

Production Efficiency

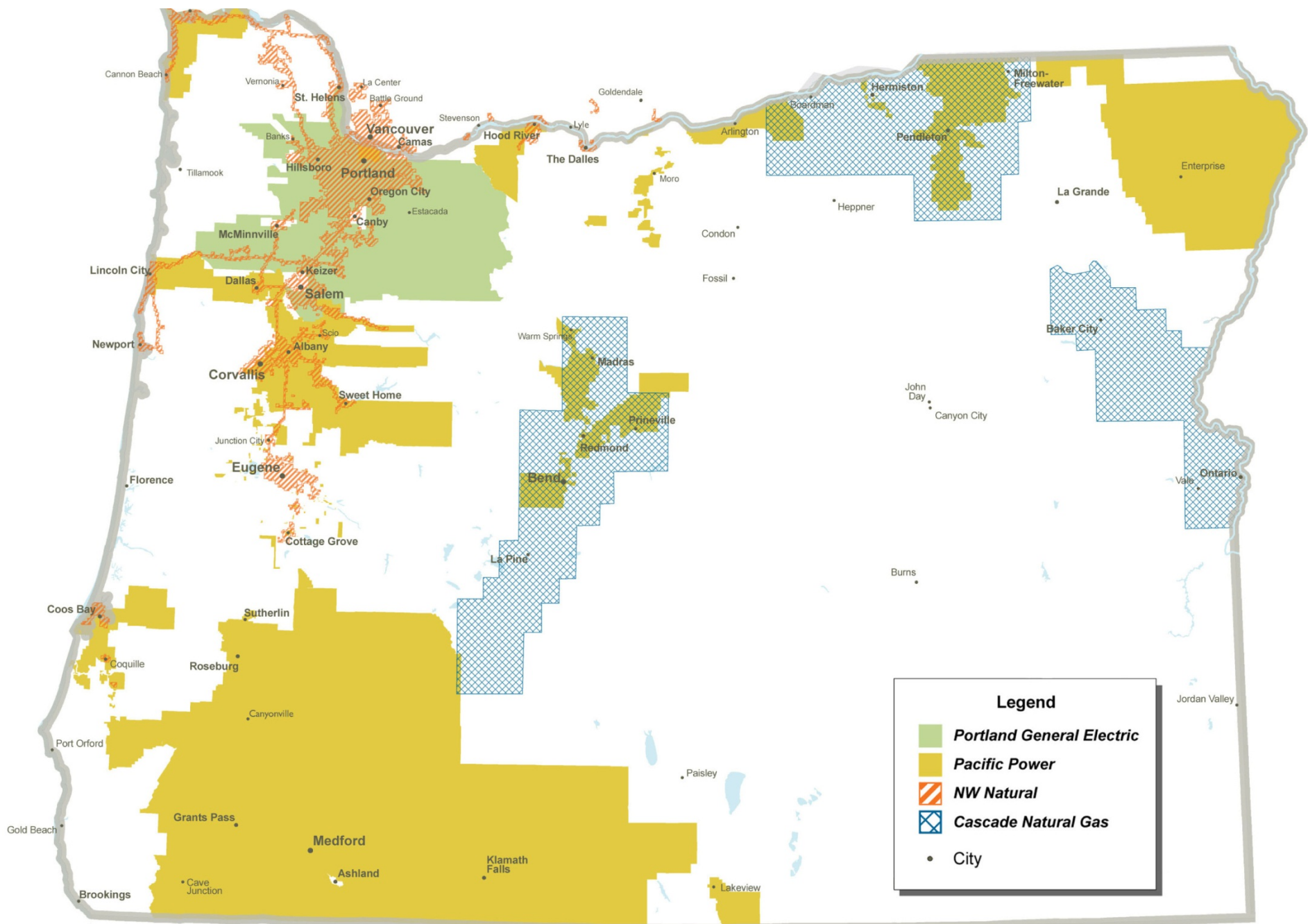
Harvesting energy savings
from Industries in Oregon

