



# Residential Building Stock Assessment

October 27, 2010

# Agenda

- **RBSA Background and Overview**
- **The Value of the RBSA**
- **RBSA Success Factors**
- **Sample Size & Geographic Regions**
- **Deliverables to the Region & Timeline**
- **Utility Participation & Communication**
- **Utility & Customer Data Security**
- **Next Steps**

# What is the RBSA?

- Comprehensive characterization of the current housing stock.
- Auditors will visit approximately 1,600 units around the region, collecting data on home size, heating characteristics, appliances, lighting, insulation levels and age.
- The information collected will be a rich data set for planners around the region.

# RBSA Helps Utilities Adapt to New Conservation Goals & Opportunities

- 6<sup>th</sup> and 7<sup>th</sup> Power Plan targets for utilities increasing, with expanded emphasis on electronics, plug loads
- Electronics and plug loads are an increasing percentage of total home energy use
- Federal lighting standards require more targeted programs (CFLs become new federal standard)
- Conservation potential studies (I-937, etc.) require detailed benchmarking of existing loads
- Post-2011 require utilities to have focused programs to manage loads

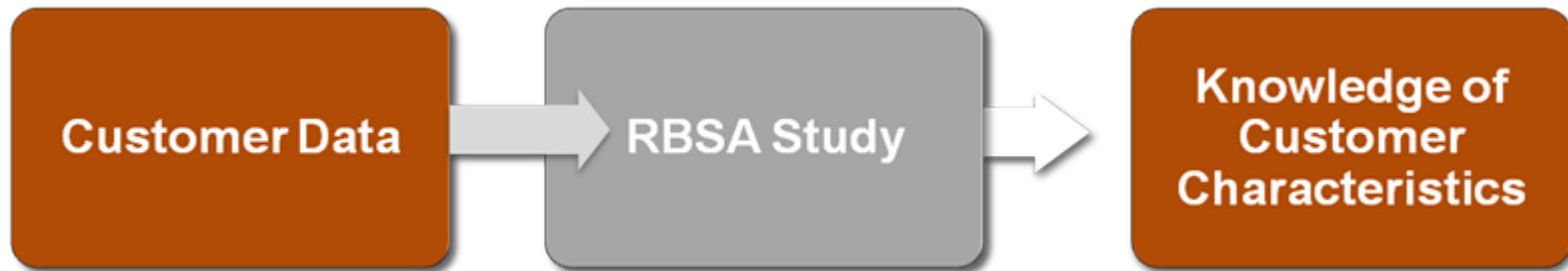
# RBSA Delivers Targeted Data to Utilities

- Baseline building characteristics provide foundation for achieving conservation targets
  - Knowing what conservation is available will help BPA and utilities plan for and develop programs
- Detailed electronics and appliance audit supports targeted new programs
- Detailed lighting audit focusing on lighting power and lamp type helps utilities maintain lighting as a resource
- Baseline home energy and heating use supports overall utility benchmarking and load forecasting

# RBSA Delivers Targeted Data to the Region

- RBSA will ensure accurate and detailed data for the 7th Plan
  - Profile of both urban AND rural areas
  - Greater granularity than previous datasets
- RBSA will assist in quantifying non-programmatic savings
  - Non-programmatic savings decreases the budget for BPA to acquire savings
- Inputs for utility Conservation Potential Assessments
  - Richly detailed dataset can feed into the “guts” of a potential study model, informing on saturation levels, applicability and fuel type shares

# Utility Participation & Data Goes Full Circle



# Value of RBSA Depends on Regional Collaboration



# RBSA Success Factors

- Effective regional collaboration
  - Broad regional utility participation
  - Customer data for sample frame & billing analysis
  - Customer data confidentiality
- Comprehensive, representative sample
  - Region, State, BPA sub-regions (public power), building type
- High-quality data and analysis of critical components of home energy use
- Accessible regional characteristics database available to the region

# Sample Size & Geographic Regions

- Separate design for each house type
  - Single-family and Manufactured homes representative with region and states
  - Public power oversample in BPA regions
  - Multifamily with regional random sample only
- Study will include approx. 1,650 single-family, manufactured, and multifamily units across the region
- Divide the region into geographic domains
  - 1 Region
  - 1 Public Power Sector
  - 4 States (ID, MT, OR, WA)
  - 5 BPA Regions (PS, WW, WO, EWA/EOR, ID/MT)

# Deliverables to the Region & Timeline

| Tasks                                           | Q3 2010 |     |     | Q4 2010 |     |     | Q1 2011 |     |     | Q2 2011 |     |     | Q3 2011 |     |     | Q4 2011 |     |     | Q1 2012 |     |     | Q2 2012 |     |     |  |
|-------------------------------------------------|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|--|
|                                                 | JUL     | AUG | SEP | OCT     | NOV | DEC | JAN     | FEB | MAR | APR     | MAY | JUN | JUL     | AUG | SEP | OCT     | NOV | DEC | JAN     | FEB | MAR | APR     | MAY | JUN |  |
| 1 Kick Off, Work Plan & Sample Design           |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 2 Nested Data Collection Instruments/Protocols  |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 3 Sample Frame Development & Phone Survey       |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 4 Field Audits & Characteristics Database       |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 5 Billing Data Collection & Analysis            |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 6 Characteristics Summary & Analysis            |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |
| 7 Project Management, Reporting & Presentations |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |         |     |     |  |

# Importance of Utility Phone List

- The optimum way to sample is through utility customer lists
  - Ensures regional representation
  - Ensures we can accurately link the customer to the serving utility
- We understand that requesting utility customer lists could cause additional work, but these lists are critical to the study's success
  - Drawbacks of using a phone book list:
    - Only includes landlines that are listed (skewing demographics)
    - Can't determine physical location
      - How do we keep sample regionally representative?
      - How do we not call into a territory that doesn't want to participate?

# Customer Confidentiality

- Secure IT infrastructure/platform
  - Best practice, industry standard, named users
- Best practices for protecting customer data
- Information exchanged through secure extranet or portal (collaboration platform)
  - Documents with customer information will be posted to the secure website, not sent via e-mail
- All billing data and billing data summaries will be made anonymous before assembling database
- All data stored for five years, then personal data will be destroyed
- Non-disclosure agreements as required

# Utility Communication & Involvement in the RBSA

2010

- RBSA utility outreach, formal data requests, oversampling orientation
- Utilities provide customer data (names, address, phone numbers)
- Utilities decide on utility-specific oversampling

2011

- Timely notification of survey and audit activities
- “Cheat sheets” for customer representative provided before site visits
- Ongoing status updates during phone survey and audit phase
- Utilities provide billing histories for final audited sites

2012

- Final characteristics database, characteristics summaries, and baseline home energy and heating use delivered to region for utility benchmarking and planning
- Regional presentation of final deliverables

# Next Steps

2010  
through  
2011

- **Oct. – Nov.:** RBSA outreach for utility participation
- **Week of Oct. 25:** Formal data request sent to participating utilities
- **Nov. 1 - Nov. 30:** Utilities provide customer data via RBSA secure site, including names, acct. numbers, phone numbers, and addresses
- **Mid Nov.:** Second orientation for utility oversampling
- **Jan.:** Phone survey begins
- **Early Q2 2011:** Site visits begin and Ecotope contacts each utility before site visit recruitment

# Please take our survey!!

- We have left time at the end of this presentation for you to take a brief survey. This 5-10 minute survey will help us better understand your interest in participating. It is not a formal agreement to participate.
- Before we move on to the survey, are there any questions?
- Thank you for joining us today. Please proceed to <http://www.surveymonkey.com/s/PHCCDQ8>.

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