



RES.

INTEL

Business Intelligence for Smart Utilities

DSM Prescriptive Analytics

Mass-Scale Energy and Water Benchmarking

by Residential Energy and Water Intelligence (Res-Intel)

Partially funded under California Energy Commission

grant #58076A/14-09G and #57356A/11-12

ACEEE Intelligent Efficiency Conference

5 December, 2016

Sean Bjurstrom, CTO

Hal T. Nelson, Ph.D.

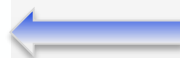
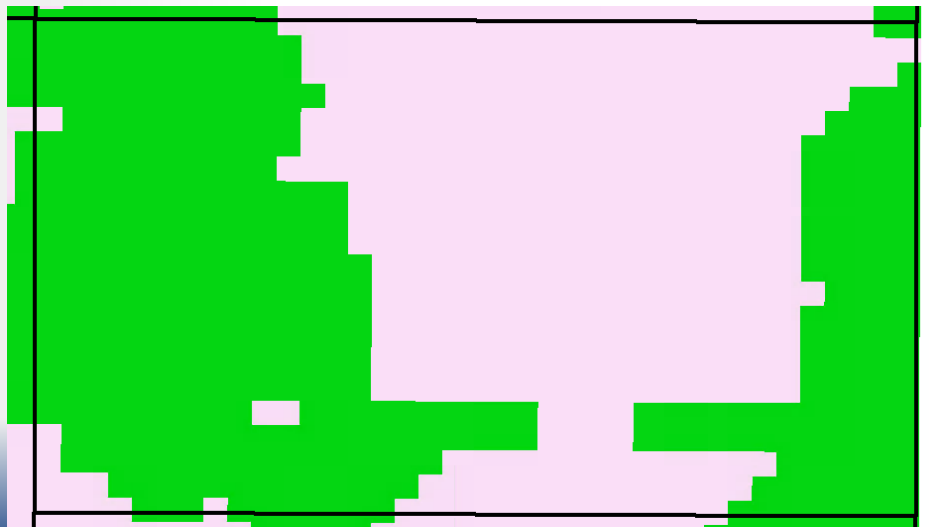
Founder and CEO

Hal.Nelson@Res-Intel.com

Confidential and Proprietary

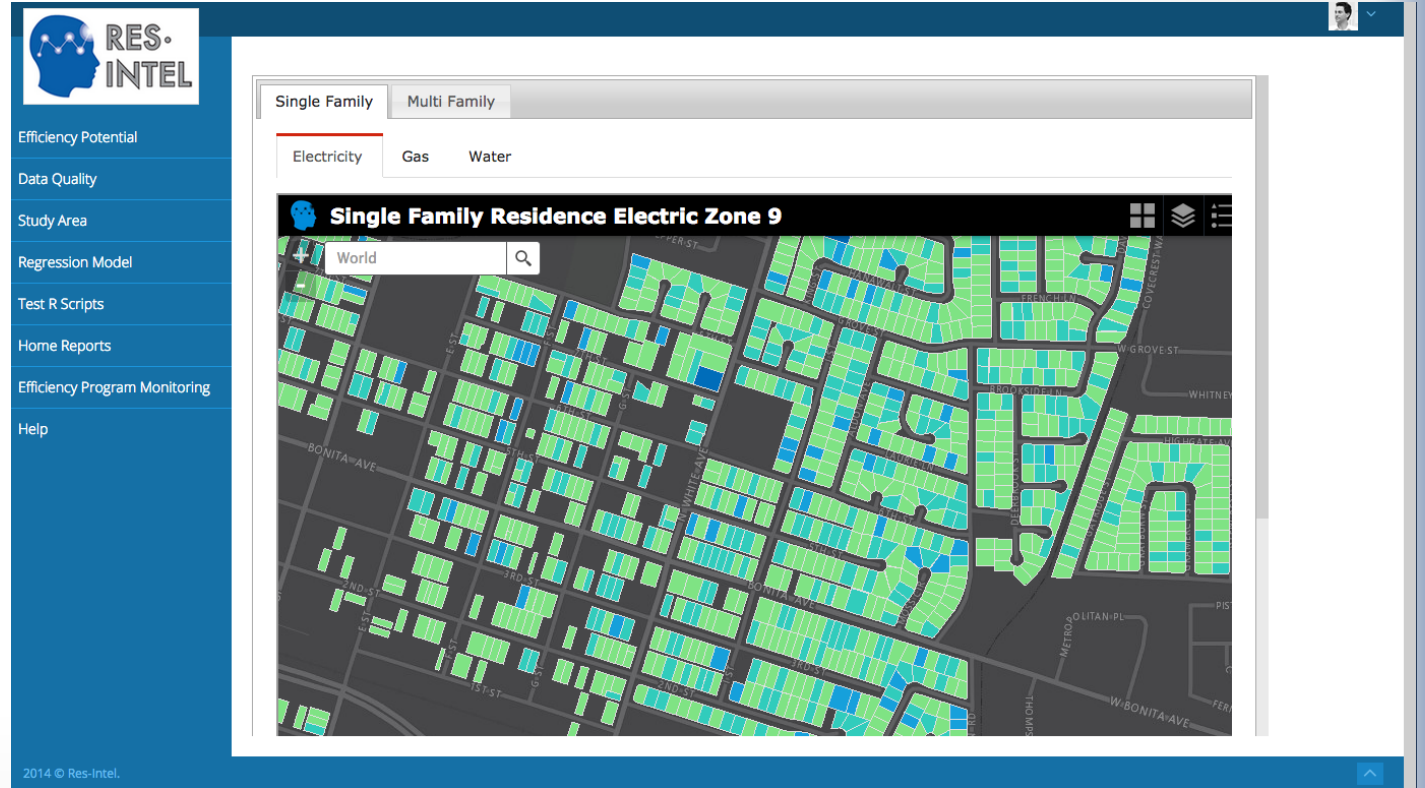
Enabling Mass-Scale Building Benchmarking

