The Real Estate Roundtable

Comments of

THE REAL ESTATE ROUNDTABLE

to the

U.S. DEPARTMENT OF ENERGY

Regarding Request for Information Published at

75 Fed. Reg. 26,203 (May 11, 2010)

"Implementing the National Broadband Plan by Empowering Consumers and the Smart Grid: Data Access, Third Party Use, and Privacy"

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The Real Estate Roundtable is pleased to provide these comments in response to the Request for Information issued by the U.S. Department of Energy ("DOE"), published at 75 Fed. Reg. 26,203 (May 11, 2010) entitled, "Implementing the National Broadband Plan by Empowering Consumers and the Smart Grid: Data Access, Third Party Use, and Privacy."

The Real Estate Roundtable brings together leaders of the nation's top publicly-held and privately-owned real estate ownership, development, lending and management firms with the leaders of major national real estate trade associations to jointly address key national policy issues relating to real estate and the overall economy. Collectively, Roundtable members' portfolios contain over 5 billion square feet of office, retail and industrial properties valued at more than $1 trillion; over 1.5 million apartment units; and in excess of 1.3 million hotel rooms. Participating trade associations represent more than 1.5 million people involved in virtually every aspect of the real estate business. By identifying, analyzing and coordinating policy positions, The Roundtable's business and trade association leaders seek to ensure that a cohesive industry voice is heard by government officials and the public about real estate and its important role in the national and global economies.

GENERAL COMMENTS

- **Behavior of building occupants is critical to understanding, controlling, and reducing power consumption in buildings.**

Commercial and multifamily building owners and managers, and their tenants and occupants, can play a significant role to reduce power costs and curb greenhouse gas emissions. The Energy Information Administration estimates that the commercial "end-use" sector accounts for 46% of building energy use. See Table 2.1a at http://www.eia.doe.gov/emeu/aer/consump.html. While commercial property owners can install high efficiency equipment and building managers can ensure that systems operate for maximum effectiveness, The Roundtable must emphasize that occupant behavior in a building largely drives energy consumption. The majority of a building's electricity use is associated with systems and equipment under the sole control of tenants and occupants, outside of the owners' ability to manage, and not covered by building codes (*e.g.*, tenant plug loads and usage of appliances, computers, tvs, etc.). Not all commercial and multifamily buildings have the same mixes of residential or office tenants; families use more electricity than households without children, and law firms and financial services companies generate greater demands for power than businesses operating on a more regular 9-5 schedule. To the same point, unique leasing arrangements between owners and tenants address issues such as payment of utility bills, access to energy consumption data, sub-metering, individual unit thermostat controls, window opening, and a variety of other items affecting whole-building energy consumption. The Roundtable thus cautions against a "one size fits all" approach to regulate energy efficiency and power consumption in commercial and multifamily structures. We likewise emphasize that any program of federal financial incentives for energy efficiency must be flexible enough to encourage retrofits that make sense for varied building types, occupant behaviors, local and state regulations, and regional climatic conditions.

- **Smart Grid technologies present great opportunities in energy consumption data collection, but likewise pose unprecedented consumer privacy concerns.**

Expansion of Internet access through projects like the National Broadband Plan, combined with international and domestic laws and guidelines to reduce power use and curb greenhouse gas emissions, will likely spur installation of millions of smart grid devices over the next decade. Some smart meters will be able to monitor electricity use in homes and offices at spans close to real time (even as short as every minute), and can provide detailed data on specific appliances used by consumers, the frequency of their use, times of building and room occupancy, and the number of people who occupy a home or office.

Collection of and access to massive quantities of power consumption data at such granular levels present both great opportunities and serious risks. On the positive side, Smart Grid deployment will replace the aging and over-burdened electrical network in the United States, adding monitoring, analysis, control and communication capabilities to help ensure efficient transmission and use of electricity, and reduce energy consumption. The information gathered by smart meters and transmitted to utilities across broadband, fiber-optic cable, and other infrastructure can help make our power system less wasteful and more reliable.

