Building Benchmarking

An Overview of City and Utility Efforts

International District Energy Association
June 10, 2014 | Seattle, WA
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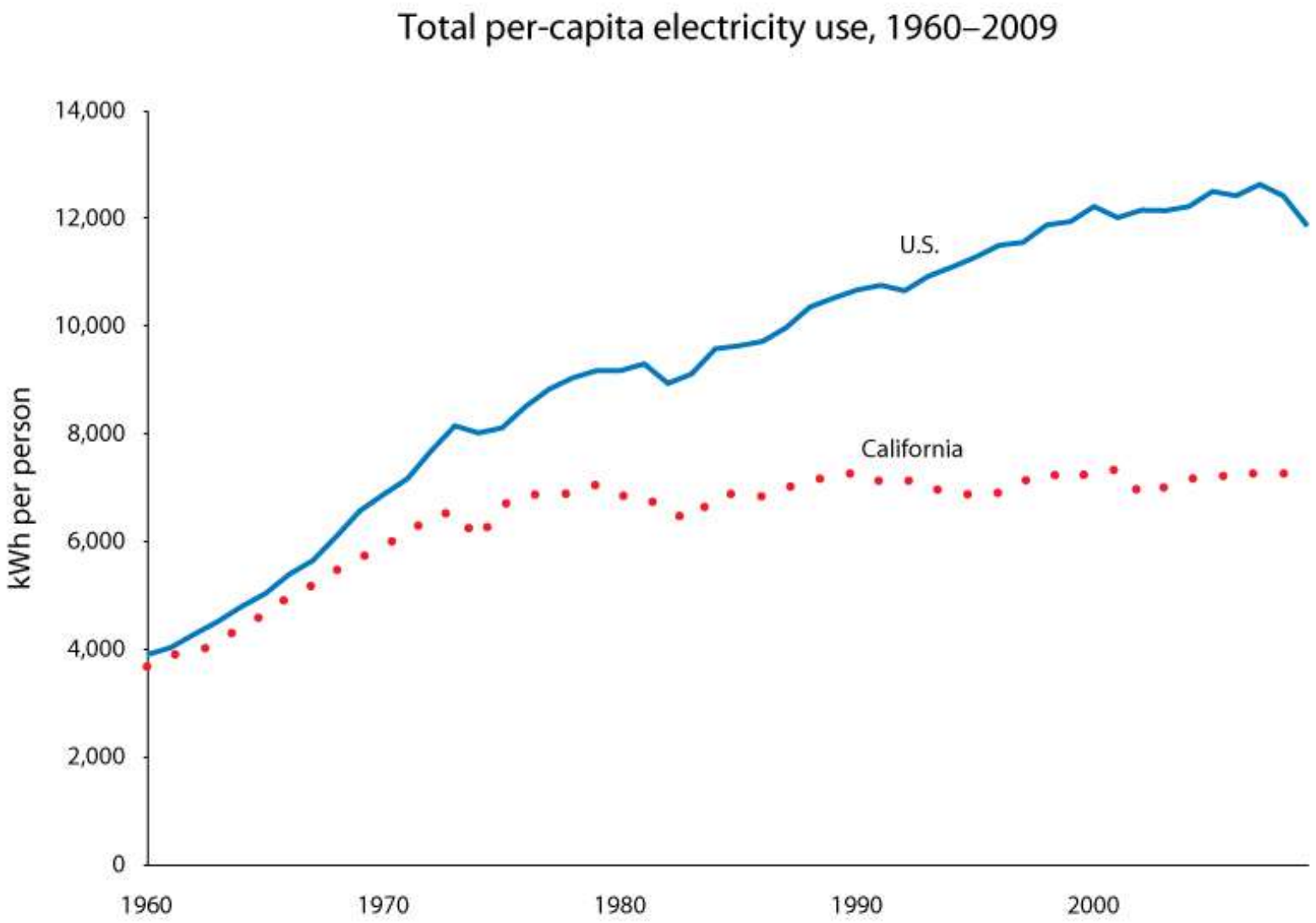
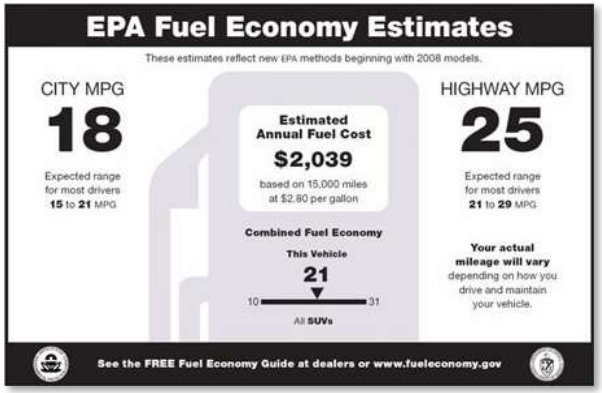
IMT
INSTITUTE
FOR MARKET
TRANSFORMATION

Institute for Market Transformation

- Design, adoption and implementation of building energy efficiency policies
- Policy advisor to state and local governments, federal agencies, utilities and industry groups
- Serves as the U.S. hub for the Global Buildings Performance Network

Even the most aggressive codes and incentive programs have only managed to flatten per capital energy usage.