May 15, 2014



About

- Independent nonprofit
- Serving 1.5 million customers of Portland General Electric, Pacific Power, NW Natural and Cascade Natural Gas
- Providing access to affordable energy
- Generating homegrown, renewable power
- Building a stronger Oregon and SW Washington



Legend

- Portland General Electric**
- Pacific Power**
- NW Natural**
- Cascade Natural Gas**
- City**



The Production Efficiency program serves:

- Industrial + manufacturing facilities of all sizes
- Agriculture: nurseries, dairies, irrigators
- Water + wastewater treatment facilities

How We Go to Market



Easy to work with...one-stop shop

Industrial energy efficiency experts assigned to your facility work with you to reduce energy costs and optimize use

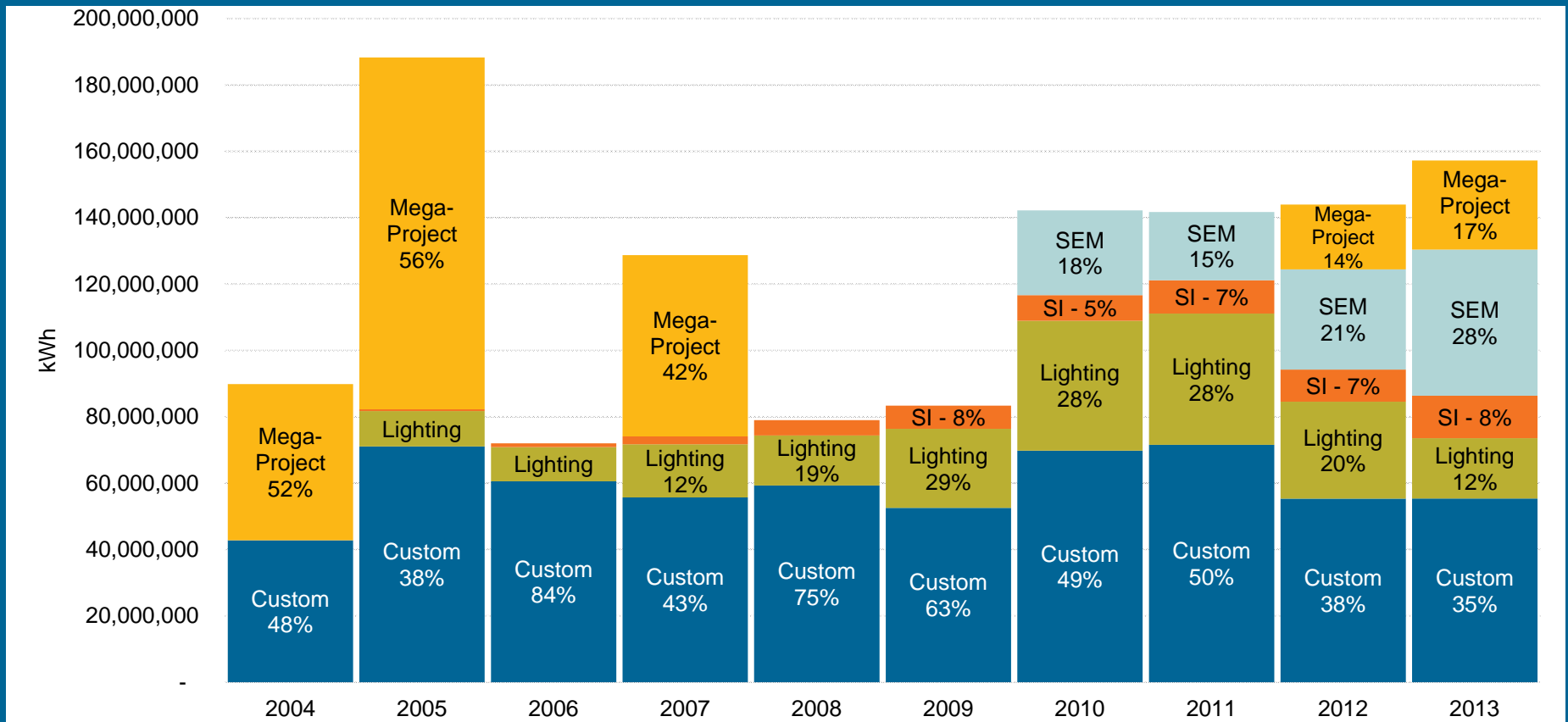


Long-term perspective with incentives and services for capital projects, O&M and strategic energy management