Yet, the capture, storage and use of behavioral data supplied to a utility company over a wide area network – if not accompanied by means to safeguard against nonconsensual public access – can result in breaches of privacy that threaten personal and workplace safety. Indeed, the scope of privacy issues implicated by Smart Grid deployment is even broader than those regarding the Internet, which are limited to the activities of Web users. The Smart Grid will allow collection of information about the minutiae of people's daily activities and habits in their homes, places of business, and other areas where occupants have reasonable expectations of privacy. Studies of Smart Grid technologies identify potential vulnerabilities such as hackers doctoring a consumer's energy bills, remote control by disreputable third parties who might turn power off and on, warrantless searches of property by law enforcers, intrusive marketers seeking to profit from occupants' behavior, and burglars who might easily determine when a home or office is unoccupied because power is off.

The Real Estate Roundtable thus appreciates DOE's information collection efforts, to recognize that the technological and energy benefits which can accrue from the Smart Grid must be tempered by allowing energy consumers to control what information is collected, who has access to it, and how it may be used. Growth in Smart Grid technologies will depend largely on the level of confidence that building owners, their tenants, and other consumers have in how their energy data is used by utilities, the government, and third parties.

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With these introductory points in mind, The Roundtable is pleased to provide answers to some of the specific questions posed by DOE with regard to energy consumption data access and privacy. We submit these comments in the spirit of an on-going dialogue with DOE and its sister

agencies as new technologies, policies and laws arise in the rapidly evolving areas of Smart Grid and National Broadband Plan deployment.

RESPONSES TO SPECIFIC QUESTIONS

(1) Who owns energy consumption data?

As a general matter, consumers of energy own their own energy consumption data. Identifying the energy "consumer," however, is a layered task in the context of income-generating properties like multifamily, office, retail and other commercial buildings where building ownership is divested from tenant occupancy. Building *operators* or tenants typically own the energy consumption data regarding the spaces they lease or rent. Building *owners*, in turn, own energy consumption data relative to those common space areas within their control to manage and maintain (such as lobbies, hallways, stairwells, parking facilities, recreational facilities, etc.) As a result of this divestiture of ownership from occupancy, building owners generally lack data that pertains to whole-building energy performance (unless there is some available means for the building owner to pay for it, or access to it has been negotiated through a lease or other means). Rather, consumption data at the whole-building level is typically within the custody of utilities who supply power to the structure.

The lack of access to tenants' energy consumption data is a significant impediment that prevents multifamily and commercial building owners from completely assessing, benchmarking, tracking, and improving their assets' overall energy performance. As building owners have a vested interest in and ability to influence energy consumption, they should have access to the energy consumption data for their buildings. While negotiated lease and contractual provisions could require a tenant to provide data to a landlord in a given instance, administrative processes and information transparency could be improved through practices whereby utilities provide whole-building energy information directly to building owners or managers. Ideally, utilities could supply this information electronically so building owners and managers could readily upload and input data to common on-line energy benchmarking and performance tools.

Ensuring the privacy and security of power use data is essential to consumer acceptance of the Smart Grid. The Roundtable looks forward to assisting DOE and other agencies to overcome barriers to data transparency that impede access by building owners to whole-asset energy performance information, while maintaining maximum confidentiality in consumption information owned by end users.

(2) Who should be entitled to privacy protections relating to energy information?

At the ***facility- or building-specific level,*** the consumer who pays the energy bill is entitled to privacy protections. The power customer owns the data, should have control over who might gain access to it, must know with whom their data is shared (if they consent to sharing), and should be able to withdraw information access as they see fit. Accordingly, general public disclosure of energy data owned by building owners and managers regarding consumption at

specific buildings should always be voluntary, consensual, and driven by competitive demands and needs in a given market. Likewise, particular tenants and occupants are entitled to privacy in their consumption data from the general public and third parties – although occupants who lease space in a building should make energy data transparent to their landlords or building owners. As explained in the introductory comments, building owners have a vested interest in their occupants' power consumption behavior; data on such behavior is critical for building owners and managers when deciding to make capital investments in their assets and initiating programs to address whole-building energy performance. Of course, occupant-specific energy power data should not be released by the building owner to third parties without written consent.

It is appropriate to publicly share power consumption information in the context of ***aggregated data*** which considers energy information from multiple buildings across geographic areas, space types, or some other high level variable that is averaged as representative of a given market. In the context of aggregated data as well, however, the identities of particular individuals, firms and companies must be protected from general public or third party disclosure.