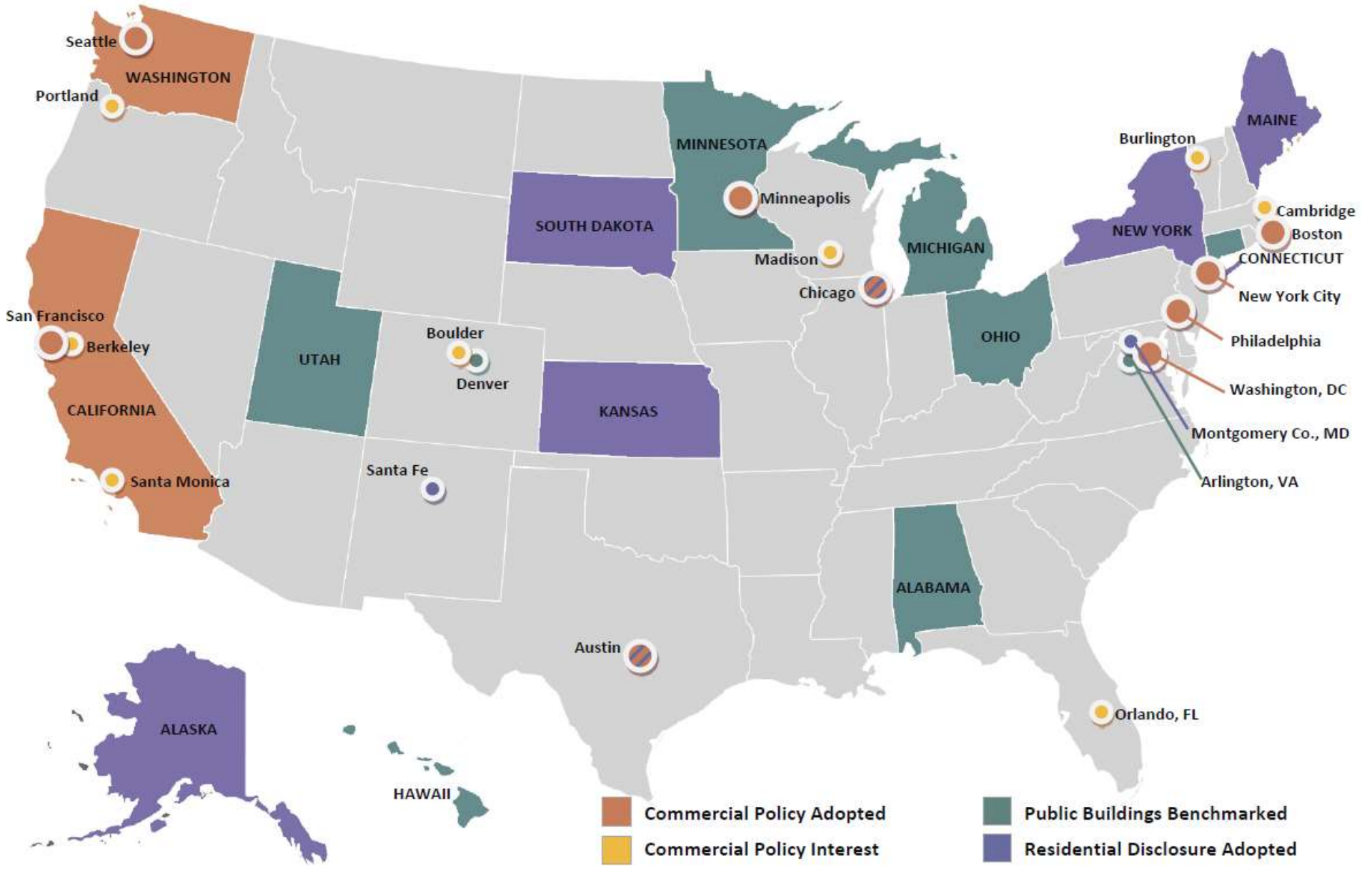




You can’t manage what you don’t measure

Building Energy Benchmarking

U.S. Benchmarking Policy Landscape

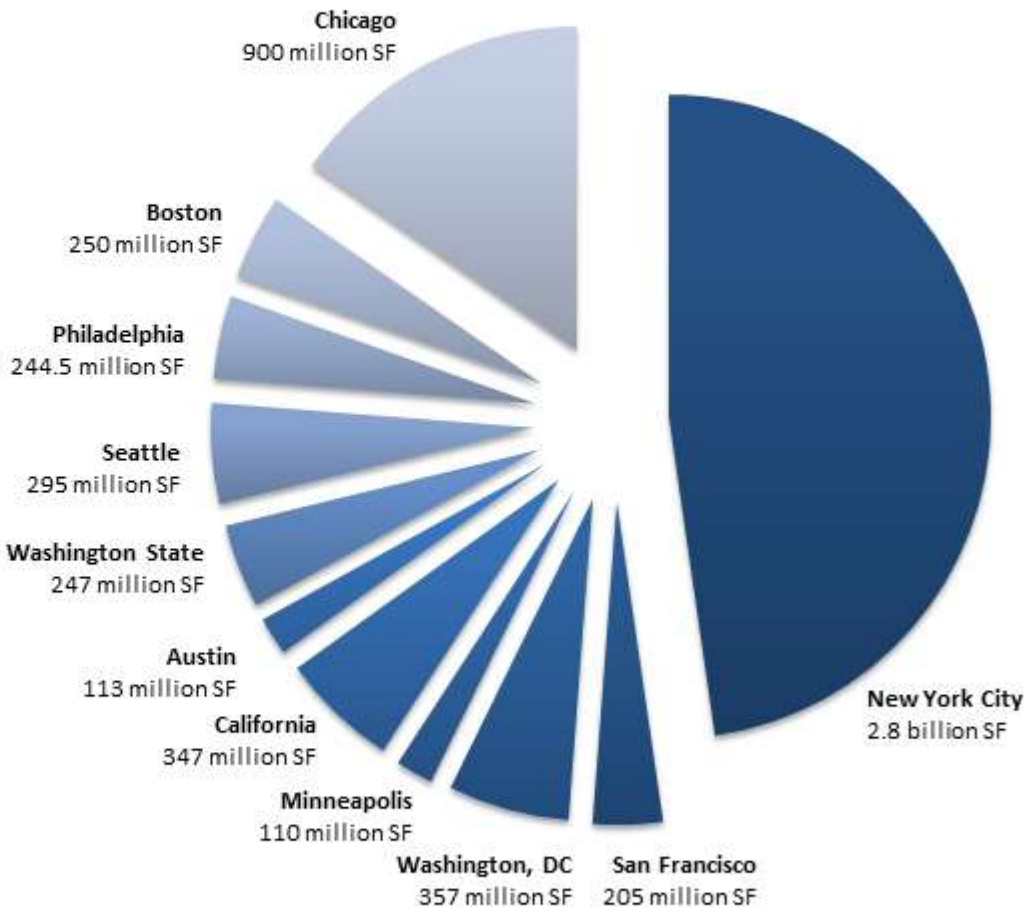


Totaling approximately

5.8 billion SF

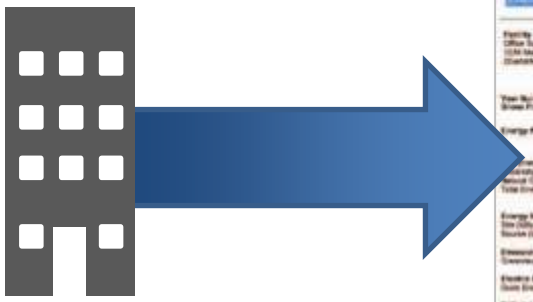
of floor space in major real estate markets

