

## RECOGNIZING THE CRIMINAL/CIVIL DIVIDE IN THE USE OF ENERGY DATA

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### INTRODUCTION

In their 2020 Article, *Protecting Energy Privacy Across the Public/Private Divide*, Professor Matthew Kugler and recent law school graduate Meredith Hurley express concern that the “smart home” revolution poses dangerous privacy risks to homeowners who do not realize that the data collected by their smart appliances may be used against them by law enforcement.<sup>1</sup> If law enforcement can access individual homeowner real time electricity and water use data, it can show whether or not a person was home at a particular time, what she was doing in the home, and who else was in the home with her. Kugler and Hurley raise important privacy concerns associated with that data, and we agree such data should be protected under the Fourth Amendment and state law in the law enforcement context. However, Kugler and Hurley downplay the benefits of this data outside the law enforcement context. For instance, they state with regard to individual energy data: “Should it be available to university researchers looking for potential energy-efficiency improvements? Local department stores hoping to sell you a more efficient clothes dryer? Low level government employees who may also be your neighbors? Tech companies looking to improve the efficiency and “smartness” of your home?”<sup>2</sup>

If the benefits of energy use data were limited to those circumstances, then there would be little need to carefully consider the benefits and drawbacks of making such data available, in some form, to anyone beyond the individual homeowner and the electric utility. But as we discuss in our 2016 article, *Remaking Energy: The Critical Role of Energy Consumption Data*,<sup>3</sup> the public interest requires that the federal government and states ensure that appropriately anonymized and aggregated energy consumption data is made available to a wider range of actors than the electricity customer and the electric utility. Kugler and Hurley focus their analysis on establishing that, in the law enforcement context, the Fourth Amendment should protect that data from disclosure without the owners’ consent regardless of whether the utility collecting the data is a private company or a government utility. We agree completely with that conclusion. But by focusing their analysis primarily on that narrow question, Kugler and Hurley risk leaving the reader with

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1. Matthew B. Kugler & Meredith Hurley, *Protecting Energy Privacy Across the Public/Private Divide*, 72 FLA. L. REV. 451, 451 (2020).

2. *Id.* at 453.

3. Alexandra B. Klass & Elizabeth J. Wilson, *Remaking Energy: The Critical Role of Energy Consumption Data*, 104 CALIF. L. REV. 1095, 1095 (2016).

a misunderstanding of the importance of the data in question outside the law enforcement context. This has significant implications in the policymaking realm, where lawmakers and advocates may use the analysis in Kugler and Hurley's Article to be mistrustful of energy consumption data in general, and place limits on its use even outside the law enforcement context. That result would harm electricity customers, local governments, and the broader public, all of which stand to benefit from greater availability of standardized, anonymized, aggregated energy consumption data. This Response will explain these issues in more detail below.

### I. ENERGY DATA AND THE FOURTH AMENDMENT

First, in this Response, we agree with Kugler and Hurley that based on current case law, as well as a matter of good public policy, the Fourth Amendment should apply to customer energy usage data and that a warrant should be required to obtain that data for law enforcement purposes. Both *Carpenter v. United States*,<sup>4</sup> and *Naperville Smart Meter Awareness*,<sup>5</sup> two of the key cases discussed in Kugler and Hurley's Article, support that conclusion. In light of *Carpenter*, it is very likely the U.S. Supreme Court would hold there is an expectation of privacy in smart meter data, just like cell phone data, and that the collection and use of that data is a "search" under the Fourth Amendment. However, as the U.S. Court of Appeals for the Seventh Circuit recognized in *Naperville Smart Meter Awareness*, the real question outside the law enforcement context is whether the collection and use of that data without a warrant constitutes an "unreasonable" search.<sup>6</sup> The Seventh Circuit held that it did not, because the data collected by the municipal utility in that case was not being used for law enforcement purposes; the municipal utility planned to use the data for distribution network and grid efficiency, emissions reductions, and other public benefits that were a "significant" government interest; and the data collection was not particularly invasive.<sup>7</sup> In reaching this conclusion, the Seventh Circuit correctly relied on Fourth Amendment case law in other contexts that carefully considered the collection of data without a warrant in a civil context versus in a criminal context, and found that data collection for non-criminal law purposes was not an unreasonable search without a warrant.<sup>8</sup>

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4. *Carpenter v. United States*, 138 S. Ct. 2206, 2209–10 (2018).

