest home solar installer in the country, brought an antitrust claim against a utility, Salt River Project, that enacted particularly onerous changes in its rates for rooftop solar customers. In a surprising move, the Department of Justice (DOJ) intervened in the case earlier this year. DOJ Antitrust argues in its brief in support of SolarCity's contention that Salt River Project, even though it operates a state-chartered monopoly and so would normally be immune from antitrust claims, should nevertheless be held to account for any actions it takes that are anticompetitive with respect to rooftop solar.

In another signal of federal competition regulators' interest in grid edge energy services, the Federal Trade Commission (FTC) has intervened in important regulatory proceedings, ongoing in New York State, known as the Reforming the Energy Vision or REV process. The REV process is intended to result, ultimately, in competitive markets for energy services at the customer level. The FTC filed comments early on and has

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5 See Brief for the United States of America as Amicus Curiae supporting Plaintiff-Appellee, SolarCity v. Salt River Project, 9th Cir. No. 15-17302 (June 7, 2016).
continued to stay engaged in this process as it unfolds. In its comments, the FTC has emphasized the need to create open access for all energy service providers in the new markets that REV would create and has warned against allowing regulated utilities to serve in roles where they can leverage their monopolies in the grid to gain unfair advantages over other competitors. Federal regulatory intervention in state utility proceedings is exceedingly rare, increasing the perceived significance of FTC participation in the REV proceedings.

Finally, in June of 2016, the Federal Trade Commission convened a workshop on distributed energy, in part to understand whether competition between DER providers and electric utilities raises a novel antitrust enforcement concern. A diversity of views were expressed on the panel – especially as to whether and how antitrust law could be used in practice to govern the conduct of state-regulated electric utilities. A diversity of views were evident at the forum, ranging from those who felt that while the competition issues were real and important, the use of antitrust authority would be impractical to those who argued for a more vigorous role for antitrust enforcement.

To be clear, electric utilities deserve a fair shake, too. They have made and continue to be required to make investments predicated on a business model that assumes no competition and focuses on cost minimization, not customer value. Cost minimization is a very limiting box to be in when exposed to firms that are willing to take risks because they can enjoy high future returns. Regulated utilities provide an incredibly valuable service to American consumers at relatively low cost and are obligated to serve all comers – unlike their would-be disrupters. They are also required, unlike their competitors, to provide very high levels of reliability. The interests of these firms and their shareholders deserve consideration in evaluating how and where a role for antitrust law should or should not exist in policing competition at the grid edge.

III. Shaping A New Role for Competition in Electricity

So how should antitrust enforcement agencies respond to this nascent competition? Basic principles are straightforward. First, create a level playing field for consumer energy services. Second, resist attempts by utilities, abetted wittingly or unwittingly by utility commissions, to create or raise barriers to entry for new technologies or service offerings. But detailed strategies to accomplish these goals bring antitrust regulators into unfamiliar and complex territory.

Courts and antitrust regulators are averse, and with good reason, to playing the role of rate regulator. In general terms, these goals will be effectuated by differentiating between rate structures or practices that discourage competition from those that allow for and reward it. Applying these general concepts to specific contexts is a daunting challenge. How should antitrust enforcement intervene where prices are set by

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application to a commission, where cross-subsidization between different types of customers has been common practice for decades and where the regulatory context and industry structure vary substantially between states? This is a daunting challenge.

Before this challenge can even be addressed, the role of antitrust law in the electricity industry of the future needs to be clarified. This should be an important energy policy goal of the next president. Today, electric utilities and public utility commissions do not believe antitrust enforcement has any role to play in their activities due to what is known as the State Action Immunity doctrine. This area of law creates an exception to the antitrust laws where a state authorizes anticompetitive conduct by a party and then actively supervises the conduct as it occurs. State Action Immunity has long protected state-chartered and supervised monopolies from the application of the antitrust laws – and for good reason. Utilities rely upon this doctrine for antitrust immunity for their regulated business. And for much of that business, they are absolutely right to do so. It would be manifestly unfair to both require a utility to provide monopoly service at prices regulated by the state and yet to then impose liability for being a monopoly.

