

August 1, 2014



### Additional Residential Building Stock Assessment Metering Study Information

The RBSA Metering (RBSAM) is a subsidiary of the larger, regional RBSA Study. The Metering Study was designed to represent single-family houses across the Northwest as best as possible within the project constraints. Working within the feasible sample size, the design worked to optimize the location and variety of sites according to the following goals:

- Locate the metering group within the context of the RBSA study so the more intensive, but narrower, metering study can inform the results of the wider RBSA onsite surveys.
- Provide a representative picture of energy end uses.
- Provide a representative balance of heating system types (including heat pumps).

The current RBSAM data includes 103 total files, ranging from April 1, 2012, to March 31, 2013, with each file corresponding to a unique, residential single-family site. The full study will include two full years of data that will be added as soon as it is available later in 2014. The data is provided as-is and assumes some skill with data and data manipulation. A more user-friendly interface is planned for later in 2014 as well.

### Additional Load Shape End Use Flag Information

The Flag file is a set of flags indicating if a site was used in the creation of the load shape graphics in the report or appendix. 0 indicates it was excluded. 1 means it was included. 2 or more means that multiple end uses were included for a site. For example, there may be 2 TVs monitored at a site and both contributed to the load shape. The column labels list the time interval for the load shape. If there isn't a time listed, daily is implied.

The guiding principle in the report was to use as much data as possible. However in some cases, data for a particular end use at a particular site may not be available due to issues with the data recorder, the person dropping out of the program, etc. This means that, depending on the question being asked there may have been a different number of sites.

For example, Table 43 in the report lists a certain number of sites used for appliance annual energy totals. Those counts won't necessarily line up with the counts in the load shapes due to missing data periods. For example, 3 months of data may be missing for a given load. Creating an annual estimate of energy use from 9 months of data is not desirable, but creating a weekend load shape from nine months is possible. In the case of water heaters, however, the spreadsheet flags the exact sites used in Tables 31 and 32. That could be a good test case to provide as an example to the typical user.

There can be different counts between the monthly and then daily and hourly shapes. In the monthly cases, more sites tended to drop off because too much data was missing over the course of the year. It seemed better, at that time, to exclude those sites. This is a matter of interpretation.

Another note on comparing to the RBSA database tables such as SFMasterPopulation. The RBSA survey database was prepared before the RBSA Metering project was very far underway. Many things were learned about the houses while metering them for years. Therefore, any contextual information from RBSA Metering trumps the RBSA survey database. In cases where there are differences, the Metering dataset wins.