5. *Naperville Smart Meter Awareness v. City of Naperville*, 900 F.3d 521, 529 (7th Cir. 2018).

6. *Naperville Smart Meter Awareness*, 900 F.3d at 527–28.

7. *Id.* at 528–29.

8. *Id.* at 528 ("Since these searches are not performed as part of a criminal investigation, . . . we can turn immediately to an assessment of whether they are reasonable, 'by balancing its intrusion on the individual's Fourth Amendment interests against its promotion of

In their Article, Kugler and Hurley express concern that the Seventh Circuit’s holding in *Naperville Smart Meter Awareness* was limited to the situation where the electric utility collecting the data was a municipal utility and thus was a government actor. Kugler and Hurley worry that a subsequent court in a case involving a private, investor-owned utility might find the Fourth Amendment does not apply based on the third-party doctrine. However, based on *Carpenter*, there is little, if any, legal basis to distinguish between government utilities and investor-owned utilities when it comes to Fourth Amendment protections. Thus, we agree with Kugler and Hurley that Fourth Amendment protections should apply regardless of whether the electric utility collecting the data is a government utility or a private utility.<sup>9</sup> To the extent that is the main thesis of Kugler and Hurley’s Article, we wholeheartedly support it. But that is where the authors seem to end their analysis. Once the law enforcement context is put aside, however, an important question remains: how and under what circumstances can the data be used in the public interest in a way that does not unduly compromise the energy customer’s privacy interests?

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legitimate government interests.”) (quoting *Hiibel v. Sixth Jud. Dist. Ct.*, 542 U.S. 177, 187–88 (2004) and citing *Riley v. California*, 134 S. Ct. 2473, 2482 (2014)). See also *Maryland v. King*, 569 U.S. 435, 435 (2013) (finding that a search to obtain DNA sample after arrest without a warrant was reasonable); *Nat’l Aeronautics & Space Admin. v. Nelson*, 562 U.S. 134, 134–37 (2011) (holding that information requested by government in employment background check related to prior drug use or counseling and treatment related to same did not violate information privacy rights).

9. Kugler and Hurley often refer to government utilities as “public utilities” in their Article. This terminology is incorrect, at least in the energy law world. Government utilities are “publicly-owned utilities,” but the term “public utility” is used universally in the energy law field as a shorthand for “publicly-regulated utilities,” which are private, investor-owned utilities. To the extent this Response makes a distinction between government utilities and private utilities in this response essay, we will use the term “government utility” or “publicly-owned utility” to refer to government utilities and “private utilities” to refer to investor-owned utilities and rural electric cooperatives (which are private, non-profit utility organizations that, like government utilities, are subject to light or no regulation by the Federal Energy Regulatory Commission and state public utility commissions). See, e.g., Federal Power Act, 16 U.S.C. §§ 824(e)–(f) (defining “public utility” as “any person who owns or operates facilities subject to the jurisdiction of the Commission” and excluding from Commission jurisdiction the United States, states, political subdivisions of states, and most rural electric cooperatives); MINN. STAT. § 216B.02 (defining a “public utility” as any “persons, corporations, or other legal entities, . . . maintaining, or controlling in this state equipment or facilities for furnishing at retail natural, manufactured, or mixed gas or electric service to or for the public or engaged in the production and retail sale thereof but does not include (1) a municipality or a cooperative electric association, organized under the provisions of chapter 308A, producing or furnishing natural, manufactured, or mixed gas or electric service; . . .”); LINCOLN L. DAVIES, ET AL. ENERGY LAW AND POLICY 264 (2d ed. 2018) (describing investor-owned utilities (IOUs) and explaining that “[t]he law calls IOUs ‘public utilities’ even though they are privately owned, because they have a legal obligation to serve the public.”).

