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Book Reviews

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BOOK REVIEWS

Integration of Large-Scale Renewable Energy into Bulk Power Systems: From Planning to Operation, edited by Pengwei Du, Ross Baldick and Aidan Tuohy (Springer, 2017). 337 pages. ISBN: 9783319555799

The book treats an extremely important topic, that is the integration of large-scale renewable energy into bulk power systems. Consisting of 10 chapters written by different authors, it has no full-scale storyline, which makes it sometimes a bit less easy to read.

Chapter 1 discusses "Wind integration in ERCOT" (Julia Matevos and Pengwei Du). ERCOT is an important system with a lot of wind energy installed. The impact of the reduction of dispatchable generation on the system services needed is well illustrated. Though the ERCOT control system is rather unique in the world, the lessons learned are important for other control systems too.

Chapter 2 is entitled "Integration of Large-Scale Renewable Energy: Experience and Practice in China" (Ming Ni, Feng Xue and Zhaojun Meng). Although other energy sources are mentioned, the major emphasis is on the integration of wind energy. Several control strategies for the integration are analysed in detail and the examples given are very well chosen.

Chapter 3 "The Role of Ensemble Forecasting in Integrating Renewables into Power Systems: From Theory to Real-Time Applications" (Corinna Mörhrlen and Jess Jørgensen) treats the subject of advanced forecasting mathematical techniques and models in weather prediction that are crucial for renewable energy prediction and their integration, not only technically but also in the electricity market. This combined approach makes the chapter key for every member in a development team of a wind farm or a large PV plant. Models are used to study the German massive deployment of both wind and solar. Then they are applied to cross border systems, indicating the advantage of geographical spreading of resource to avoid extreme weather conditions. The impact on price levels in the day ahead market as a better way of integrating than more basic remuneration schemes is a very interesting part of the chapter. Different market organisations are compared with grades of liberalisation on the one hand and with centralised or distributed nature on the other. Then more technical markets are discussed. The first one is the balancing and intra-day market: this market is very critical combined with uncertainties in weather forecast. The final product discussed is the reserve market, both looking at the required reserves in a system with deep penetration of renewable resources, but also at reserves as can be provided by the renewable energy systems as such.

Chapter 4 "Wind and Solar Forecasting" (John W. Zack) solely handles the problem of weather forecast in depth. It clearly represents the state of the art in weather forecasting (sun and wind). It gives a good insight into the limitations of such models and is a key framework for power system engineers. I believe it should be read before chapter 3.

Chapter 5 discusses an important specific topic for system operation "Reserve Estimation in Renewable Integration Studies" (Brady Stoll, Rishabh Jain, Carlo Brancucci Martinez-Anido, Eduardo Ibanez, Anthony Florita and Bri-Mathias Hodge). The different types of reserves, with their specific time horizons, are explained both for solar and wind integration. The technical description is based on the situation in North-America (NERC) but can be used as a basis for other AC systems.

Chapter 6 looks at "Balancing Authority Cooperation Concepts to Reduce Variable Generation Integration Costs in the Western Interconnection: Consolidating Balancing Reserves" (N.A. Samaan, Y.V. Makarov, T.B. Nguyen and R. Diao). The example used is the Western Interconnect in North-America. The cost elements are modelled for all system components (solar, wind, load, hydropower, thermal generation, transmission grid). Different scenarios are introduced. The impact of the growing portion of renewables is clearly shown. The impact on the dispatch is studied using several approaches to minimize costs. The reserves needed for balancing are an important cost factor and closely linked to forecasting errors. Using the models, the cost of balancing with uncertainties is obtained. The combination of technology and costs is a crucial aspect. The increase of the operational system costs due to the variability of the renewable resources can be seriously reduced using appropriate techniques as shown in this chapter. The methodologies introduced can be applied in almost all integrated systems and will help to limit the costs of the energy transition.

Chapter 7 discusses "Robust Optimization in Electric Power Systems Operation" (X. Andy Sun and Alvaro Lorca). Both Unit Commitment and Economic Dispatch are shown under uncertainty. It is somewhat unfortunate that the specific impact of variable renewables did not receive more attention.

In chapter 8 "Planning of Large Scale Renewable Energy for Bulk Power Systems" (José Conto), a number of important problems are enumerated, all dealing with the system behaviour with large integrated renewables: steady-state models, wind and solar in dynamic studies, frequency support, voltage oscillations and sub-synchronous resonance.