Building Area (in Square Feet) Covered Annually



Source: IMT

Benchmarking Data Needs



Building Owners

- Building physical characteristics
- Building operating characteristics

Utilities

- Building energy consumption

Current Utility Practices

Utilities Benefit by Supporting Benchmarking

- Customer service
- A gateway to other energy efficiency programs
- Insight into building loads to improve marketing and targeting for energy efficiency programs and inform infrastructure planning
- Data to analyze energy efficiency programs and validate savings

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BENCHMARKING IN SEATTLE:
Data Access Helps Make it Happen!

IDEA Conference 2014
06.11.14

Nicole Ballinger
City of Seattle - Office of Sustainability & Environment

Seattle Policy Requirements

SEATTLE ENERGY BENCHMARKING & REPORTING

Commercial and multifamily buildings 20,000 SF+ must annually:

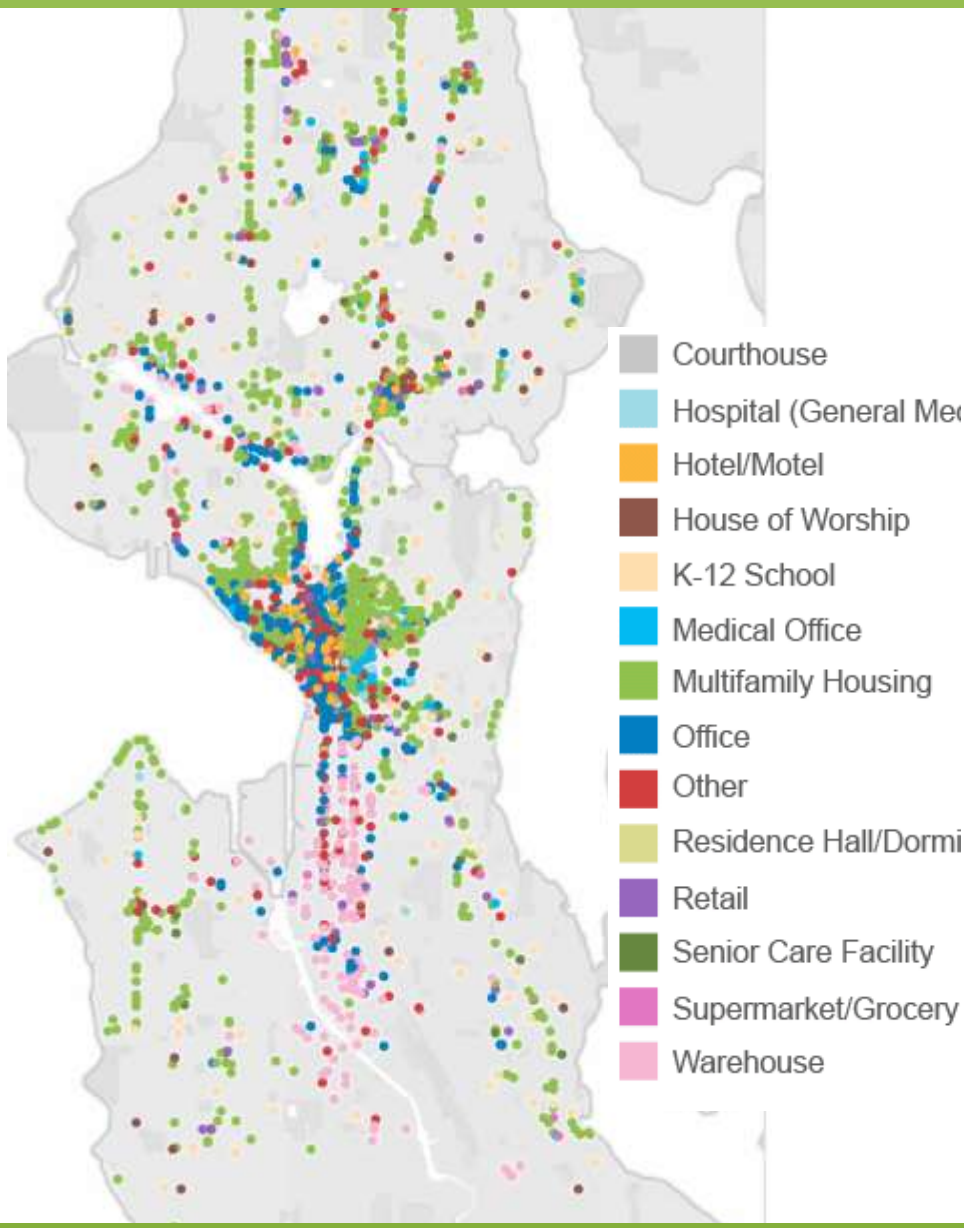
- ❑ **Benchmark** energy use with EPA's Portfolio Manager tool
- ❑ **Annually Report** building energy use by April 1st (Energy Use/SF and ENERGY STAR score)
- ❑ **Disclose** upon request to buyers, lenders, current/prospective tenants

ENERGY STAR®
Portfolio Manager®

Seattle's Required Buildings

SEATTLE ENERGY BENCHMARKING & REPORTING

- About 3,300 buildings
  20,000 SF +
- 281 million square feet
- 50% commercial
  50% multifamily
- Seattle City Light
  Puget Sound Energy
  Seattle Steam
- All types of ownership & utility billing scenarios



Obtaining Whole Building Energy Use

SEATTLE ENERGY BENCHMARKING & REPORTING

Owner/manager enters building square footage & use details and signs up for utility "data exchange"

ENERGY STAR® Portfolio Manager®

Utilities provide whole building energy data via "data exchange"

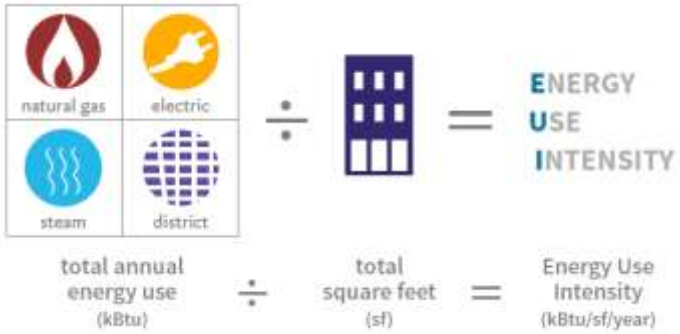
Seattle City Light

PSE PUGET SOUND ENERGY

SEATTLE STEAM CO. Sustainably Reliable

Tenant/building energy use

Owner reports whole-building energy use/sf & ENERGY STAR scores to **City of Seattle**.