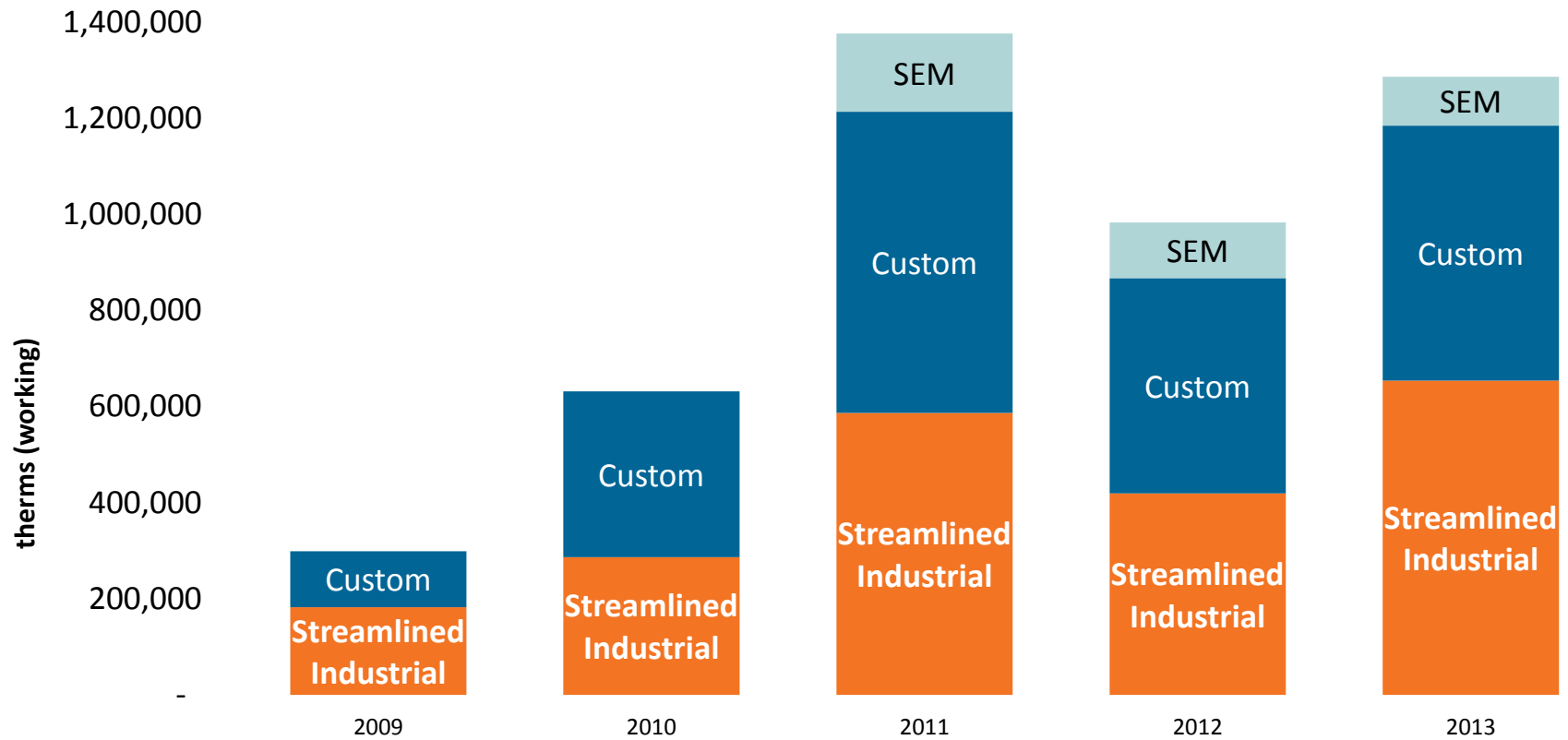
Implementation: the PE Team



Electric Savings by Track, Historical



Gas Savings by Track, Historical

