

# A Model Privacy Policy for Smart Grid Data

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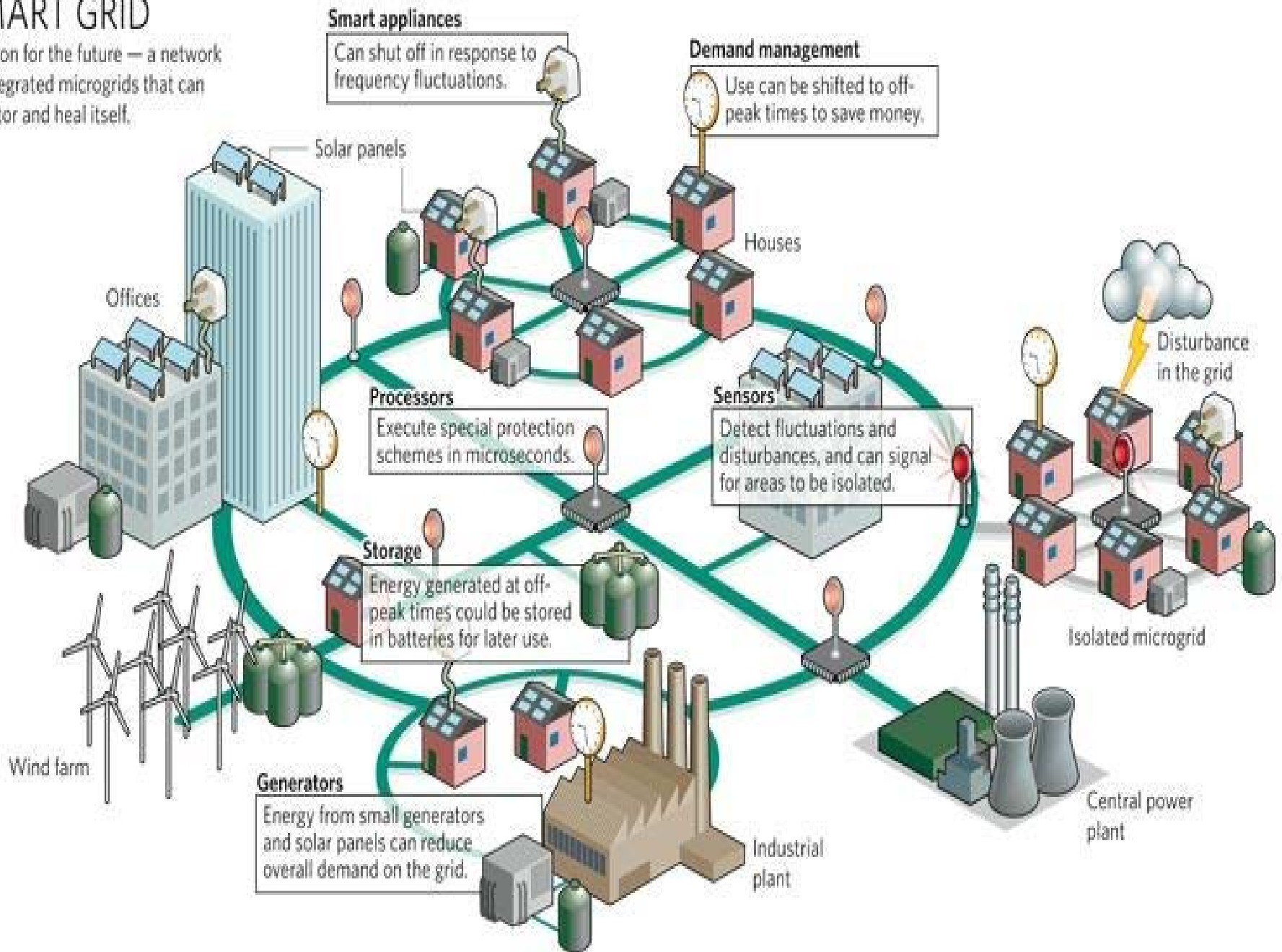
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# SMART GRID

A vision for the future — a network of integrated microgrids that can monitor and heal itself.