But whether utilities should be shielded from competition in provision of distributed energy services is a much closer question. Why should the doctrine shield utilities when they take actions that erect barriers to entry of otherwise unregulated DER providers that want to provide energy services to homeowners or businesses? The next administration should act to create a policy and a set of legal precedents that define clear limits to the reach of this doctrine, consistent with the new technological realities in the energy space. Initial advocacy by the antitrust agencies needs to focus on the two legal prongs of the State Action Immunity doctrine, authorization and supervision.

The first question a new administration’s antitrust lawyers should be asking is whether utilities across the country have been clearly authorized by the states to act anticompetitively toward distributed energy. In large parts of the country, retail competition of some sort exists under state law for electricity customers. As electric utilities in these jurisdictions act to change rates in ways that discourage rooftop solar or other technologies, antitrust enforcement has a role to play in questioning whether states have clearly authorized displacement of this new type of competition. Where there is authorization for grid-based retail competition, why not competition from distributed energy? This argument has been made in the SolarCity v. SRP case by DOJ Antitrust but needs to be made to utility commissions across the United States as they are considering proposals by utilities that would harm competition.

In addition, many of the actions being taken by utilities across the country to change rate structures are focused solely on rooftop solar rather than on rates in general. For example, many proposed rate structures would impose minimum bills or demand charges on net metering customers but not on other customers. Should the utility be free from immunity when it modifies its rate structures to single out competition from rooftop solar? Absent specific statutory authorization, the answer is probably not. Modifications to rate structures should focus on creating a level playing field for all technologies on either side of the meter rather than singling PV out for special treatment, absent specific authorization by state legislatures to do so.

A second line of inquiry that a new administration’s competition lawyers should pursue is whether utilities anticompetitive conduct, where it exists, is sufficiently supervised by public service commissions that oversee and approve rates. It might seem odd to suggest that a public utility commission (PUC) does not actively supervise retail rates. Most utilities, faced with the burden of supervision by utility commissions,
would beg to differ. But the key question is the content of “supervision” that occurs and whether it is sufficient to relieve utilities of antitrust liability. Is the supervision concerned with utility cost recovery? Is it concerned with bill impacts to ratepayers? Or is it concerned with competitive impacts to DER providers? A new administration’s lawyers should argue that courts need to clarify that the last is the most important criterion in assessing whether supervision is active in the context of a structurally competitive but indirectly rate-regulated market such as that for distributed energy.

The truth is, we don’t really know how courts will respond to the issue of what counts as active supervision. The Supreme Court and circuit courts have been quite vague on the content of active supervision that must occur to confer State Action Immunity. What the history and evolution of antitrust law does teach is that enforcement is highly fact and context specific. A new administration should make the case that there are a new set of facts and a very new context in the electricity sector and that the national interest lies in fostering this evolution.

This strategy is not without risk: Courts allow the use of antitrust authority in new ways only reluctantly for fear of too much enforcement unfairly clipping the wings of successful enterprises. But right now, utilities feel free to propose new rate structures and commissions to review and approve them, with no consideration to the broader impacts on the developing ecosystem of distributed energy providers and the customers they serve. One recent example of this attitude was the decision by the Nevada Public Utility Commission, at the behest of its largest utility, to exclude SolarCity from full participation in negotiations on future rates for existing rooftop solar customers.9 The idea that SolarCity has no interest in the outcome of this proceeding, given the impact of changes to the grandfathering rules on its ability to procure financing on future projects, does not withstand scrutiny. The new administration should pursue the policy that utilities will not be immune for anticompetitive conduct against DER providers unless supervision by utility commissions takes these stakeholders’ interests fully into account in setting the rules by which all parties compete for customers.