## II. ENERGY DATA AND THE PUBLIC INTEREST

It is on this question of the scope of the public interest that Kugler and Hurley's Article falls short. Nowhere until the very end of the Article do the authors really address *why* this data is so important and for what purposes beyond the law enforcement context (for which, as previously stated, a warrant should be required). The authors make a few references to such data helping electric utilities save money and providing helpful information for third-party energy efficiency companies to make a profit, but they go no further than that until too late in the Article. Thus, they tend to minimize two important facts. First, customers themselves want and need this data and, if there are too many roadblocks to obtaining it (or obtaining it in a useful form), they cannot get it and use it. Second, it is in the public interest for local governments and researchers to have access to anonymized, aggregated data in a standardized form to rework our energy systems to decarbonize the electric grid, reduce energy demand from existing buildings, and adapt those buildings to withstand increased severe weather and a changing climate.

Existing buildings account for about half of overall energy consumption in the United States and 75 percent of electricity consumption.<sup>10</sup> The commercial and residential sectors alone constitute approximately 13 percent of total U.S. Greenhouse Gas (GHG) emissions.<sup>11</sup> Thus, it is imperative that legislators and regulators put policies and incentives in place to build new buildings and retrofit existing buildings to make them more energy efficient and weather resistant. This will both *mitigate* the impacts of climate change through reducing GHG emissions and simultaneously *adapt* our built infrastructure to a rapidly changing climate. To develop and implement appropriate policies, policymakers, researchers, and energy efficiency providers need access to large amounts of building energy use data in standardized, usable form to prioritize neighborhoods and communities, implement programs, and evaluate those programs.

If we fail to accomplish those goals, the impacts of climate change will interfere with our daily lives to such an extent that the least of our problems will be the scope of Fourth Amendment protection for our energy data. Thus, this Response strongly disagrees that lawmakers should enact policies prohibiting energy efficiency companies and similar industries from gaining access to customer energy consumption

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10. U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW, CH. 5, INCREASING EFFICIENCY OF BUILDING SYSTEMS AND TECHNOLOGIES 145 (Sept. 2015), <https://www.energy.gov/sites/prod/files/2017/03/f34/qtr-2015-chapter5.pdf> [<https://perma.cc/J4A3-6W95>].

11. *Sources of Greenhouse Gas Emissions*, U.S. ENV'T. PROT. AGENCY, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> [<https://perma.cc/SPL5-DNSS>].

data. Such companies should have access to such data so long as it is properly anonymized and aggregated, and their use of that data should be highly regulated, as is set forth in more detail in our 2016 article.

Moreover, even beyond responding to climate change, energy consumption data is critical to addressing widespread and longstanding energy poverty. With over one-third of Americans struggling to afford their energy bills, it is essential that these customers and the nonprofits assisting them have access to essential energy data.<sup>12</sup> Indeed, low-income, minority households pay as much as 20 percent of their household income on utility bills in some urban areas, as compared to approximately 2 percent for high-income households.<sup>13</sup> Studies also show that effective energy efficiency programs can reduce this energy burden on low-income households, allowing more of their income to go to food, medicine, and other necessities.<sup>14</sup> American society recognizes that proper collection and analysis of education data, healthcare data, and the like are necessary to improve the lives of the public—particularly those citizens with less access to resources. Accordingly, our laws ensure that governments, researchers, health care providers, and nonprofits in those sectors have access to that data with appropriate privacy protections in place. Likewise, governments, researchers, and nonprofits can and should use customer energy usage data to improve the lives of those citizens who often cannot heat their homes, cook their food, and pay their bills because of poor weatherization and inefficient HVAC systems and appliances. Energy system program design *is* social policy and ensuring energy efficiency and weatherization programs are accessible to all customers is a critical measure of programmatic success.<sup>15</sup>

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12. *One in Three U.S. Households Faced Challenges in Paying Energy Bills in 2015*, U.S. ENERGY INFO. ADMIN., RESIDENTIAL ENERGY CONSUMPTION SURVEY (2015), <https://www.eia.gov/consumption/residential/reports/2015/energybills/> [<https://perma.cc/BG4U-RNWE>].

13. *See, e.g.*, Deepa Shivaram, *Shalanda Baker and the Energy Crisis Plaguing Black and Brown Americans*, NBC NEWS (Mar. 9, 2021), <https://www.nbcnews.com/news/nbcblk/shalanda-baker-energy-crisis-plaguing-black-brown-americans-n1260047> [<https://perma.cc/9CNN-ME9N>]; Ariel Drehol, *Explaining the Energy Burden of Low-Income Households*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (May 20, 2016), <https://www.aceee.org/blog/2016/05/explaining-unique-energy-burden-low> [<https://perma.cc/WP8D-YSE2>] (discussing a 2016 report by the American Council for an Energy-Efficient Economy entitled *Lifting the High Energy Burden in America's Largest Cities*).