Chapter 9 handles the specific topic of "Voltage Control for Wind Power Integration Areas" (Qinglai Guo and Hongbin Sun). As such a very interesting chapter, but the example provided gives the impression that it is rather limited and difficult to apply in general.

Chapter 10 describes the "Risk Averse Security Constrained Stochastic Congestion Management" (Abbas Rabice, Alireza Soroudi and Andrew Keane). The impact of wind power and its uncertainty is clearly demonstrated. This chapter is important for all grid operators that are confronted with large-scale wind integration.

Overall, this book is a must-read for engineering professionals dealing with all aspects of power systems (design, technical operation and market operation) with large volumes of wind energy. Not all chapters will be important for each of them, but all major challenges are addressed. This book is a must-read for all TSOs, power market operators and grid engineering design companies. Of course, there is always room for improvement. Given the recent evolutions in battery technology, large system batteries are introduced in grids, for instance in California, to cope with the variability of generation. The combination of wind and batteries is even introduced as an alternative for very expensive peak power plants. A chapter on this type of evolutions would have been interesting.

In Europe, a lot of attention is given to the use of resources in the distribution grid for delivering ancillary services to the transmission grid. This is certainly another topic to be discussed in future.

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Can We Price Carbon? by Barry G. Rabe (The MIT Press, 2018). 376 pages. ISBN: 9780262535366

I must start this book review by confessing that I am a member of the "active and affirming army of economists", mentioned in the preface, that has been backing the use of environmental taxes for decades. Prices to pollute are actually an invention of economists and one of the few ideas that receive very wide support across the profession. Indeed, only a couple of months ago an impressive group of US economists signed a manifesto calling for the immediate introduction of carbon taxes to fight climate change.

Although carbon prices are not a rarity (the Carbon Pricing Leadership Coalition reports around 60 applications as of today, roughly half of them taxes, in almost 30 countries), the truth is that in the 1990s most of us had expected a much better progression, not only in the number of applications/scope but also in their stringency. The absence of this concept within the text of the Paris Agreement (despite the ad-hoc manifesto of another impressive group of academic economists), which instead explicitly mentions "non-market approaches", is yet another indication of the difficulties to advance.

Why has this appealing and powerful idea not prospered more in practice? Economists have no clear answer to explain the distance between our high expectations and the actual developments. My experience as an academic working in this field in Spain is somewhat frustrating: the country had a lot of reasons for an intense use of energy/carbon taxes since the late 1990s (sizeable emissions and climate vulnerabilities, large fiscal deficits, dependence on foreign energy stocks) but instead is now amongst the European countries with the lowest energy-related taxes. And not only this: these were virtually the only taxes not raised by the government during the great recession. A recent modest attempt to raise diesel taxes was met with general contempt. Strikingly, this behaviour contrasts with the positive academic evidence on the environmental and socio-economic effects of these instruments, at low distributional costs, in Spain.

This setting explains why I approached this book with a lot of interest. The author is clear about his objectives: to study, from a political-science perspective, the reasons why some carbon prices have been introduced by a number of governments, and why only some of them have succeeded in enduring the different challenges associated with real-world policy-making. In this sense, the book employs a "policy life-cycle analysis" based on case studies that largely focus on North American experiences. Some non-American applications are also mentioned, particularly Nordic carbon taxes and the EU ETS, but with a less detailed analysis (even less so with experiences of emerging countries). The author intends, in any case, to go beyond the enumeration and description of the experiences, attempting to draw lessons on the success/failure of proposals and implemented instruments.

As stated by another commentator of the book, this is an ongoing project and quite timely: a quick review of directly-related developments in the first three weeks of April 2019 (when this review was written) include the likely repeal of Alberta's carbon tax after the landslide conservative victory, the likely incorporation of Virginia to RGGI in 2020, the beginning of operation of the Canadian (federal) carbon price backstop, EU ETS allowances approaching 30 Euros/ton and detailed plans for the upcoming start of China's national ETS.