The Federal Trade Commission has taken some tentative steps into the area of state utility commission regulation of the power sector. In the FTC’s comments in the NY REV proceeding, where it opposed allowing utilities to both own the transmission and distribution system and to operate as the distribution system operator, it essentially staked out a position on a structural remedy for competition in retail electricity. This suggestion by the FTC regarding how a new industry – the market for energy services operated in the distribution system – should be structured contains important pieces of how a new administration might flesh out the details of a new competition policy for consumer energy services.

The end goal should be creation of a national market for DER that allows for full exploitation of the potential productivity gains created by technological innovations. The best way forward in the numerous contexts across the country is for utility commissions to take a much more active role in oversight of the competition impacts of proposed changes to retail rates. By evaluating not just how retail rates will impact utilities and ratepayers but also how rate-structure changes will affect competition, PUCs and their regulated utilities can do much to avoid a highly disruptive private or public antitrust challenge to a rate case. The DOJ Antitrust involvement in the SolarCity–SRP case and FTC engagement in NY REV are

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important first steps in this direction. But a new administration needs to signal that this should be the rule for commissions moving forward. Commissions will not adopt this new responsibility unless antitrust regulators insist that they do so.

A new administration need not stop there in fostering a new era of competition and value creation for electricity customers. Federal competition regulators can and should be taking a more active stance in their horizontal merger reviews of major utilities. A new administration should be asking for disclosure during merger review of current retail rate structures and the competitive impacts on DER of the spread of one set of practices to the merged entity’s full territory. It should also be soliciting input from the merging utility’s DER competitors. By doing so, the new administration’s competition regulators would do much to encourage the spread of best practices as utilities continue the consolidation wave brought on by stagnant electricity demand and shareholders’ growth expectations. The next administration can and should act to ensure that the multistate utilities that emerge from the next wave of mergers are champions of DER and are well-positioned to make the transformation from regulated entities to competitive service providers, much the way the predecessors to AT&T and Verizon did over the last two decades.

Finally, the next administration should take heart in the fact that the law governing what counts as acceptable rate recovery already recognizes this inherent complexity. For 72 years, the law of the land has been that rate cases will not be overturned by courts as long as their impact is reasonable – not because there are technical defects in their accounting methods. Perfection is not required. For 48 years, Supreme Court doctrine has held that as long as a commission’s decision is “within the zone of reasonableness” it will not be disturbed. In other words, rough justice is acceptable in the rate-setting context. Antitrust remedies need do no better or worse than what courts will require of utility commissions.

Likewise, regulators should reassure themselves that there is no question that utilities should not be free to charge a rate that allows them a fair recovery on their invested capital. The only issue a new administration’s competition regulators are concerned with is in regard to how that rate is distributed across customers and the consequent impacts of that structure on innovation in consumer energy services.

IV. Conclusions

Managing the new competition issues in the electricity sector is hard but essential work for the next administration. The next president should set as his or her goal nothing less than the creation of a national market for consumer energy services. Accomplishing this objective would unleash enormous productivity gains and lead to the creation of large numbers of high-quality jobs that cannot be outsourced. It would also position the United States as a leader in the energy transformation that is occurring across the globe.

Getting to that outcome will, of course, be enormously complex given the nature of the electricity system and its regulatory structure. But antitrust agencies should not shy away from their critical role. The purpose of antitrust engagement early in the next administration should be to avoid a situation where competition and innovation are stifled or where the issues are left unaddressed until they are so acute that

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private antitrust litigation leads to a wave of settlements that will prove highly disruptive to the utility industry.

The next president’s antitrust agencies, in collaboration with both PUCs and regulated firms, should play a more active role in ensuring that the electricity landscape is fair for all participants. Ensuring this will further the interests of consumers, regulated utilities, DER providers, state governments and the nation as a whole over the next eight years. The federal government has an important role to play in helping to guide the grid edge ecosystem from one dominated by regulated utility monopolies toward a diverse, creative and value-creating sector that generates jobs, wealth and economic growth while at the same time improving local air quality and reducing the harms from climate change.