14. Drehol, *supra* note 13.

15. *See* Tony G. Reames, *Targeting Energy Justice: Exploring Spatial, Racial/Ethnic and Socioeconomic Disparities in Urban Residential Heating Energy Efficiency*, 97 ENERGY POL'Y 549–58 (2016); Tony G. Reames, *A Community-based Approach to Low-Income Residential Energy Efficiency Participation Barriers*, 21 LOCAL ENV'T 1449–66 (2016); Daniel Raimi, *Defining, Measuring, and Addressing Energy Poverty*, *With Tony Reames*, RES. RADIO (Jan. 19, 2021), <https://www.resources.org/resources-radio/defining-measuring-and-addressing-energy->

The Texas electric grid disaster in February 2021 is only the most recent example where an extreme, but not unprecedented, weather event impacted the electric grid in such a way as to cause people to die in their homes from hypothermia, pipes to burst, large electric generating plants to shut down, and the state and its residents to sustain potentially upwards of \$100 billion—the largest disaster in the state’s history.<sup>16</sup> Tragedies like this can be avoided and harm minimized through more energy efficient and better weatherized buildings, increased distributed energy resources such as rooftop solar and storage; better weatherization of all energy and water infrastructure; and, importantly, enhanced communications between grid operators, electricity providers, and individual customers.<sup>17</sup>

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poverty-with-tony-reames/ [https://perma.cc/C4YW-4C3T] (discussing the importance of metrics and data to increase energy efficiency and weatherization in low-income homes to reduce energy poverty). *See also Average Monthly Electricity Bill for U.S. Residential Customers Declined in 2019*, U.S. ENERGY INFO. ADMIN. (Dec. 15, 2020), <https://www.eia.gov/todayinenergy/detail.php?id=46276> [https://perma.cc/3PNT-TWYL] (showing average monthly residential energy costs in the highest cost states and lowest cost states and explaining how average bills decreased from 2018 to 2019 due to “the increased use of behind-the-meter generation (such as rooftop solar panels), high-efficiency appliances, more efficient lighting, and smart energy-saving devices”).

16. *See, e.g.*, Brian K. Sullivan, *Texas Deep Freeze Could Cost \$90 Billion in Losses, Modeler Says*, BLOOMBERG LAW (Feb. 24, 2021), <https://www.bloomberg.com/news/articles/2021-02-24/texas-deep-freeze-could-cost-90-billion-in-losses-modeler-says> [https://perma.cc/XN34-UR4H]; Laurel Calkins, *Texas Deep Freeze Should Cost ERCOT Billions, Judge Told*, BLOOMBERG LAW (Mar. 10, 2021), <https://www.bloomberg.com/news/articles/2021-03-10/ercot-must-face-liability-for-blackout-losses-texas-county-says> [https://perma.cc/K5H6-KHWC] (“The Perryman Group, a Texas-based economic research firm, projects the state’s economic impact from the February winter storm at \$195 billion to \$295 billion, according to the filing. The week-long freeze killed more than 80 people, as the state’s electricity grid shut down, subjecting millions of Texans to freezing darkness and burst water pipes.”); Alexandra B. Klass, *Lessons from the Texas Grid Disaster: Planning and Investing for a Different Future*, LAWFARE (Feb. 22, 2021), <https://www.lawfareblog.com/lessons-texas-grid-disaster-planning-and-investing-different-future> [https://perma.cc/TC3X-JHX9]; Mitchell Ferman, *Winter Storm Could Cost Texas More Money Than Any Disaster in State History*, TEXAS TRIBUNE (Feb. 25, 2021), <https://www.texastribune.org/2021/02/25/texas-winter-storm-cost-budget/> [https://perma.cc/BT45-2LXX]; Catherine Morehouse, *ERCOT Narrowly Avoided “Much More Devastating Impacts” As Nearly Half of Generation Went Offline: CEO*, UTIL. DIVE (Feb. 25, 2021), <https://www.utilitydive.com/news/ercot-narrowly-avoided-much-more-devastating-impacts-as-nearly-half-of-gc/595701/> [https://perma.cc/T6AV-2SBB]; Edward Klump & Mike Lee, *4 Takeaways from Texas Blackout Crisis*, ENERGYWIRE (Feb. 24, 2021); Naureen S. Malik, et al., *Power Outages Main Cause of Oil, Gas Shut-Ins*, BLOOMBERG LAW (Feb. 25, 2021), <https://www.bloomberg.com/news/articles/2021-02-25/texas-power-producers-blame-system-failures-for-outages> [https://perma.cc/MWD5-EX5W].