Yet I would like to raise a number of questions that emerged from reading the different parts of the book. In my view the first chapter, "why carbon pricing is appealing", fails to acknowledge the relevance of carbon pricing for a successful transition to low-carbon societies. In particular, the importance of prices not only in achieving cost-effective outcomes (i.e. with

cost minimisation), but also in mobilising the vast amounts of private investments and technological developments required for such an endeavour. Also, the crucial issue of distributional effects is not fully covered: not only across taxpayers but also in terms of qualitative changes in the economic fabric. Moreover, I found the comparison between tobacco and carbon taxes somewhat misleading. Greenhouse gas emissions related to energy consumption are a kind of blood in our economies. Thus, it is extremely difficult to act intensely against them. Recall also that many oil and gas companies, in clear contrast with the attitude of tobacco producers, have been advocating the use of carbon taxes for many years (perhaps to avoid more costly regulatory activities?).

I also missed more attention on policy packages around carbon pricing, particularly the so-called green tax reforms. I feel that the theoretical backing of such reforms (double dividend ideas) has played a very important role in the introduction of some European (particularly Nordic) carbon taxes, and the evolving use of tax revenues may also explain the endurance or failure of some initiatives. Indeed, recent green tax reforms have stressed the return of most revenues to taxpayers to mitigate adverse distributional effects. Policy interactions are also a very relevant issue, and they are only indirectly considered in the book: can carbon prices be negatively affected by other existing (or new) instruments such as renewable/energy efficiency promotion devices? Is it possible that the introduction and/or endurance of carbon pricing might be related to the broader policy landscape?

I was quite surprised by the inclusion of the EU ETS in the chapter devoted to "failures of carbon prices". In my view, both the scope and relevance of this instrument in one of the most ambitious climate policies implemented to date do not justify it (especially when compared with minor applications that are included in the chapters devoted to successful experiences). The EU ETS is by far the most relevant carbon price in the world; it has endured very complex economic and political contexts, showing a large adaptive capacity, and it is starting to provide larger incentives for mitigation (including innovation). The European system has also had a clear role in the diffusion of pricing approaches elsewhere, and it is likely to play a significant global role if there are advances in linking across systems (such as the forthcoming Chinese national market).

In any case, I found the book very informative and useful and, above all, quite complementary to economic approaches to the matter. Indeed, by considering the political factors and by learning from real-world failures and successes of these instruments, we economists might be able to understand more about the aforementioned gap between our expectations and reality.

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***Imperfect Markets and Imperfect Regulation. An Introduction to the Microeconomics and Political Economy of Power Markets*,** by Thomas-Olivier Léautier (The MIT Press, 2019). 416 pages. ISBN: 9780262039284

Electricity markets in developed countries were liberalised starting in the 1990s, at a rather special time in the evolution of the industry. Combined cycle gas turbines were mature, cheap

and fast to build, and in many countries gas prices were attractively low. Wind and solar were costly and only gradually making an appearance. In many countries demand growth was modest and capacity more than adequate. Liberalisation offered the prospect of lower wholesale prices set by marginal, not average costs. The main risk was the exercise of market power, as liberalisation frequently preserved entrenched incumbency dominance. Over time, market inquiries, divestment, massive renewables entry and improved cross-border trade reduced market power, although putting investment in conventional fossil plants at risk. A lack of public confidence in nuclear power, amplified after the Chernobyl disaster and the Fukushima-Daiichi meltdown, caused the threat and actuality of early nuclear plant closures. Increased attention to safety and next generation nuclear reactor designs, followed by inevitable cost over-runs, further undermined the development of nuclear generation. Security of supply has now moved up the agenda with a reluctance to invest in new plants without prior contractual assurance. The question now is whether the liberalised electricity sector model, exemplified by the EU Target Electricity Model with its energy only markets, is still fit for purpose.

Léautier's book takes all these matters both seriously and analytically. He argues convincingly that the preferred engineering and modelling strategy of assuming perfect competition should not be the default choice without careful consideration. Analysing imperfect competition is, while necessary, considerably more challenging, and Léautier's book provides the toolkit to attempt it. There is a knee-jerk reaction that finds imperfect markets a reason for regulation or state-ownership, hence the importance of the second part of Léautier's title, reminding us that regulation is inevitably imperfect as well. The right balance between market solutions and regulatory interventions depends on each case and it will likely differ across countries depending on market structure, demand growth, renewables penetration and the competence of both regulators and governmental bodies.