(3) What, if any, privacy practices should be implemented in protecting energy information?

Appropriate government agencies and utilities should have access to energy consumption data from end users. Likewise, building owners should have access to the energy consumption data of their tenants. In both of these situations, individual privacy is limited insofar as energy consumption is concerned. The government knows the identities and addresses of energy end users, and building owners also possess information regarding the identities, addresses, and even the earnings of their tenants.

Those entities who are afforded access to end user power information must only collect data for specific, programmatic goals. Data should also be kept by utilities and government agencies for as short a time as possible, and records should be purged pursuant to established destruction protocols. Clear identification of what records are being collected, from whom, for how long, and for what purposes, are essential to ensure that information will be lost or misused and customer privacy is safeguarded.

(4) Should consumers be able to opt in/opt out of smart meter deployment or have control over what information is shared with utilities or third parties?

No (at least not at the single-family residential level). If a utility installs smart meters or a private company can afford the added expense to deploy those technologies in a commercial or multifamily building, a tenant should not have the ability to opt-out of using them. The objective of smart meters – and the private and public expenses that accompany such a capital investment – is to generate sufficient, reliable, useable, and accurate data on energy consumption, which can ideally lead to better equipment management and occupant behaviors to conserve power use. Such objectives would be compromised if tenants and other consumers can simply avoid using smart meters. As to data sharing and disclosing data generated by smart meters, please see responses (1), (2) and (3).

The Roundtable supports public investment in smart meters in commercial and multifamily buildings, and private sector incentives to help defray the costs of these expensive technologies. To the extent smart meters are installed in income-generating properties, end users should generally not be given an option to avoid using them.

(8) Which of the potentially relevant data privacy standards are best suited to provide a framework that will provide opportunities to experiment, rewards for successful innovators, and flexible protections that can accommodate widely varying reasonable consumer expectations?

Privacy regarding energy data is a significant issue should the general public and third parties seek access to power consumption data in the custody of government agencies and utilities. In this regard, applicable freedom of information and data disclosure laws should be consulted. For example, the federal Freedom of Information Act (FOIA) exempts from disclosure "commercial or financial information obtained from a person [that is] privileged or confidential." 5 U.S.C. § 552(b)(4). The Department of Justice explains:

> This exemption is intended to protect the interests of both the government and submitters of information. Its very existence encourages submitters to voluntarily furnish useful commercial or financial information to the government and it correspondingly provides the government with an assurance that such information will be reliable. The exemption also affords protection to those submitters who are required to furnish commercial or financial information to the government by safeguarding them from the competitive disadvantages that could result from disclosure.

U.S. Department of Justice, Guide to the Freedom of Information Act, available at http://www.justice.gov/oip/foia_guide09/exemption4.pdf. Accordingly, existing and established FOIA principles must apply to prevent wholesale release of energy consumption information to third parties and the public at large.

Of course, building owners, tenants, and other end users might agree to publicly disclose energy consumption data because they believe it is competitively advantageous for them to do so. But these consumers must control the terms and extent to which they agree to make such data generally accessible. Accordingly, as a prerequisite to disseminating a particular consumer's energy data, the government or other party requesting disclosure the data must first obtain the consumer's written consent.

(10) What security architecture provisions should be built into Smart Grid technologies to protect consumer privacy?

Just as with the Internet's development, privacy protections must be built into the Smart Grid from the start. Utilities and technology vendors must embed security in Smart Grid systems as they are deployed. Incorporating security measures up front will be necessary to establish encryption points along every portion of the grid that might be vulnerable to hackers – at the meter, the transformer, the substation, etc. Systems must be designed not only to prevent privacy

infringements, but also to allow utilities to quickly detect precisely where a breach has occurred, correct it, and safeguard other portions of the power supply infrastructure.

As one of the goals of the Smart Grid and the National Broadband Plan is to make energy data Web-accessible, security architecture must do more than simply protect public access to such data. Encryption software and other technologies must also operate to ensure against data manipulation, identity theft, and power theft by hackers into the Smart Grid. Above all, Smart Grid security architecture must protect personal and building safety. If power consumption data is to be disseminated on the Internet – especially in real time formats – no one should be able to determine if a home or office is empty or how many people occupy the building. Accordingly, as discussed throughout these comments, individual resident or occupant data should not be disseminated without the express written consent of those consumers.