17. *See, e.g.*, Edward Klump, *Texas Blackouts: 10 Ways to Fix the Power Grid*, E&E NEWS: ENERGYWIRE (Mar. 11, 2021) (discussing the need to better weatherize homes; increase electric utility energy efficiency programs; implement greater demand response and distributed energy resources in a broader range of communities, particularly low-income ones that suffered the worst in the Texas crisis; and build “community resilience.”)

### III. ENERGY DATA, REGULATION, AND FEDERALISM

As we discuss in our 2016 article, achieving grid modernization, reducing energy poverty, increasing energy efficiency, and mitigating and adapting to climate change requires access to good data in a standardized, usable format. In our article, we examined longstanding federal data access and privacy regimes in health care, toxic releases, GHG reporting, education, and census collection as examples where federal regulators have addressed similar tensions between balancing data privacy and third-party data access in the public interest.<sup>18</sup> In a footnote, Kugler and Hurley state that they agree with the use of federal law governing health care data as “a model for making energy consumption data available for research purposes” while also noting that they “disagree” with us “on many points” (without specifying which points).<sup>19</sup> In Sections III.C and III.D of their Article, Kugler and Hurley survey other areas of federal law, particularly regulation by the Federal Trade Commission (FTC), to discuss various proposals to make individual data available and useful to customers, and anonymous and aggregated data available to other parties working on energy efficiency, grid modernization, and other energy transition projects.<sup>20</sup> We agree that these efforts are a step in the right direction.

However, by focusing mostly on federal law, Kugler and Hurley ignore that states have the primary authority under the Federal Power Act to regulate the relationship between electric utilities and retail customers. While they discuss state law briefly, they could have done much more, as state public utility commissions have been quite active enacting regulations and policies in this area. We discuss some of those policies in detail in our 2016 article, and additional states have developed policies since that time. Moreover, as we explained in an earlier article entitled *Energy Consumption Data: The Key to Improved Energy Efficiency*, it is important to consider which level of government is in the best position to address different questions in addressing privacy and access with regard to energy consumption data.<sup>21</sup> In that article, we concluded that the federal government may be in the best position to set standardization requirements for data to make it usable by customers, governments, and third parties.<sup>22</sup> With regard to aggregation and privacy standards, states

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18. Klass & Wilson, *supra* note 3, at 1126–50.

19. See Kugler & Hurley, *supra* note 1, at n.351.

20. *Id.* at 507–13.

21. Alexandra B. Klass & Elizabeth Wilson, *Energy Consumption Data: The Key to Improved Energy Efficiency*, 6 SAN DIEGO J. OF CLIMATE & ENERGY L. 69, 110–13 (2014–2015).

22. *Id.* The Green Button Initiative, based on a call to action by the Obama White House, is an industry-led, nationwide effort to standardize energy data for customers and third parties with customer consent. However, it is voluntary only and the bulk of the nation’s utilities have not adopted it. See *About Green Button and the Alliance*, GREEN BUTTON ALLIANCE,

may be in a superior position to set policy, at least for now, as some level of experimentation may be desirable.<sup>23</sup> Enforcement of data privacy violations likely can be addressed at the federal level (as Kugler and Hurley discuss in the context of the FTC) or at the state level. However, to the extent a federal agency should be involved in collection and enforcement, one of the energy agencies, such as the U.S. Department of Energy or the Federal Energy Regulatory Commission, would be a superior choice to the FTC because the former agencies already have expertise when it comes to energy data and are familiar with its uses and potential misuses.

