Utility Benchmarking / RETScreen Suite

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High Construction
Energy Solutions Group
What Motivates Action?

- Accurate analysis
- Effective communication
Business Questions

- What are my fixed and variable costs and how does production impact those costs?
- If ________ isn’t influencing my costs, what is?
  - Production quantities
  - Weather
  - Attendance
  - Schedule
What if:

- We could accurately correlate energy use to a particular variable (or set of variables)?
- What if we could accurately prove that a particular variable had no correlation to energy use?
Fun with Linear Regression

\[ y = 5.7597x - 118.63 \]
\[ R^2 = 0.9695 \]
The Power of Metrics

- Quote from CEO “I see all of this data but is the patient getting better or worse?”
- Units of energy consumption per _____ can be a powerful tool and means of communication
Predicting the Future

- **IF** we can develop an accurate correlation
  **THEN** we can predict future performance

- **AND** we can compare what would have been, with what we have influenced via implementation of change

- Some might even call it M&V
Here’s Where We are Headed
Risk Analysis

- Why do clients have a hard time investing money in energy projects?
- What if your calculations aren’t quite accurate?
- How do we communicate risk in quantitative terms?
RETScreen

- What is it?
  - Renewable-energy and Energy-efficient Technologies (RET)
  - Free decision support tool developed by Canadian Government and support from NASA, UNEP, GEF, and REEEEP
  - Two parts: energy and financial analysis (RETScreen), Benchmarking (RETScreen Plus)
Why was it developed?
– To reduce the costs (both financial and time) associated with identifying and assessing potential energy projects
– Quickly access project viability (feasibility)

What portions will we focus on today?
– Fast example of compressed air (RETScreen)
– Benchmarking example (RETScreen Plus)
RetScreen

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