New Opportunity for State Energy Offices:
The National Utility Energy Registry

Click here to learn how to participate!

The Utility Energy Registry (UER) was developed by the New York State Energy Research & Development Authority (NYSERDA) to collect and house standardized utility energy data, and it is ready for national adoption.

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What is it?

The Utility Energy Registry (UER) is an innovative new approach for State Energy Offices, Public Utility Commissions, and local governments to establish a data standard (protocol) and collect electricity and natural gas data from utility companies. Geospatially-aggregated local energy consumption data are useful for state and local planning and long-term energy usage tracking, and the UER provides a standardized method for capturing data points.

Municipalities, state policymakers, and renewables developers are increasingly looking to utilize these data to support data-driven energy plans to increase local renewable energy use and reduce greenhouse gas (GHG) emissions.

Utilities have not traditionally provided aggregated, community-level energy use data, and prior to the UER, no industry standard for data sharing existed. While most utility data efforts have focused on building-level benchmarking and individual account-level access, planners have recognized a growing need for community-scale energy demographics, such as:

Residential, Commercial, and Industrial Consumption

Energy Costs

Consumer Counts

Net-Meter Counts

Renewable Capacity On The Grid

Peak Load Metrics

Energy Service Company Penetration Metrics

Electric Vehicle Charging Infrastructure

With thousands of utilities in the 50 states, the UER aims to standardize reporting data from utilities and compile them into a single public platform—a registry. What makes the UER unique is the effort to aggregate the community-scale demographic data at a smaller geographic layer (currently reported at a census-track level), which will increase the resolution of the data. By joining New York, Maryland, Minnesota, and the District of Columbia in adopting the UER, other state agencies and regulatory commissions will gain the ability to compile high-value, standardized data in just a few months.

The UER was developed by New York (NYSERDA) and Climate Action Associates, LLC to replace an ad hoc and expensive approach of providing grants to municipalities to cover the administrative costs of sourcing their own data. Before the UER, communities had to request data directly from one or more utilities to track community-wide energy use. Utilities lacked standardized data reporting protocols to follow, and thus applied different methodologies to reporting the data. Consequently, communities compiling the data experienced issues with data quality, cost, and administrative burden. NYSERDA found that for small and resource constrained municipalities, it simply was not practical to manage all these issues and therefore developed a robust, dynamic system for tracking community-wide energy performance over time. The UER is designed to make new data sets available as policy needs evolve, such as providing installed renewable capacity to track distributed energy resources (DER) development goals at geospatial resolution. Moreover, UER geography is Census-based, which allows planners to correlate energy usage against a variety of population, economic, and other demographic drivers.

How UER Expanded Beyond NY

After piloting the UER from 2012 to 2015, New York presented it to the State Sustainability Network, a network of state supported community capacity building programs. Fellow member states Maryland, Minnesota, and the District of Columbia signed on to collaborate with New York on the UER These states, led by New York, received funding from the U.S. Department of Energy's State Energy Program to turn the UER into the national model that exists today.

Each of the participating states hosted their own stakeholder workshops with representatives from utilities, non-profits, and local governments to familiarize them with the goals and objectives of the UER and to get input into what a state-specific protocol for utility energy data collection would look like. A representative from each participating state then joined a larger UER national working group to provide details, comments, and recommendations from the individual state stakeholder process to inform the national standard and protocol development. The UER protocol defines a set of sector-based data that communities will need for energy planning and GHG inventories. Datasets include things like residential, commercial, and industrial consumption—similar to what utilities use to report statewide sales to the Energy Information Administration. Instead of reporting statewide totals, utilities report based on a pre-defined geographic region (zip codes, municipalities, census tracts, etc.). Per the protocol, utilities use proprietary customer data behind their firewall to create the data, screen it to ensure there are enough customers to protect privacy in each location, and then publish the data to the UER online registry for public use. As years go by, state and local policymakers can use this independently sourced and objective data to track progress towards energy and GHG emissions goals.
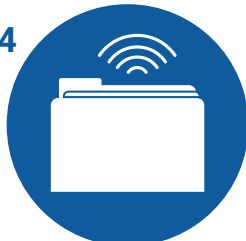
How can states and utilities get involved?

The UER website has instructions on how states – state energy offices or public utility commissions – can join. Typically, states will undertake a simple process to review, customize, and adopt the UER protocol, and then work with a few local utilities to pilot the reporting process.

General Steps for Customizing the UER Protocol

1 Contact NYSERDA via https://utilityregistry.org to schedule a brief call to learn more and plan for next steps.

2 The State Energy Office asks for utility volunteers for a test pilot though a webinar.

3 The State Energy Office directs utility volunteers to upload data through the UER online portal.

4 Utilities submit an initial set of data and then resubmit annually as a part of routine utility reporting.

New York Public Service Commission

The New York Public Service Commission adopted the UER on Earth Day 2018. Semiannually, utilities prepare and publish data to the UER to better inform NYSERDA and allow consumers to make better informed energy choices, as per New York's comprehensive energy strategy put forth in 2014. The data are mirrored in state's open data platform (data.ny.gov) and in the UER platform. The data are free to access not only for consumers, but also for energy planners working on long-term energy and climate goals.

How Municipal Electric and Gas Uses the UER

Municipal Electric and Gas (MEGA), is a non-profit community choice aggregation (CCA) administrator in NY. Like other CCAs, MEGA provides communities more local control over their electricity sources. MEGA uses the UER to develop load projections of community choice aggregations and their values to design CCAs. Communities use the UER to determine how many MWh are eligible to aggregate, which puts them in a better position to negotiate more competitive rates or greener power sources.

◼Frequently Asked Questions

What is the UER?
The UER is a multistate collaboration that will be launched as a 501(c)(3) with a mission of helping states standardize and facilitate access to high quality energy planning data for communities nationwide.

Is UER an online registry, or a standard?
It's both. The UER protocol is a written, open-source industry standard designed to be implemented by states on their own. The UER also contains an optional online data registry to crowdsource the data if needed (i.e., states could request that utilities report data in the standardized method the UER utilizes, but without reporting into the UER). States may host data in the UER and on state open data archives.

Who owns the data?
UER is intended to be used by states to produce free and open source energy data for public use.

Who governs the UER data protocol and standards?
The UER protocol is a voluntary utility-industry standard managed by national working group made up of state policy makers, utilities, and other interested parties. It is updated annually and available at the UER project website. State energy offices are encouraged to participate in the annual update process. Go to https://utilityregistry.org to learn how to participate.

Is there a cost to states for UER?
The protocol and related resources are free and public. States may choose to invest in working groups to customize the national protocol to better meet their needs, others can pilot UER with volunteer utilities without significant costs.

We are planning a registry of utility account data; should we just do this ourselves?
Many states are looking at setting up utility account registries to streamline access to data. UER is different. It is not a registry of accounts – it is a registry of geospatially aggregated data. Therefore, states with existing registries can adopt the UER protocol and publish data to it on behalf of utilities, rather than requiring utilities to report to two different registries. By working together, states can ensure their data are consistent nationally.

Our state has unique data needs; how does this work?
The UER protocol is designed to be flexible. While there are nationally consistent datasets and maps in UER, states can define unique metrics and maps to support local policy needs. For instance, New York developed a series of metrics to show how much electricity load would be available to communities if they adopt Community Choice Aggregation.