In Part I of the book, Léautier starts by addressing the heart of the challenge to liberalised markets—how to recover fixed costs when variable costs may be less than half of the average costs. The problem is old, and we are reminded that a former head of EdF, Marcel Boiteux, set out the theory of peak-load pricing. Although Léautier does not mention it, Boiteux also argued for marking up variable costs inversely to demand elasticities, or, in modern terms, arranging the cost-recovering addition to deliver equi-proportional reductions in various kinds of demand (peak vs off-peak, connection vs usage, etc.). While this guides efficient pricing, it runs counter to concepts of fairness, which Léautier is aware of (although the index fails to mention either fairness or equity to guide the reader to the relevant discussions).

The book has an approachable structure, setting out in each chapter first the intuitive explanation, often illustrated with plausible numerical examples to roughly quantify the result, pulling out the policy implications and the practical implementation details. The second half of each chapter provides the necessary (and very rigorous, not for the faint-hearted) algebra to underpin the more graphical and intuitive explanation. This combination of fact, theory, analysis and policy is refreshing and essential for practitioners who aspire to offer useful advice, and is one of the many strengths of the book.

A nice example of this is the discussion of the implications of setting the popular European reliability standard of three hours Loss of Load per year (on average over a large number of years). If the last and cheapest unit needed to meet this standard costs \$60,000/MW/yr (net of any market revenue, but including interest, depreciation, connection and operating costs) then the implied Value of Lost Load (VOLL) is \$60,000/MW/yr/3hrs/yr = \$20,000/MWh (or more familiarly, \$20/kWh). The sum of the Loss of Load Probability, LoLP, over the year

is the Loss of Load Expectation, or the three hours per year. The derivation is clear, but more could have been pulled out of this example. Thus, the efficient day-ahead price when there remains some uncertainty is the sum of an energy and capacity price. The former is the short-run marginal supply cost, weighted by its likelihood, 1-LoLP, the latter is VOLL multiplied by its probability, LoLP. This could contrast markets with an explicit capacity payment (essentially an insurance paid up front against future high prices) and an energy-only market in which firms estimate the amount to add on to variable costs for scarcity. The mathematical section develops these formulae and the investment rule, but an earlier simpler explanation would help the less mathematically brave. The relationship with screening curves, between optimality, cost recovery and competitive equilibrium are nice examples which are agreeably clear.

The following chapter 3 on Enron and the Californian crisis is an excellent motivation for discussing market power and its mitigation, although contracts (arguably the lack of which was part of the problem) are left to the next chapter (but without indicating their relevance to market power at this point). The discussion of imperfect competition walks through the standard models including supply functions, which are all explored mathematically. The main message is that sophisticated market surveillance, rather than setting price caps at a low level (relative to VOLL), is superior, leaving mandated contracting for the next chapter, where it is discussed in depth together with forward markets (as an aside, using the book as a reference is hampered by the inadequate index and its lack of page references to authors; contracts, for instance, are not in the index).

In Part II, the chapter on demand-side response (DSR) has a useful discussion of the relation between real-time pricing (RTP) and peak-time resale (PTR). PTR is popular with regulators, but it is only efficient and equivalent to RTP if associated with a previous contract to buy a specified amount, some of which can be resold in the spot market during the high-price peak. This discussion should be drawn to the attention of policy makers who argue that demand and supply side responses be treated alike. The later discussion of the costs and benefits of DSR is again quantified and directly policy relevant, arguing that while it makes sense for large consumers, it is not (and is not likely to become) worthwhile for small consumers. This conclusion is also likely to undermine the case for universal smart meters.

Part III of the book addresses network issues, nodal pricing and the exercise of local market power where transmission constraints fragment markets. Excellent although mathematically challenging stuff at the cutting edge of current research.

Part IV addresses policy issues, first reviewing technologies to mitigate climate change such as renewables, storage, carbon capture and storage, and nuclear power, followed by an analysis of climate policy tools such as carbon taxes vs carbon trading as in the ETS. The discussion of renewables support is mostly excellent, for example identifying the importance of learning externalities whereby current investment reduces the cost of subsequent investments, although failing to argue that this undermines the case for technology neutrality. Léautier points out that the merit order effect of renewables lowering wholesale prices is a disequilibrium effect (although disequilibrium can last a long time). The problems of negative prices caused by feed-in-tariffs are highlighted. The most important distortion, that if the carbon price is correctly set then the remaining market failure of learning externalities requires a capacity subsidy, not an output subsidy, is only mentioned in the very technical section at § 8.4.5. Although, even here it is only mentioned with the remark that it "constitutes a first best benchmark" without a discussion of why capacity rather than output subsidies are preferable. Again, the technical section and the calibration are excellent.

