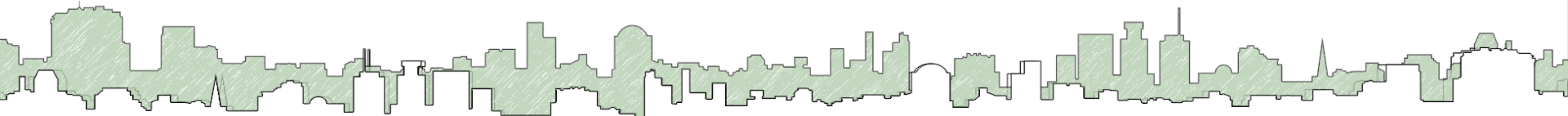




Community-Based Sustainable Development

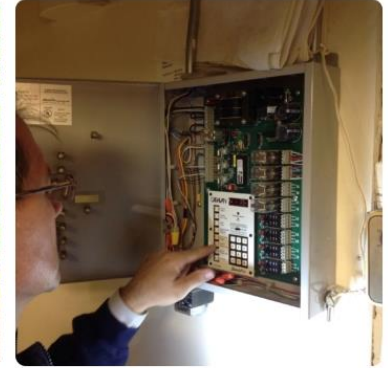
Identifying Your Biggest Opportunities

Jessica Darling
New Ecology, Inc.
March 14, 2017



New Ecology, Inc.

- Audits and data analysis
- Integrated design
- Certifications and compliance
- Monitoring and optimization
- Life cycle cost analysis



Target Buildings through Benchmarking

- Track utility use
 - Spreadsheets
 - Portfolio management tool
- Use data to identify best/worst performers
 - Estimate “potential” as compared to similar buildings
 - A building performing like similar buildings is not necessarily efficient
- Combine results with asset management strategies
 - Upcoming refinancing vs. future refinancing