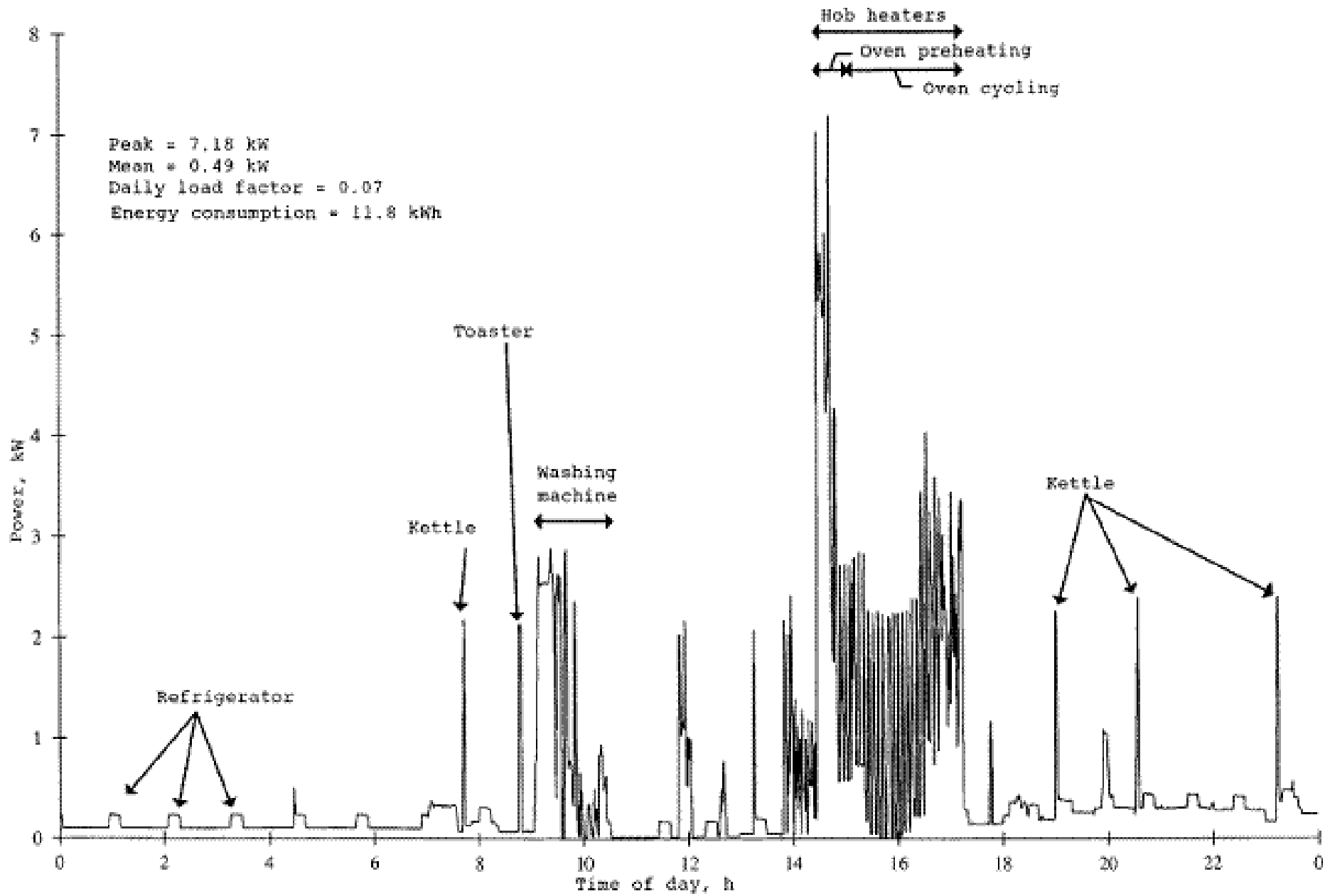
# Privacy is Paramount for Public Acceptance

"We . . . have the technology to record . . . energy consumption . . . every minute, second, microsecond, more or less live. From that we can infer how many people are in the house, what they do, whether they're upstairs, downstairs, do you have a dog, when do you habitually get up, when did you get up this morning, when do you have a shower: masses of private data."

Martin Pollock, Siemens Energy

Gerard Wynn, "Privacy Concerns Challenge Smart Grid Rollout,"  
Reuters (June 25, 2010).





# Privacy is Paramount for Public Acceptance

- Concern about data security in other sectors
  - Examples from Epsilon, Facebook, Google, Nintendo, etc.
- State scrutiny of privacy implications
  - “It is the policy of the state to promote . . . smart grid functions . . . in a manner that is consistent with security and privacy.” Maine Smart Grid Policy Act.
  - Colorado Smart Grid Task Force tasked to review potential impacts to “consumer protection and privacy.”

# Public Power Agencies are Subject to Privacy Laws and “Sunshine Laws”

- Privacy laws require utilities to protect data and obtain customer consent before distributing data to third parties.
  - Some exceptions for contractors, researchers, law enforcement, etc.
  - Texas Utilities Code § 17.004(a): All buyers of telecommunications and retail electric services are entitled to . . .
    - (6) privacy of customer consumption and credit information
    - (7) accuracy of metering and billing
  - California Public Utilities Code § 8380(b)(1): An electrical corporation or gas corporation shall not share, disclose, or otherwise make accessible to any third party a customer's electrical or gas consumption data, except as provided in subdivision (e) or upon the consent of the customer.