(12) When, and through what mechanisms, should authorized agents of Federal, State, or local governments gain access to energy consumption data?

As a general matter, authorized agents of Federal, State or local governments should gain access to energy consumption data through utilities – but only where the consumer gives written consent that a utility may provide the data to the government. Such precautions are necessary to both protect end user privacy and ensure data accuracy and reliability.

In the commercial and multifamily arena, building owner and manager consent is critical to provide them the opportunity to place energy consumption data in proper context before government officials take actions based on such data. For example, basic facility information (*e.g.*, type, size and age of building, occupancy rates, tenant mixes, etc.) must be provided before government officials are afforded access to consumption data. Commercial building owners of energy data should also be given the chance to review it to ensure its accuracy before it provides the basis for any government action or program. Building owners and managers are best suited to provide facility information to regulatory bodies; without it, energy consumption data would be unreliable, could be misinterpreted, and would not provide sound bases for any government programs designed to reduce power consumption.

(13) What third-parties, if any, should have access to energy information? How should interested third-parties be able to gain access to energy consumption data, and what standards, guidelines, or practices might best assist third-parties in handling and protecting this data?

Due to privacy and security issues discussed elsewhere in these responses, government agents, third-parties and the general public should generally not have access to energy consumption information without the express written consent of the end-user. Facility-level energy information should be accessible only by the building operator (*i.e.*, existing tenant), building owner, utilities distributing power, or an organization that is directly paying for or subsidizing energy costs. The consumer might be willing to give consent that provides government officials with greater access to energy data compared to the public at large, but that decision is rightfully a matter of consumer choice.

Consumption in office and multifamily buildings is largely tenant-driven. So, for instance, if a prospective third-party tenant wants to gather data on the energy efficiency of a building in which they are considering leasing space and seeks that information as a metric in determining which building they prefer, they will get data that reflects consumption habits of existing tenants. Such data will not reflect occupancy changes that may occur prior to the commencement of the tenant's lease and, in fact, the existing data may include consumption from a departing tenant who is not at all focused on energy conservation. So, the information a prospective tenant gets will likely be skewed and will not reflect the energy efficiency of building systems or the energy efficiency operations within the owner's control. Should prospective third-party tenants wish to have access to this data, it should be through a request to the owner who can then provide appropriate context for the prospective tenants to understand the consumption history, use of electricity by existing tenants, efficiency of building systems, and anticipated changes to occupancy which would impact overall consumption.

As explained in response (2), aggregated building data on energy use (where personal identities and specific facilities are ***not*** disclosed) could be more freely available to third-parties such as nonprofits or research institutions studying the impacts of smart meters or other programs on energy consumption. The types of organizations that have access to such data should be clearly identified to all relevant parties. It would be administratively efficient for third-parties to work with utilities to access building aggregated power data, so long as the utility customer is aware that their data may be shared on an aggregate level and further understands how the third party will use the information.

(14) What forms of energy information should consumers or third parties have access to?

The responses provided in these comments should cover information regarding electricity, steam, gas and water consumption. As stated throughout, consumers should have access to their own data, and utilities should provide whole-building performance information to building owners. The general public and third-parties should have access to data aggregated and grouped by geographic area, space type, building age, building size, or other similar high-level variables. Otherwise, at a consumer- or facility-specific level, energy end-users must provide consent and be given an opportunity to review, verify, and contextualize consumption data before it is released to government officials, third parties, or the public at large.

(15) What types of personal energy information should consumers have access to in real time, or near real-time?

Assuming adequate security infrastructure and appropriate privacy safeguards are in place, consumers should have as much real-time information about their personal energy use as possible. Allowing consumers to be able to see what they are using in real time and make adjustments and decisions accordingly can also be extremely useful to utilities and building owners as they seek to improve whole-building energy performance.

(17) Should DOE consider consumer data accessibility policies when evaluating future Smart Grid grant applications?

Yes, for the reasons stated throughout these responses, DOE should consider privacy in evaluating Smart Grid grant applications.

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