When they do discuss state laws and regulations, Kugler and Hurley limit their discussion to state laws that prevent utilities from disclosing customer data without the customers' consent.<sup>24</sup> While this is highly relevant in the criminal law context, it does little to balance the need for privacy against the public interest in greater access to energy data in usable form outside of that context. Indeed, in recent years, an increasing number of state regulatory commissions have gone further and put in place regulations attempting to balance privacy interests with the public interest in anonymized, aggregated data, recognizing the important energy efficiency, cost reduction, and decarbonization benefits associated with government and authorized third-party use of that data.<sup>25</sup> Moreover, there is a growing literature on ways in which state and federal regulators can create data access requirements, enforcement provisions, private rights of action, and penalties to prevent misuse of customer data, as exists in other fields.<sup>26</sup> Thus, a more detailed discussion of how those states have balanced privacy interests and the public interest in greater data access, along with enforcement mechanisms, would have enhanced the discussion.

Kugler and Hurley also do not address that it is primarily private utilities that historically have resisted making this data available in usable

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<https://www.greenbuttonalliance.org/about> [<https://perma.cc/28WM-47RW>]; *Green Button Connect My Data (CMD)*, GREEN BUTTON ALLIANCE, <https://www.greenbuttonalliance.org/about-cmd> [<https://perma.cc/MF3F-ZD8H>].

23. *Id.*

24. Kugler & Hurley, *supra* note 1, at 508–09.

25. *See, e.g.*, Klass & Wilson, *supra* note 3, at 1117–23 (discussing law and regulations in various states with details on anonymization and aggregation requirements and third parties eligible to access that data without customer consent); Jossi, *infra* note 28; Order Adopting Open Data Access Standards and Establishing Further Proceedings, Docket Nos. E,G-999/M-19-505 and E,G-999/CI-12-1344 (Minn. P.U.C., Nov. 20, 2020) (finding “the public interest would be served” by requiring electric and gas utilities in the state over a certain size to collect and share anonymized, aggregated customer energy usage data with third parties and setting forth standards for collecting, managing, and distributing that data).

26. *See, e.g.*, FREEING ENERGY DATA, *infra* note 27, at 27–42 (discussing regulatory and contractual proposals).

form to customers or others. Kugler and Hurley state there is a “long history” of utilities making customer data available to government agencies.<sup>27</sup> This may be true in the law enforcement context, but it generally is not true outside that context, which is the focus of this Response and our earlier work on the topic. Utility resistance to making available customer energy data in standardized formats to either the customer or third-parties can be for various reasons that include: (1) costs incurred compiling and maintaining the data in a form useful for customers and third-parties and responding to requests for that data; (2) fear of privacy-related lawsuits; (3) desire to maintain the value of proprietary data for their own business purposes and (4) to avoid competition with third-party solar and energy efficiency providers and others who might use that data to provide services to customer the utility may wish (theoretically) to provide to them itself (either now or in the future).<sup>28</sup>

While there are examples of utilities working cooperatively with regulators and energy efficiency advocates to make such data available when state regulators require it or when incentives are aligned, there are many cases where utilities serve as a roadblock to progress.<sup>29</sup> Thus, although legislation restricting law enforcement access to energy data is important (and this Response concurs with the suggestions in Kugler and Hurley’s Article on that issue), legislation regarding making the data

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27. Kugler & Hurley, *supra* note 1, at 505.

28. See ABRAMS ENVIRONMENTAL LAW CLINIC, UNIVERSITY OF CHICAGO LAW SCHOOL, FREEING ENERGY DATA: A GUIDE FOR REGULATORS TO REDUCE ONE BARRIER TO ENERGY EFFICIENCY 15 (June 2016) (discussing reasons why utilities often oppose increased access to customer energy data); Jeff St. John, *Why Most US Utilities Are Failing to Make the Most of Their Smart Meters*, GREENTECH MEDIA (Jan. 10, 2020), <https://www.greentechmedia.com/articles/read/why-most-u-s-utilities-arent-making-the-most-of-their-smart-meters> [https://perma.cc/39HD-UECT].