Learn More

SEATTLE ENERGY BENCHMARKING & REPORTING

www.seattle.gov/energybenchmarking

Q & A

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SEATTLE OFFICE OF Sustainability & Environment

Sustainably Reliable

IMPROVING CUSTOMER DATA ACCESS FOR BENCHMARKING

SEATTLE STEAM CUSTOMER DATA SERVICES

Since 2006, Seattle Steam has delivered customer usage and billing information through a secure online customer portal.

- Portal available 24/7 for on-demand customer access.
- Monthly usage back to 1991, in pre-formatted graphs and reports, with account, building and meter detail.
- Data easily exported to Microsoft Excel for manual data entry in Energy Star Portfolio Manager.
- Saves SSC resources in responding to regular customer data requests.
- Partner with customers to improve operations and efficiency: Usage, Cost, Condensate Temperature Reporting.

AUTOMATED ENERGY STAR REPORTING

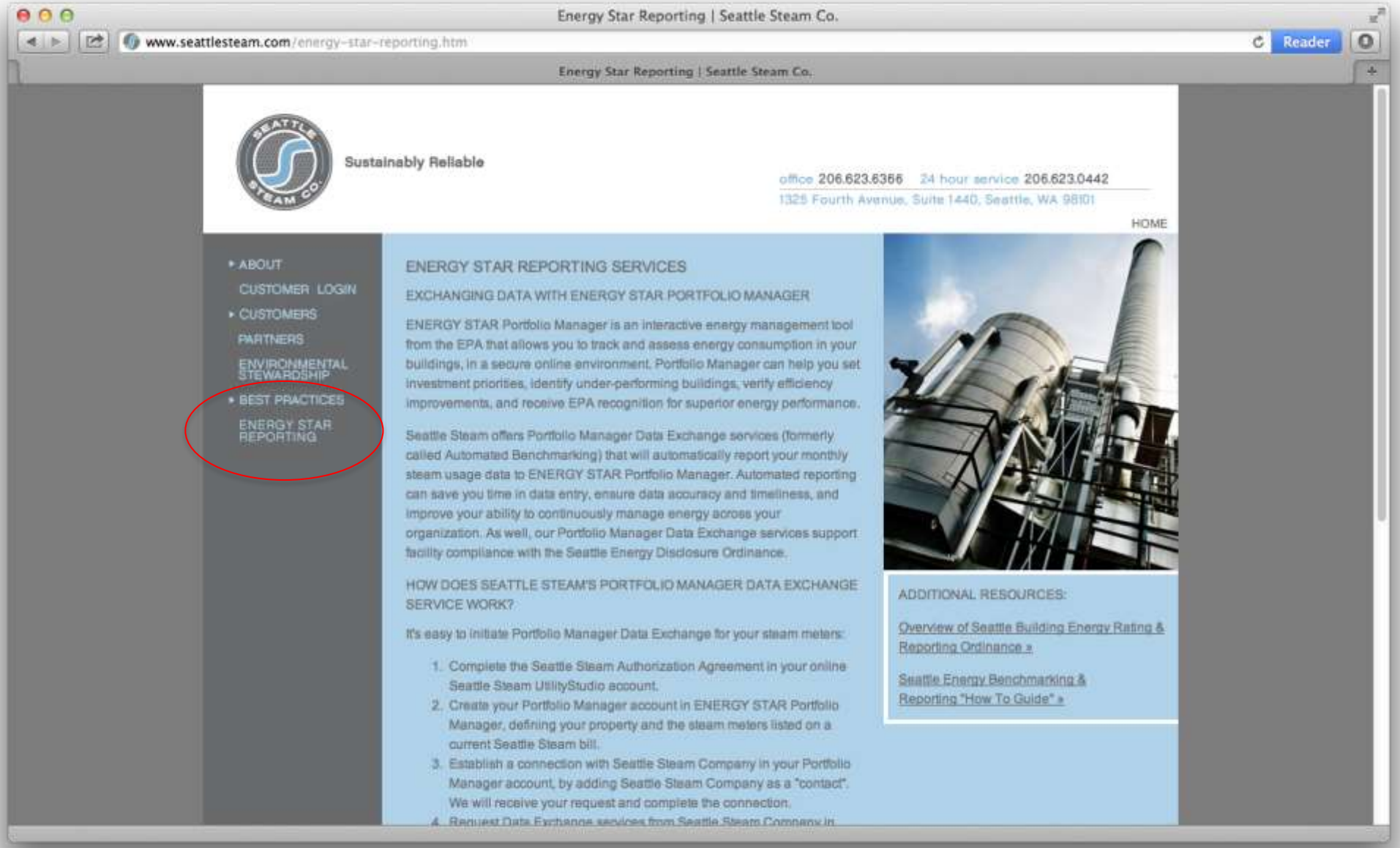
The State of WA benchmarking law (RCW 19.27A.170), essentially says that utilities in WA must make energy use data available to Portfolio Manager in a “usable” format.

- Existing SSC billing, reporting and CRM processes were integrated with Portfolio Manager Web Services. SSC Energy Star Reporting Services launched in April 2011.
- Customers enroll in web portal. Online reports confirm monthly reporting to Energy Star.
- Meter-level usage data is pushed to Energy Star after each monthly billing cycle, ensuring timely and accurate reporting to Portfolio Manager.
- Nominal service fee is included in monthly customer invoicing.