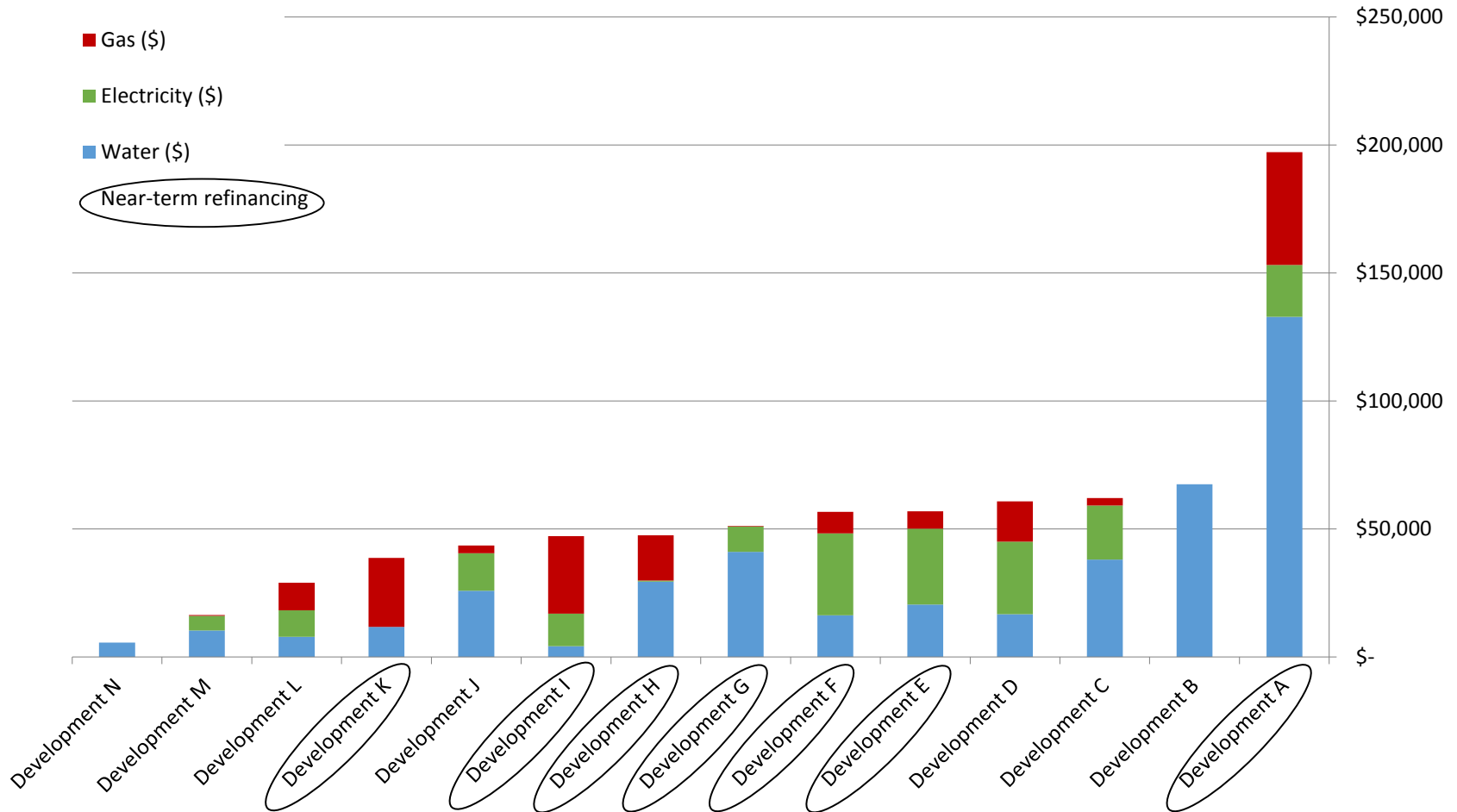


What If Client's Buildings Performed Like Similar* Buildings?

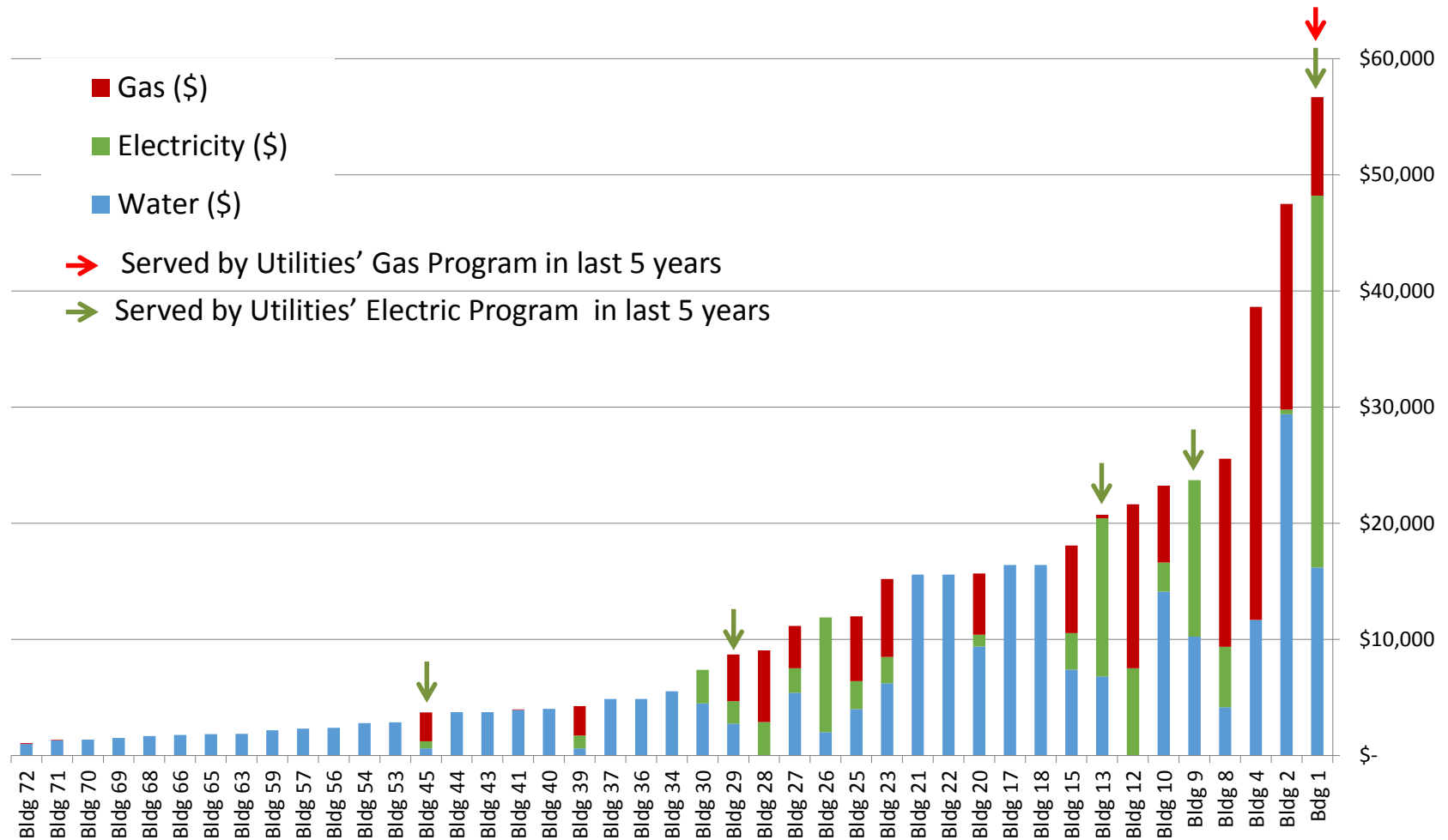
	Water Savings (\$0.018/gallon)	Electricity Savings (\$0.18/kWh)	Gas Savings (\$1.10/therm)	<u>ANNUAL</u> Savings
Buildings to be refinanced before 2019	\$255,714	\$104,975	\$134,569	\$495,258
Buildings to be refinanced after 2019	\$171,656	\$80,238	\$32,715	\$284,610
TOTAL	\$427,370	\$185,213	\$167,284	\$779,867