# Public Power Agencies are Subject to Privacy Laws and “Sunshine Laws”

- “Sunshine” laws in numerous states require public agencies to disclose public records.
  - Approximately nine states define utility data as “public records.”
  - In some cases, personal/financial data is not subject to disclosure.
  - Generally, customers must petition to keep their data confidential.

# Privacy Principles for Public Power Agencies

1. Make privacy the default setting.
2. Provide complete privacy protection.
3. Know the law regarding public disclosure in your state.
4. Only store/provide access to necessary information.
5. Obtain written consent before disclosing to most third parties.
6. Educate customers about the implications of sharing data with third parties.
7. Notify customers when data is disclosed.
8. Develop a plan for contingencies.
9. Make your privacy policy accessible to customers.



# Model Privacy Policy

## BACKGROUND

- Implement privacy policies prior to Advanced Metering Infrastructure (AMI) rollout.
  - Update the policy as new options become available.
- What does this policy accomplish?
  - Protects customer data from unauthorized disclosure or breach of security throughout data lifecycle.
- To whom does it apply?
  - Governs utility's use and management of customer electricity use data and personal information.

# Model Privacy Policy

## DEFINITIONS

- **Customer Electricity Use Data:**  
Electricity use data includes all characteristics related to a customer's electric demand. This information includes, but is not limited to, total monthly electricity use consumption and any incremental or time-of-use consumption data at the frequency or increment recorded by the utility.



# Model Privacy Policy

## DEFINITIONS

- Information
  - Confidential Information
  - Composite Personal Information
  - Internal Information
  - Personal Information
  - Personally Identifiable Information (“PII”)
  - Private Information
  - Public Information

# Model Privacy Policy

## DEFINITIONS

### ■ Information

#### - Confidential Information:

Information the disclosure of which could compromise a system, data file, application, or other business function. Confidential information is available only to officers, employees, or third-party contractors with a business need to know about or use the information. All personally-identifiable electricity use data is confidential information.

#### - Composite Personal Information

Non-personal information that, in combination or aggregate, reveals details, patterns, or other insights into the personal lives, characteristics, and activities of the customer.

# Personally Identifiable Information (“PII”)

- Names
- All geographic subdivisions smaller than a State, including street address, city, county, precinct, zip code, and their equivalent geo-codes;
- All elements of dates (except year) for dates directly related to an individual
- Telephone numbers;
- Fax numbers;
- Electronic mail addresses;
- Social security numbers;
- Account numbers (including energy bill account numbers, credit card numbers, bank account numbers, etc.);
- Any information received in the credit check processes, unique personal identifying information related to finances;
- Certificate and license numbers;
- Drivers license numbers;
- Network address, LAN, etc.;
- Device Identifiers and serial numbers;
- Internet Protocol (IP) address numbers;
- Biometric identifiers, including finger and voice prints;
- Full face photographic images and any comparable images;
- Any other unique identifying number, characteristic, or code.

# Model Privacy Policy

## PRIVACY

- **Electricity Use Data:** Electricity use data includes all characteristics related to a customer's electric demand. This information includes, but is not limited to, total monthly electricity use consumption and any incremental or time-of-use consumption data at the frequency or increment recorded by the utility.
- **Behavioral Information:** Privacy includes a customer's right to keep confidential knowledge of any activities undertaken inside his or her home and evident from the customer's electricity use data, except to the extent that a warrant compels disclosure to state or federal law enforcement officials.
- **Personal Information:** Privacy of personal information involves the right to control when, where, how, to whom, and to what extent an individual shares their own personal information, as well as the right to know what personal information is disclosed to third parties, to correct it, and to ensure it is safeguarded and disposed of appropriately.

# Model Privacy Policy

## PRIVACY

- Privacy Impact Assessment (PIA)
  - Determine whether the utility's information handling and use complies with legal, regulatory, and policy requirements regarding privacy;
  - Determine the risks and effects of collecting, maintaining, and disseminating information in identifiable, or clear text, form in an electronic information system or groups of systems; and
  - Examine and evaluate the protections and alternative processes for handling information to mitigate the identified potential privacy risks.

# Model Privacy Policy

## RIGHTS OF UTILITY CUSTOMERS

### ■ Privacy

Customers are entitled to privacy in their electricity use data, personal information, and personally-identifiable information (PII). The utility will strive to ensure that the customers' data and information are not disclosed to third parties, except to the extent that the customer consents, disclosure is required to perform a valid function related to providing reliable electric service, or disclosure is required by law.

### ■ Access to Information

In general, customers have a right to know how the utility or third party contractors and vendors use their electricity use data or PII. The purpose of any collection, use, retention, and disclosure of electricity use data will be made public in a clear and transparent manner. Customers are entitled to know which third party contractors or vendors might have access to any of their electricity use data or personally identifiable information. Customers are also entitled to know about any breaches of data security that occur.