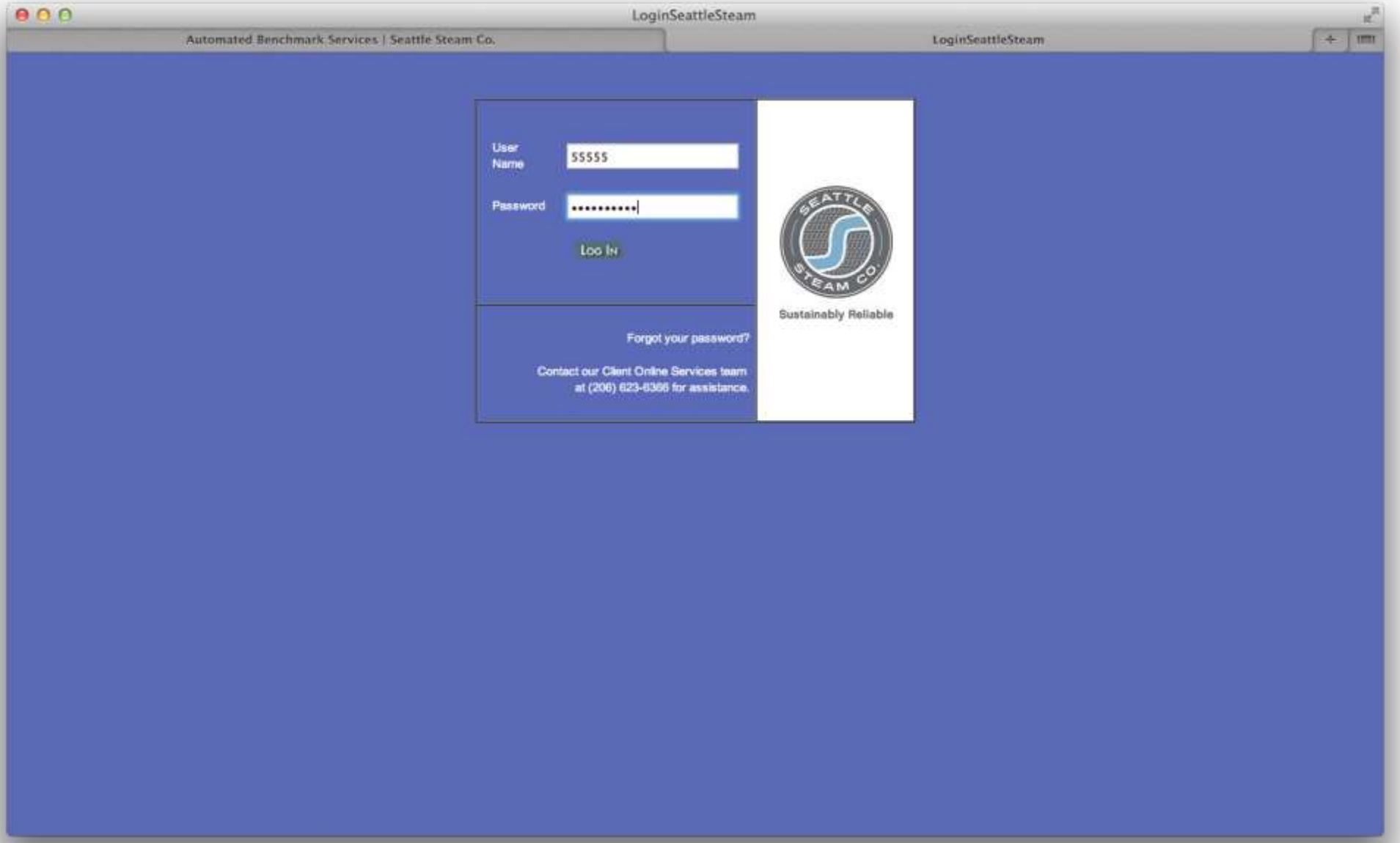
IMPLEMENTING ENERGY STAR REPORTING

- Worked with City to develop, execute and support disclosure processes.
- Completed Portfolio Manager Web Services Provider registration.
- Integrated utility customer and data management systems with Portfolio Manager Web Services.
- Developed service offering and announced service to customers.
- Support customers in manual and automated Energy Star reporting processes.
- Monitor program activity: enrollment, activation, monitoring, reporting and billing.