- Aggregates and QC's real estate and utility bill account data
 - Estimates energy-use intensity
- Data cleaning and upload to Energy Star Portfolio Manager



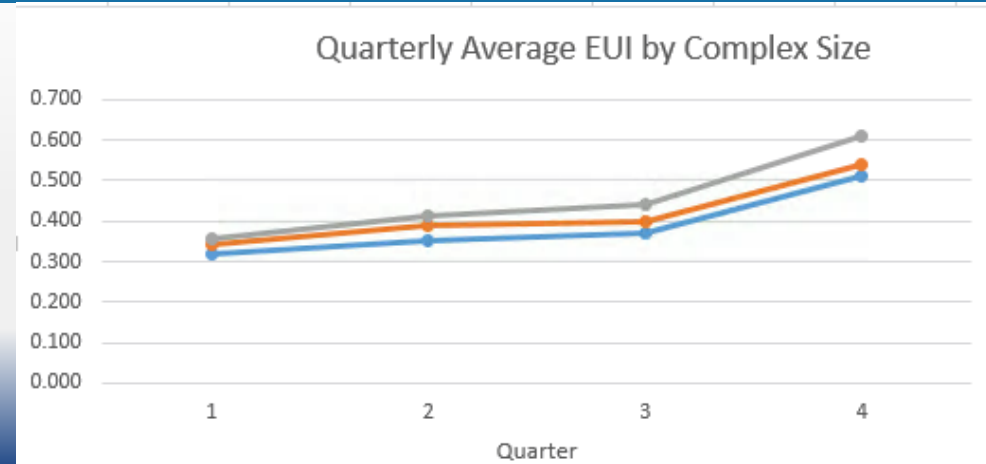
- Portfolio Analyst[®] performs building energy and water benchmarking:
- .56% average monthly difference between the two software tools