# Model Privacy Policy

## RIGHTS OF UTILITY CUSTOMERS

- Accuracy

The utility will ensure that the information it collects, stores, uses, and discloses is reasonably accurate and complete or otherwise compliant with applicable rules and tariffs regarding the quality of energy usage data.

- Data Security

The customer's electric meter and any web portal that the utility offers will provide secure and accurate electricity use data.

# RIGHTS OF UTILITY CUSTOMERS

## ■ Consent

The utility will not enroll a customer in a dynamic rate, pilot program, demand response program, or direct load control program unless the customer provides express, written consent. The utility will also require express consent before disclosing electricity use data or personal information to a third party, unless the third party is a contractor with a valid need for the information ,or disclosure to the third party is otherwise required by law.

## ■ Options

**Access to Information:** The utility will make reasonable efforts to ensure that customers have options regarding how they receive information from the utility, such as postal mail, electronic mail, etc.

**Rates:** Customers will have the opportunity to select a rate schedule that meets their needs. This includes the traditional fixed-rate or other time-of-use or dynamic pricing programs. The utility will not alter an individual's rate program unless the customer is made aware of and consents to the change.

**Use of third-party displays or services:** At their discretion, customers will have the option to purchase and use compatible devices, technologies, and appliances that augment the visibility, understanding, and control of electricity consumption.

# Model Privacy Policy

## INDIVIDUAL ACCESS TO ELECTRICITY USE DATA

### ■ Right to Access Information

- Customers are entitled to access their own energy use data within a reasonable time-frame after the utility collects and verifies the data. This information will be presented in an easily readable format that is as detailed as the information the utility uses or discloses to third party vendors and contractors.
- The utility will provide customers with access to their own electricity use data through a convenient, user-friendly interface.
- The customer has a right to know what personal information the utility maintains about the customer. The utility will make a reasonable effort to respond to requests for this information in a timely manner.

# Model Privacy Policy

## INDIVIDUAL ACCESS TO ELECTRICITY USE DATA

- Right to Disclose Information

Customers have the right to share their own electricity use data and personal information with third party vendors of their choice to obtain services or products provided by those vendors. These services or products may include, but are not limited to, in-home displays of electricity use or demand response programs. The utility will attempt to provide a standard and user-friendly process for customers to request that the utility share data with a third party.

- Written Permission

The utility will only share identifiable customer electricity use data or PII with third party vendors after the customer has provided express, written permission.

# Model Privacy Policy

## THIRD PARTY ACCESS

- Utility Disclosure
  - Subject to applicable state law, the utility may share customer data with third party contractors providing a necessary business service to the utility. The utility will not disclose customer electricity use data, personal information, or PII to third party contractors unless it is necessary to provide reliable electric service.
  - The utility will contractually obligate third party contractors to keep customer electricity use data and PII confidential.
  - The utility will require that third party vendors maintain adequate, internal auditing procedures for the collection, storage, and disclosure of customer data.
  - The utility will only share that information which is necessary for the contractor to perform the required service for the utility.
  - The utility will make all reasonable efforts to keep customers informed about the type of information that is shared with third parties. The utility will provide a general description of the type of information that is shared with third party contractors (i.e., name, address, monthly usage for billing, etc.).

# Model Privacy Policy

## THIRD PARTY ACCESS

- Legal Obligation to Disclose Electricity Data

The utility will comply with a warrant, court order or other legal obligation to disclose a customer's electricity use data or other PII.

- **Freedom of Information:** The utility will only respond to a request for electricity use data pursuant to a “sunshine” law or state Freedom of Information Act with data that has been aggregated or de-identified.
- **Warrants:** The utility will cooperate with law enforcement and provide information sought in a warrant or other court order. The utility will also establish law enforcement request procedures for requests for information supported by a warrant.

# Model Privacy Policy

## UTILITY PROCEDURES FOR DATA SECURITY

- Data Storage and Handling

The utility will only collect and store that electricity use data or personal information which is necessary for the utility to provide reliable electric service. The utility will ensure that data storage is secure according to industry standards and best practices for data storage. The utility will ensure that data that is no longer needed or used to provide reliable electric service will be disposed of effectively and securely.

- Privacy Officer

The utility will identify an officer or employee to be responsible for implementing and reviewing utility privacy procedures.

# Model Privacy Policy

## UTILITY PROCEDURES FOR DATA SECURITY

- Employee Access to Customer Data

The utility will strive to limit officers', employees', and contractors' access to customers' electricity use information or PII so that each officer, employee or contractor has access only to the information that is needed to perform the duties of their regularly assigned duties.

When an officer, employee, or contractor requires access to electricity use information or PII for an assignment that is not part of the officer, employee or contractor's regularly-assigned duties, the utility will ensure the information is made available only to the extent necessary to complete the assignment.

- Employee Training

Background Check

Information Handling

Collection



# Questions?

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