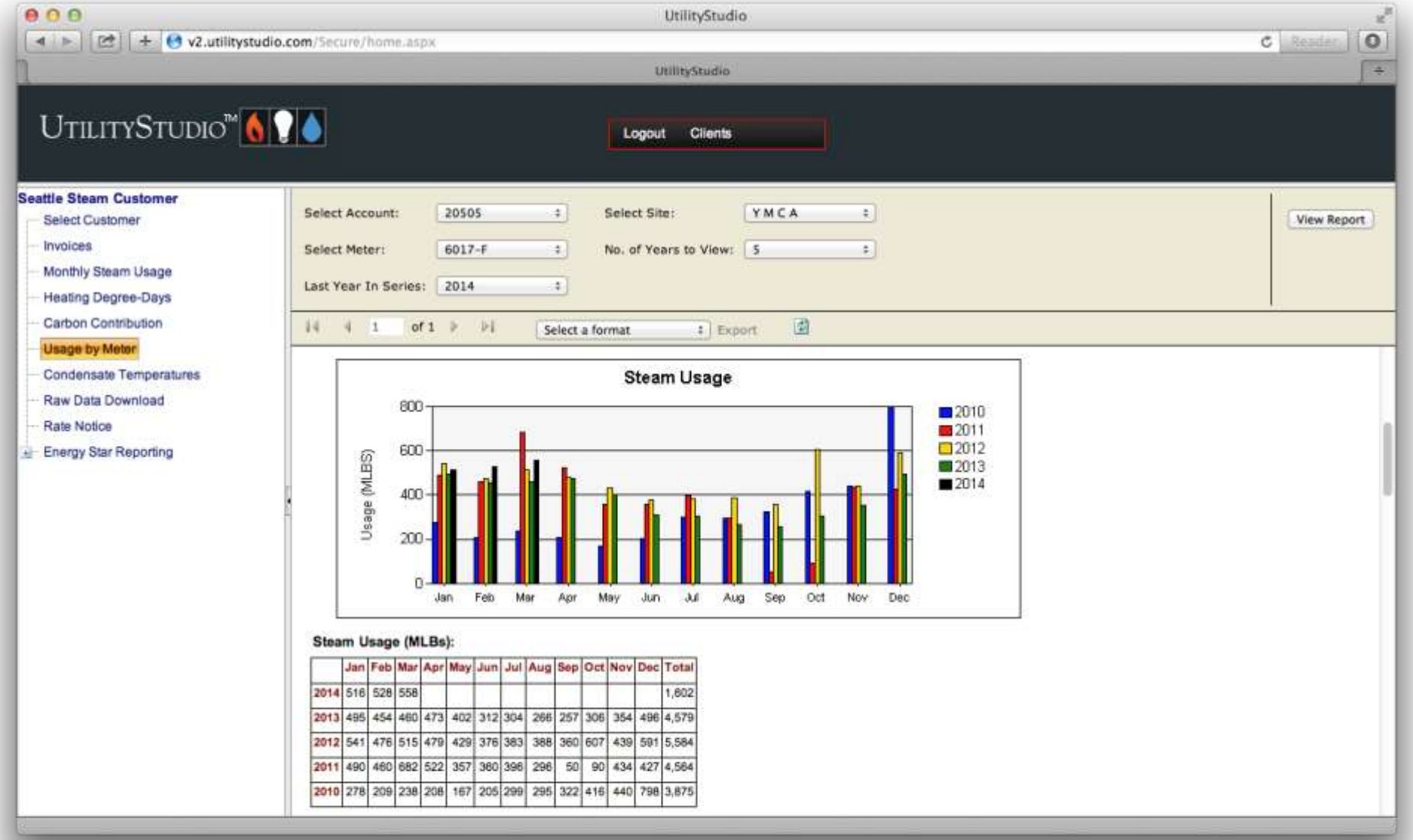
Marketing Energy Star Reporting on SSC Home Site