Data Dashboards



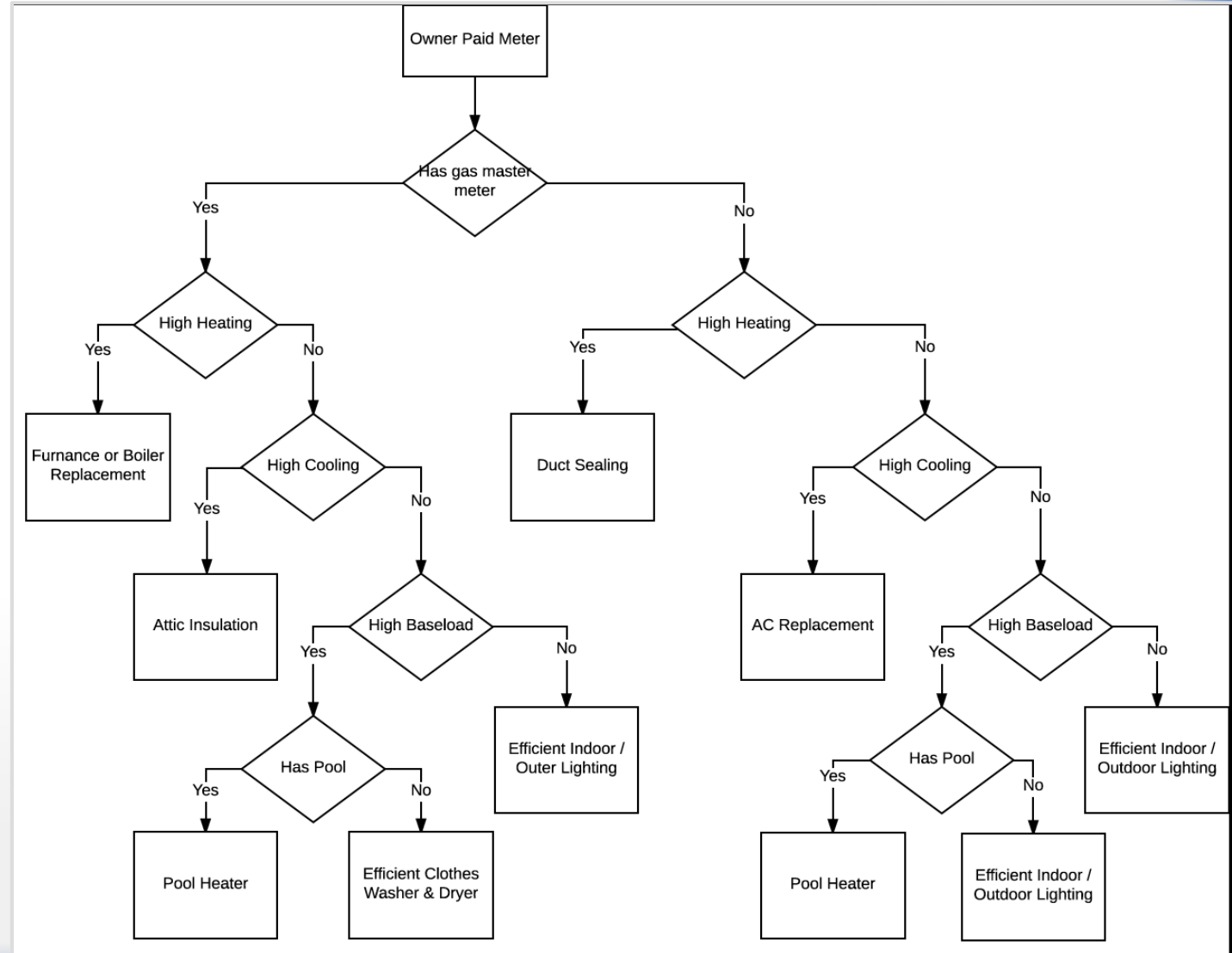
- Dashboard with data that is extractable from the map

- Program EM&V dashboard with comparison groups



Micro-Targeted DSM Recommendations

- Building Energy Modeling estimates:
 - Heating
 - Cooling
 - Baseload energy uses
- Decision tree & data warehouse of recommendations:
 - Envelope
 - Prime movers
 - Appliances
 - Etc





RES.

INTEL

Business Intelligence for Smart Utilities

DSM Prescriptive Analytics

- “Hard-to-reach” behavioral pilot in Southern California
 - 2,400 apartment complexes (~70,000 units)
 - Competition using benchmarking scores to reduce electricity, gas, and water-use
- Looking for partners with utility DSM networks
- More information at www.res-intel.com
 - And/or meet at Moonshine Patio Bar and Grill at 800 tonight

Questions and Comments?