Earlier, in § 3.2.5, Léautier draws the important distinction between reliability, the responsibility of the system operator, and adequacy, which under some rather optimistic assumptions, might be left to the market. Now in Chapter 9, Léautier argues that there is no sound micro-economic case for a capacity market. The detailed list of arguments put forward in defence of capacity markets is fair and each argument is elegantly rebutted, concluding that the only remaining defence is as a legitimate political choice. This is to ignore the most important argument, that generation investments are highly durable, often with lengthy construction periods, while futures markets are lacking for more than two years ahead. Missing futures markets (often with a failure to properly price the full range of ancillary services) in an industry more than usually subject to the vagaries of political and regulatory distortions (as frequently described in this book) means that the risk and hence cost of capital will often be unacceptably high. That said, the discussion of how to design capacity markets and variants such as reliability options is excellent.

The final chapter is a succinct and wise summary of what we now know about the economics of electricity markets and how their design can be improved, arguing for an energy-only locationally priced wholesale market with proper CO_2 pricing. One can (and I do) take issue with this, but Léautier is sufficiently clear about his arguments that he provides the tools with which to reach possibly different solutions. He also accepts that policy makers "must find reasonably efficient compromises between economics and political realities". I would argue that economics is more nuanced than this book often suggests, but as a clear demolition of faulty economics this book has few if any equals.

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Consumers, Prosumers, Prosumagers. How Service Innovations Will Disrupt the Utility Business Model, edited by Sioshansi Fereidoon (Academic Press–Elsevier, 2019). 550 pages. ISBN: 9780128168356

If you are curious about the future potential of distributed and digitalised clean energy, you will be fascinated by this book. If you want to believe in the continued success of today's electricity utility business model, you might find it rather uncomfortable to read. Fereidoon Sioshansi's latest edited volume explores how units as small as households can become energy owner-user-managers with their own mini-systems and business relationships. To describe the possibilities, he and his co-authors coin a new word: "prosumager."

More ambitious than the now familiar solar prosumer, a prosumager considers the full range of currently available technologies and invests additionally in their own distributed storage and smart energy management systems. The heart of the book is a discussion of the implications of that choice.

On the one hand, installing storage means that this group will be "even less dependent on the distribution network" than prosumers. On the other hand, in their "more exotic" variants prosumagers may nonetheless sometimes wish to use public distribution networks to "trade or share their energy generation and consumption imbalance with others" on a peer-to-peer basis. Think of transactive or community projects.

Although today prosumagers are "miniscule in number," Sioshansi is confident that the phenomenon will grow "as innovators take advantage of lower costs and improved technologies to carve out profitable niches." Consequently, greater and greater energy consumer/actor stratification is "a matter of time."

This is a project of fifty-six co-authors. Together they have assembled a superbly rich up-to-date compendium of examples. Many of the case studies are from the cutting-edge: pilot-scale projects, mainly in geographies that are friendly to behind-the-meter—sunny, prosperous and spacious California and Australia (in Australia 20% of residential customers now have rooftop solar). In particular, the authors are interested in new intelligent digital control systems, and how these can enable coordination and optimisation of myriad heterogeneous small distributed assets. As they note, the key to smart demand is to smooth automation to minimise "input from or inconvenience to" human owner-users and the grid.

The authors also investigate the potential implications of stratification for business model change and market regulation.

Sioshansi's title declares that prosumagers will "disrupt the utility." The analysis of business experiments (few are yet commercially proven) however casts a wide net, looking both at opportunities for utilities to offer service innovations that can suit the needs of prosumagers and at digital energy start-ups. This breadth is valuable: the examples span energy aggregation, the bundling of different energy and non-energy goods into attractive packages, sophisticated monetisation, charging for access to micro-trading platforms, and arrangements that guarantee a customer peace of mind amid the increasing complexity of the new energy landscape.