Customer Portal Login from SSC Home Site

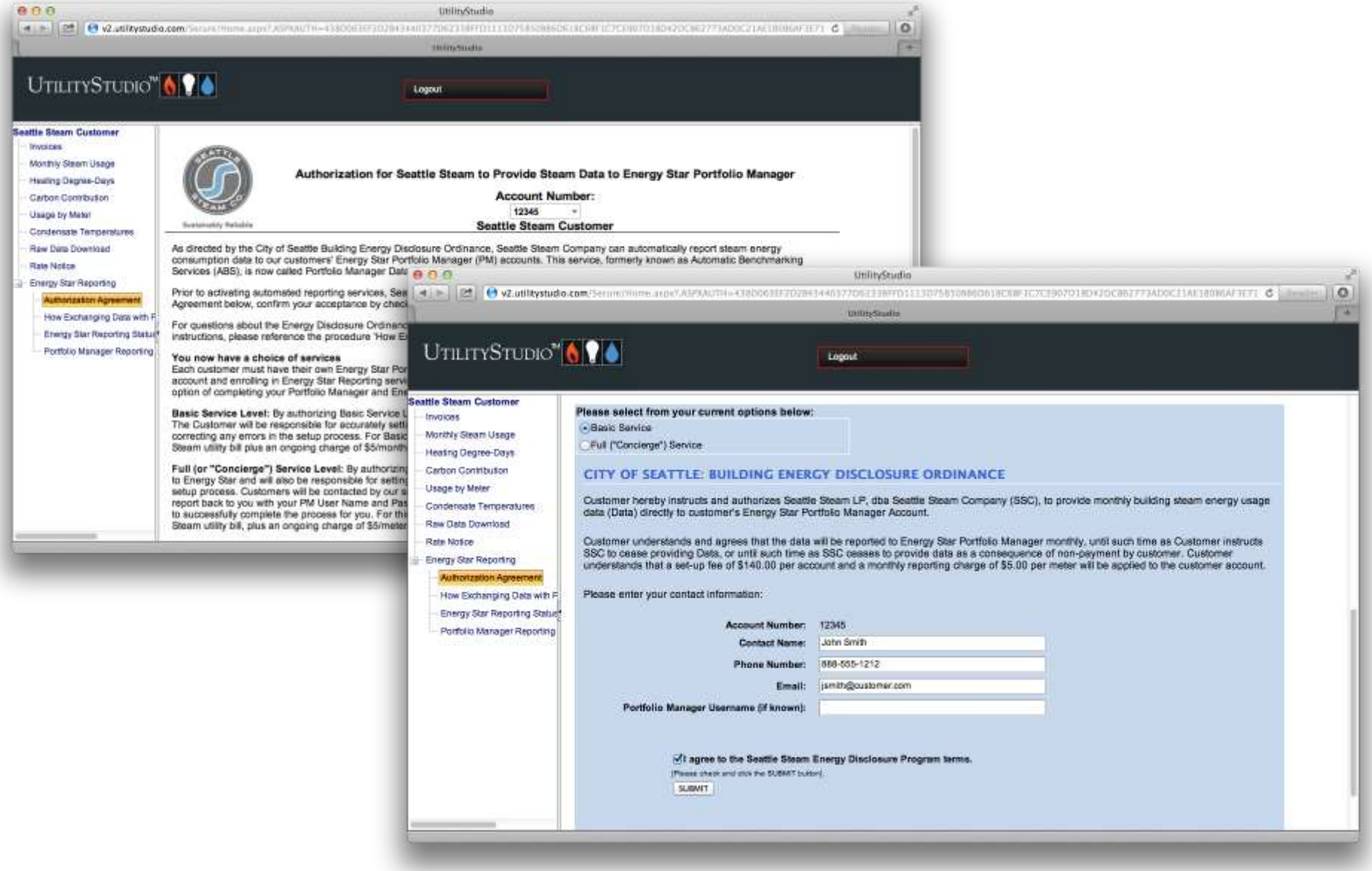


Customer Portal: Provide Data for Manual Reporting

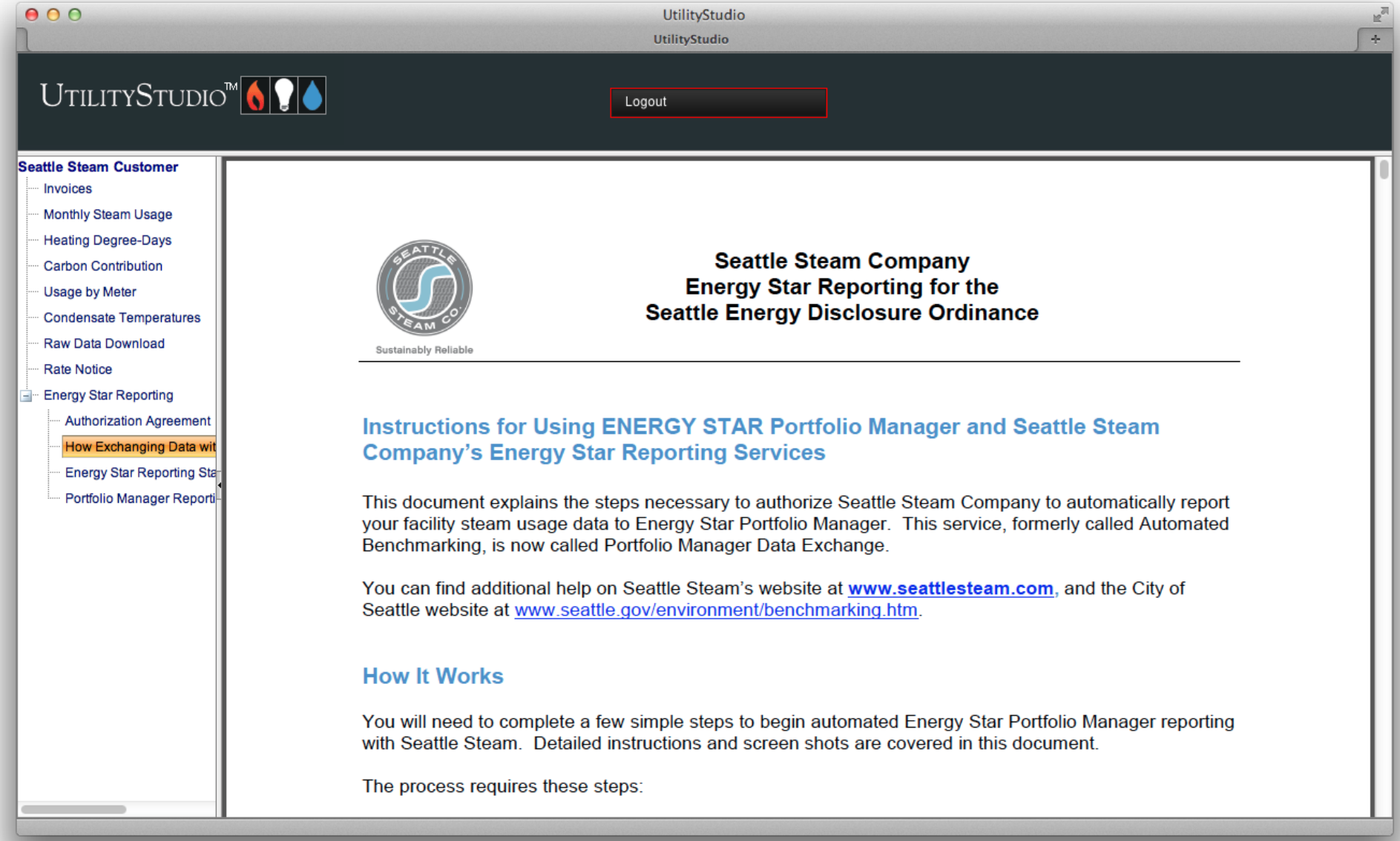


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2014	516	528	558										1,602
2013	495	454	460	473	402	312	304	266	257	306	354	496	4,579
2012	541	476	515	479	429	376	383	388	360	607	439	591	5,584
2011	490	460	682	522	357	360	396	296	50	90	434	427	4,564
2010	278	209	238	208	167	205	299	295	322	416	440	798	3,875

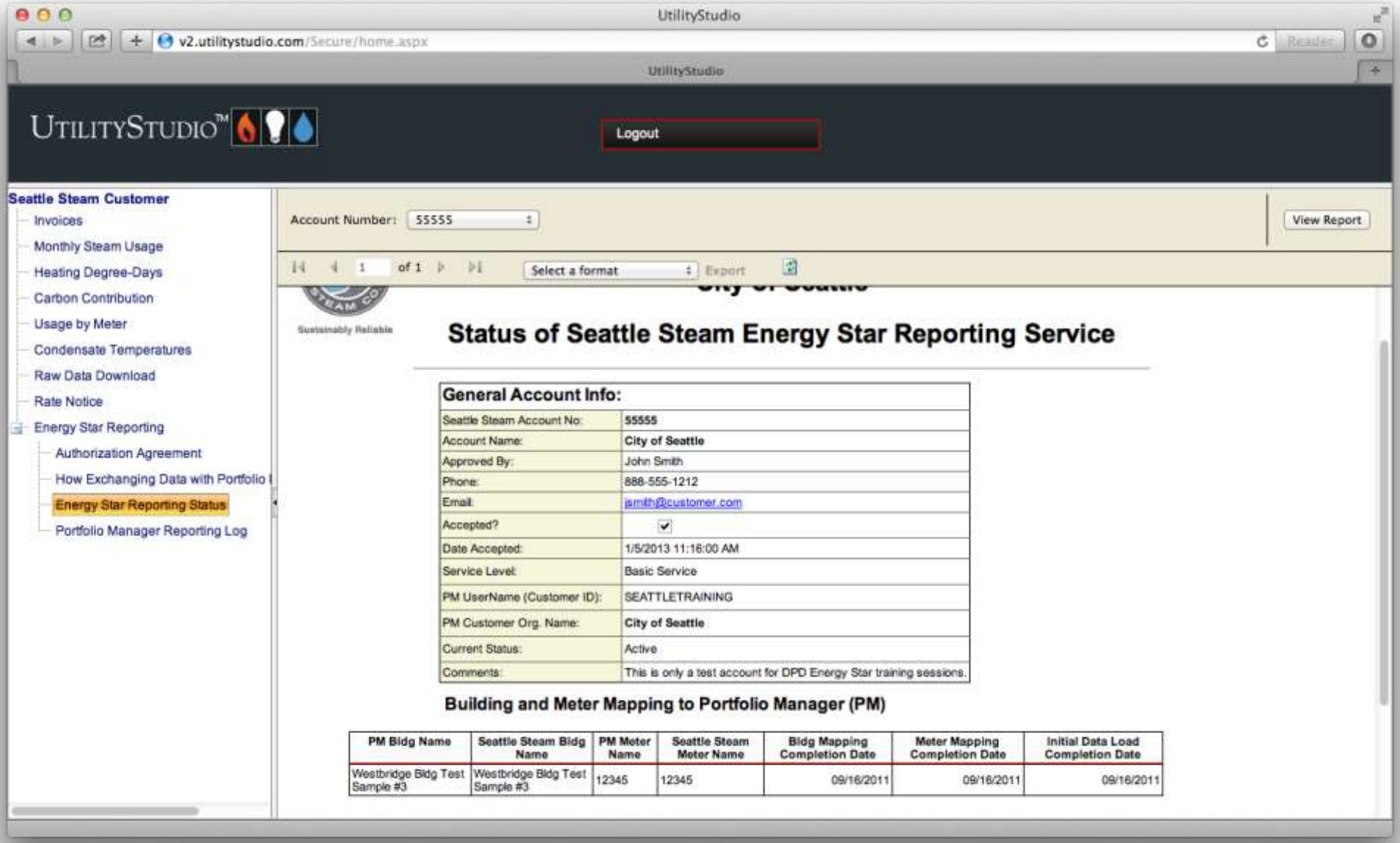
Customer Portal: Offer Automated Reporting



