Figure 1: Study Workflow

Legend:
- Data Source
- Processing
- Modeling
- Outputs

RECS 2020
Microdata
(n=18,496)

Filter:
Gas-Heated
(n=9,411)

Feature
Engineering
(24 vars)

Outlier
Removal
(2-98%ile)

Train/Val/Test
Split
(60/20/20)

XGBoost
Regression

SHAP
Analysis

Scenario
Enumeration

Table 3:
Metrics

Table 4:
Importance

Fig 8-11:
Results