*Client buildings were compared to the median performance of similar buildings in the WegoWise database. Buildings already at or below the metric were not included in this savings estimate. Median performance is not necessarily efficient.

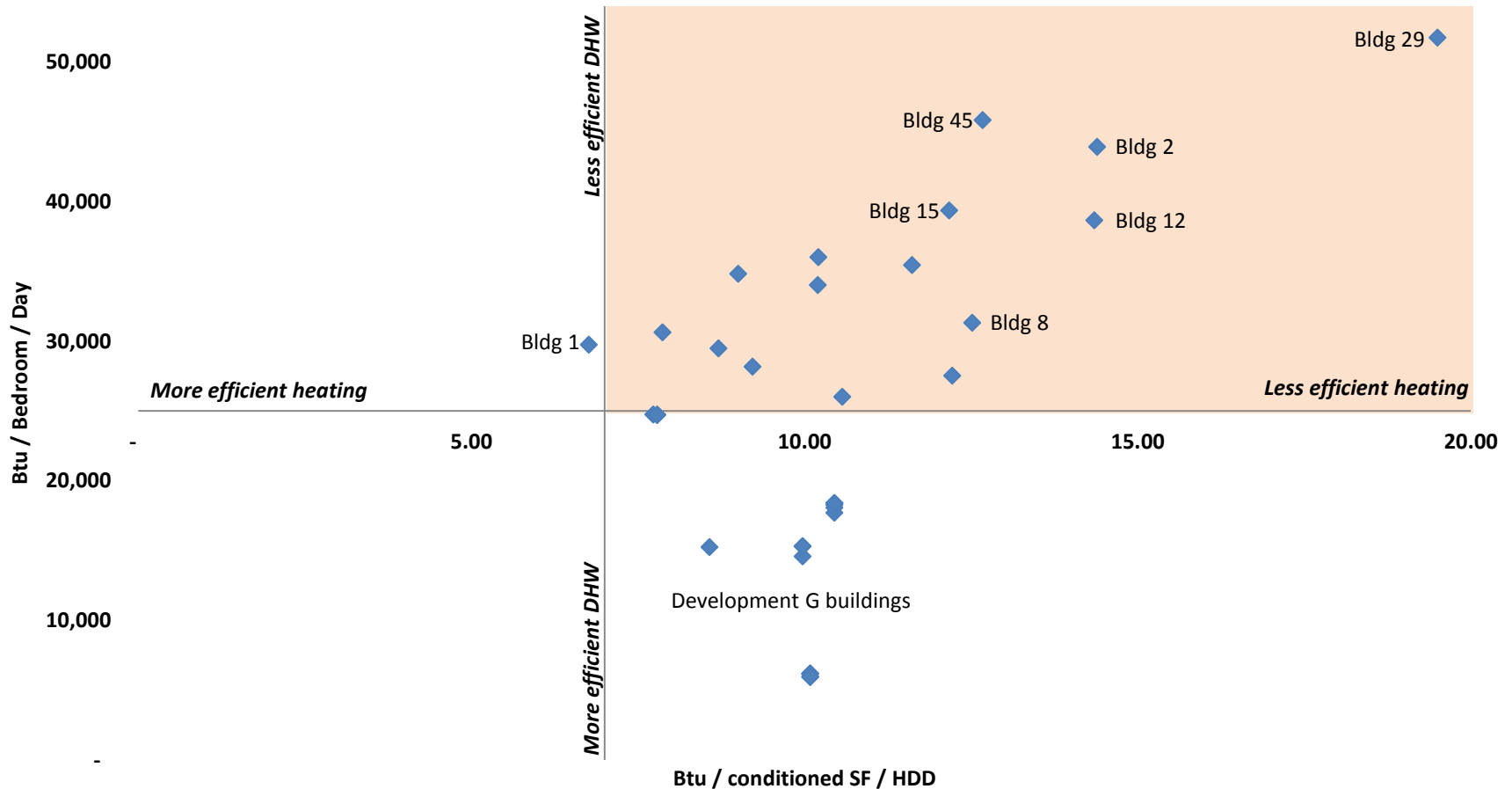
Potential - All Developments



Potential – All Buildings



Heating & Baseload – Buildings to be Refinanced



Summary and Next Steps

- Customize plan based on your potential savings
 - Large savings potential through reduction in water use
- Upcoming refinancing
 - Rehab energy audits, plan & spec review, project oversight and inspections
 - Strategic use of utility programs
- All developments
 - Track utility use for changes/spikes in usage
 - Deploy monitoring and optimization & water diagnostics where logical





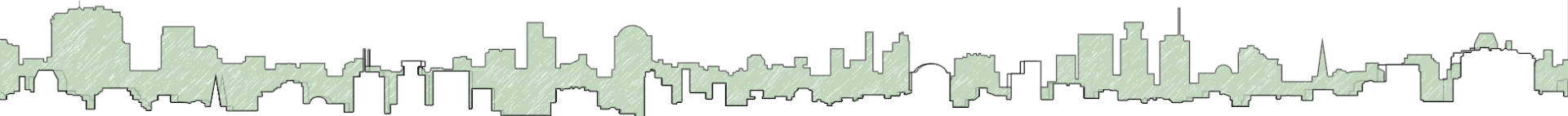
Community-Based Sustainable Development

Thank you!

Jessica Darling

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Methodology

- Study periods:
 - Gas and water: May 2015-April 2016
 - Electricity: April 2015-March 2016
- Benchmarking
 - Estimates “potential” as compared to similar buildings
 - A building performing like similar buildings is not necessarily efficient
- Regressions to estimate heating and baseload consumption
 - Base 65 °F
 - Excluded results where $R^2 < 0.7$
- Savings (\$) calculations based on consumption * estimated rate
 - Gas @ \$1.10 / therm; electricity @ \$0.18 / kWh; water @ \$0.018 / gallon