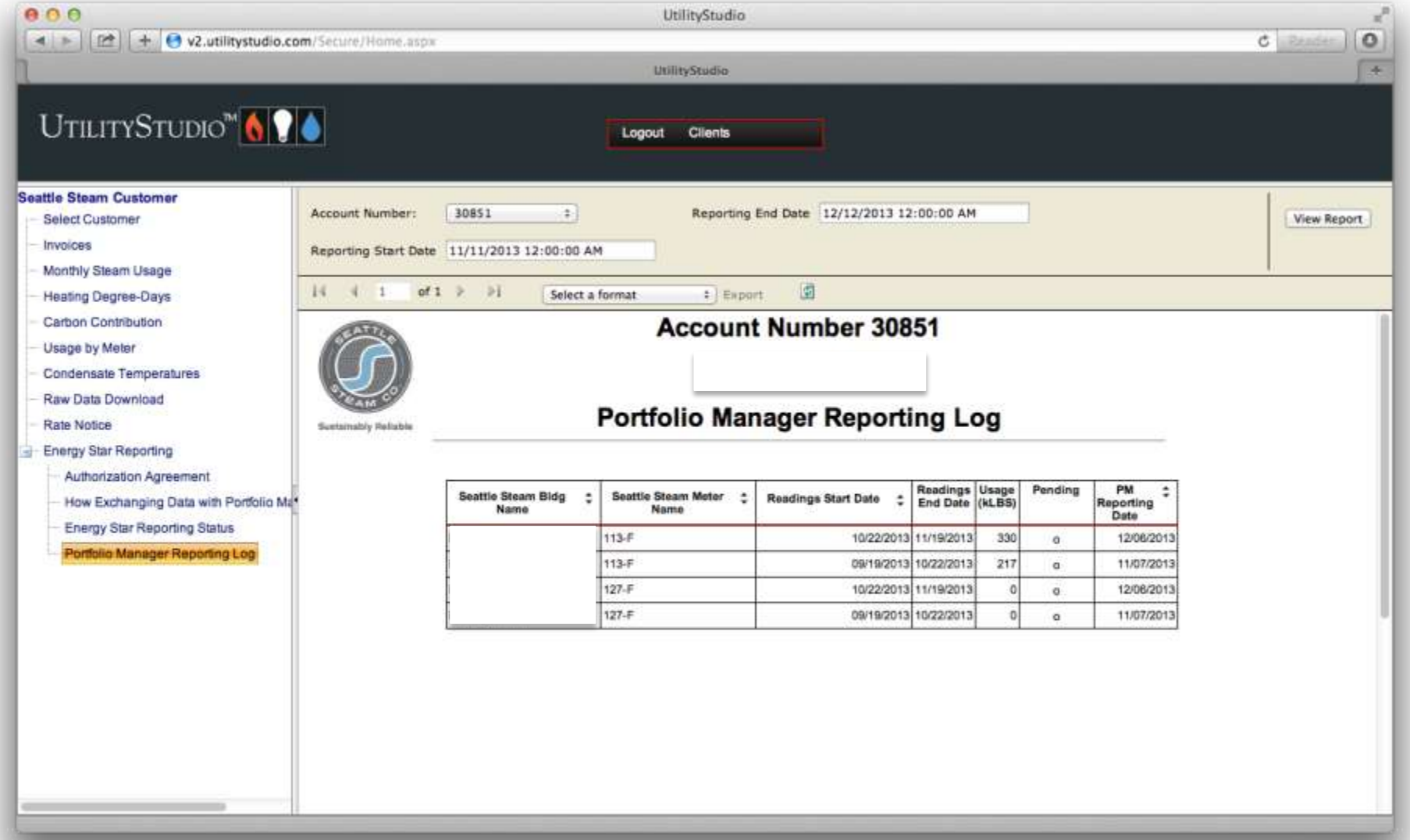
Customer Portal: Enrollment & Customer Support



Customer Portal: View Service Status



Customer Portal: Track History of Reporting



Seattle Steam Bldg Name	Seattle Steam Meter Name	Readings Start Date	Readings End Date	Usage (kLBS)	Pending	PM Reporting Date
	113-F	10/22/2013	11/19/2013	330	a	12/06/2013
	113-F	09/19/2013	10/22/2013	217	a	11/07/2013
	127-F	10/22/2013	11/19/2013	0	a	12/06/2013
	127-F	09/19/2013	10/22/2013	0	a	11/07/2013

Energy Star Reporting Services: Process Flow