As is to be expected with any early adopter or peer-to-peer phenomenon, the authors find a role also for "social value stacking" to combine financial and nonfinancial consumer propositions, notably by "tokenising" environmental and other ethical values. Here I found myself thinking about Michael Grubb's argument in *Planetary Economics* (2014) that renewables and prosuming are transformative in part because they mean that electricity ceases to be an undifferentiated and undeliberated commodity. Social stacking in electricity is the equivalent of selling food with organic certificates or at local farmers' markets.

Many of the book's authors are specialised in regulation and market design. They are intrigued to explore how prosumaging challenges today's framework and principles and introduces new conundrums. In what ways are existing regulations a barrier to exotic innovation? Will prosumagers "make good choices" or will their interests and actions compromise the functioning of the public network and therefore societal fairness and equity? One clear conclusion from this analysis is that regulatory regimes that have "worked so well for decades are struggling to keep pace" with the new grid-edge.

Chapters 2 and 8 explore how the "new dynamics" of distributed energy and demand flexibility are requiring a rethink of tariffs and the electricity system architecture. Tariffs, "historically designed to recover costs within acceptable social and regulatory goals of equity, understandability, and volatility" now need "to serve a new purpose: engaging demand to help the system achieve an efficient mix of resources." Moreover, to avoid network congestion and/or expensive infrastructure upgrades, tariffs should seek to distribute balancing services "close to distributed generation" to minimise bidirectional flows of energy over the network. This is the grid world turned upside down: there is still a key role for utilities—but it is not one that all of them will want to recognise.

I had the privilege to participate in a workshop with several authors shortly before this book's publication. That meeting provided a brilliantly clear one-line summary of the business

and regulatory implications of prosumager activity: in the words of co-author David Shipworth "in P2P, your legal status may change when the sun shines." The more formal conclusion of the book is that "The new world offers new opportunities but also adds new complexities. Those who can navigate the complexities welcome the opportunities."

There are limits, of course, to how thoroughly even a 550-page volume can discuss the diversity of the current forces for change in energy provision, management and use. Will solar-with-storage-and-smarts really be able to revolutionise systems in northern Europe's un-sunny and densely populated apartment block cities? Will nifty start-ups and regulatory refinements really be the key drivers of energy system disruption under the larger imperative of net-zero decarbonisation targets? What would the #schoolstrike kids make of this focus on market-driven change?

Another caveat is a question that I ask myself more and more frequently: how far can we meaningfully discuss the future of electricity systems when the voices in the room are only those of the electricity sector? Cars are mentioned as a factor for prosumaging but only chapter 18 looks closely at charging. Yet we know that vehicle manufacturers are acutely interested in the same opportunities as utilities—and that they bring big balance-sheets and large policy lobbying muscle. Similarly, the telecoms sector and the "FAANG" ICT giants (Facebook, Apple, Amazon, Google, Netflix) surely belong in this discussion, although noting that they are less interested in electrons as such than in the data that individual electricity consumers and appliances can now generate.

Similarly, the energy world has learned a lot in the last few years about digitalisation and its impacts. But there is not yet a shared dialogue with the wider digital community—at least, the energy debate does not share the vocabulary of the Silicon Valley developer and does not seem at home in that context. It is a little strange to read a book about digital business innovations without frequent repetition of the words "minimum viable product." "Platforms" are sometimes grids and sometimes the phenomenon of new marketplace apps that link seemingly unrelated sectors and—as MIT notes—"virtually always win" the competition with the conventional market-maker. Cybersecurity is mentioned only in passing.

Finally, throughout this book there is an interesting ambiguity about how far the coming disruption in electricity systems will start with technology change or simply with unhappy customers. This might be worthy of more analysis: a recent thought-provoking article by Thales S. Teixeira in the *Harvard Business Review* (06/2019) finds that while CEOs think that technology and start-ups drive business model change, objectively "the most common and pervasive pattern of disruption is driven by customers." Teixeira argues "They are the ones behind the decisions to adopt or reject new technologies or new products. When large companies decide to focus on changing customer needs and wants, they end up responding more effectively to digital disruption." His examples are from many sectors: loans, video games, mass retail, hospitality, news, auto transportation, personal grooming, commercial real estate, insurance, payments, audience measurement, luxury handbags, pharmacy, telecoms, and B2B software. Energy, however, is yet to be examined. The question of how electricity incumbents understand disruption, and how best they can respond, perhaps deserves more discussion in the next work in Sioshansi's lively series. I look forward to reading more.

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