29. See, e.g., Frank Jossi, *Minnesota Regulators Consider Who Should Have Access to Smart Meter Data*, ENERGY NEWS NETWORK (Aug. 3, 2020), <https://energynews.us/2020/08/03/minnesota-regulators-consider-who-should-have-access-to-smart-meter-data/> [https://perma.cc/3QNN-STBQ] (discussing public benefits of increased access to aggregated and anonymized smart meter data, state laws that require such data to be made available to consumers and third parties in usable form, and a divide among utilities regarding whether such data should be made available to consumers and third parties). See also *Energy Data Access*, AM. COUNCIL FOR AN ENERGY EFFICIENT ECONOMY (last updated July 2021), <https://database.aceee.org/city/energy-data-access> [https://perma.cc/K3R3-GRRV] (listing utilities in major urban areas in the United States that do not provide energy benchmarking data to building managers in a usable format, describing efforts of cities to obtain better data, and the need for such data for community planning to improve energy efficiency in these communities); *Data Access*, AM. COUNCIL FOR AN ENERGY EFFICIENT ECONOMY, <https://database.aceee.org/state/data-access> [https://perma.cc/5ERS-53W4] (survey of laws in all 50 states and showing most states do not have policies or guidelines in place governing third-party access to customer energy usage data or standardization requirements to make that data usable to customers and third parties).

available for non-law enforcement purposes is even more important because there are often more powerful stakeholders (incumbent utilities and others) imposing roadblocks to good policy.<sup>30</sup>

In many ways, our work in this area and Kugler and Hurley's Article reinforce each other, albeit with different emphases. In earlier work and in this Response, we made two proposals regarding individual customer energy consumption data. First, states should require utilities to make individualized data available to customers who wish to have it in a form they can use and share with third parties at their option. Second, states should make anonymous, aggregated data available to local governments, researchers, and in some cases, other third parties, in connection with their critical work decarbonizing the electricity sector, creating more energy efficient and weatherized homes, and adapting the electricity and building sectors of the economy to the worsening effects of climate change. Requiring individual customer consent on an owner-by-owner basis is not feasible and neither is the lack of state policy development regarding standardization of data format.

#### CONCLUSION

Current efforts to decarbonize buildings, enhance energy efficiency and weatherization in buildings and related infrastructure, install distributed energy resources like rooftop solar and batteries, and increase connectivity and two-way communication between customers and grid operators are essential to address the nation's public health and environmental challenges. Aggregated energy use data is important for the individual customer, for communities and governments to evaluate and benchmark progress towards efficiency or climate goals, and to address issues of equity and energy poverty. Kugler and Hurley recognize some of these benefits of increased access to energy data but downplay them in light of privacy and Fourth Amendment concerns in the law enforcement context. As discussed above, and as the case law recognizes, the criminal and civil realm can and should be kept separate when it comes to energy data and each regulated appropriately.

On the consumer side, Kugler and Hurley state that most customers do not want to deal with their data privacy issues.<sup>31</sup> But that is not the only question to be addressed. Energy data is important not only for the consumer, but also for society. Reducing GHG emissions and adapting to a changing climate requires new ways of using and producing energy. New distributed energy technologies can allow for flexibility in energy use and provides the ability to create more resilient, lower cost electricity

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30. See, e.g., LEAH C. STOKES, SHORT CIRCUITING POLICY: INTEREST GROUPS AND THE BATTLE OVER CLEAN ENERGY AND CLIMATE POLICY IN THE AMERICAN STATES 5–7 (2020).

31. Kugler & Hurley, *supra* note 1, at 499 (“Most people do not want to read long privacy policies or actively manage their privacy in the consumer sphere.”).

systems. While historic grid architectures were not designed for these two-way energy flows, future systems must be able to better manage energy generation and use in real time. This means that utilities and third-party providers need to work together to manage grid operation. This also means that meeting climate goals will encompass reducing GHG emissions *while simultaneously* adapting to an uncertain climate future. This is precisely why local governments, researchers, regulated nonprofits, and private sector energy efficiency and distributed generation companies should be able to access anonymized and aggregated data in some form so that they can work to find solutions to energy usage problems without the customer needing to micromanage the data unless they want to. Developing policies to accomplish these goals will support a clean energy transition, lower energy demand, reduce the risk of grid failure associated with extreme temperatures, and help reduce widespread energy poverty.