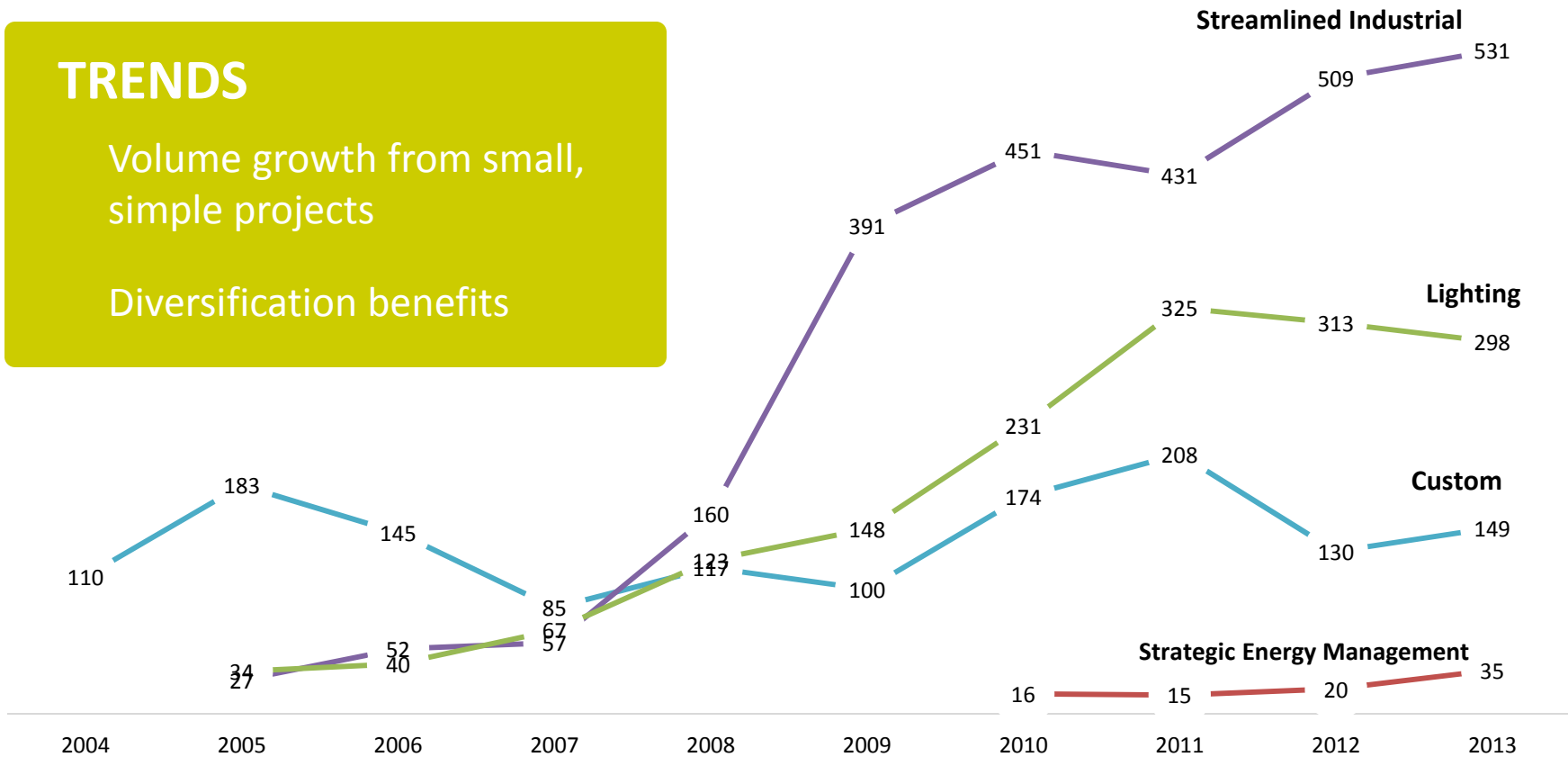


Projects Completed (*track*)

TRENDS

Volume growth from small, simple projects

Diversification benefits



Unified Grocers

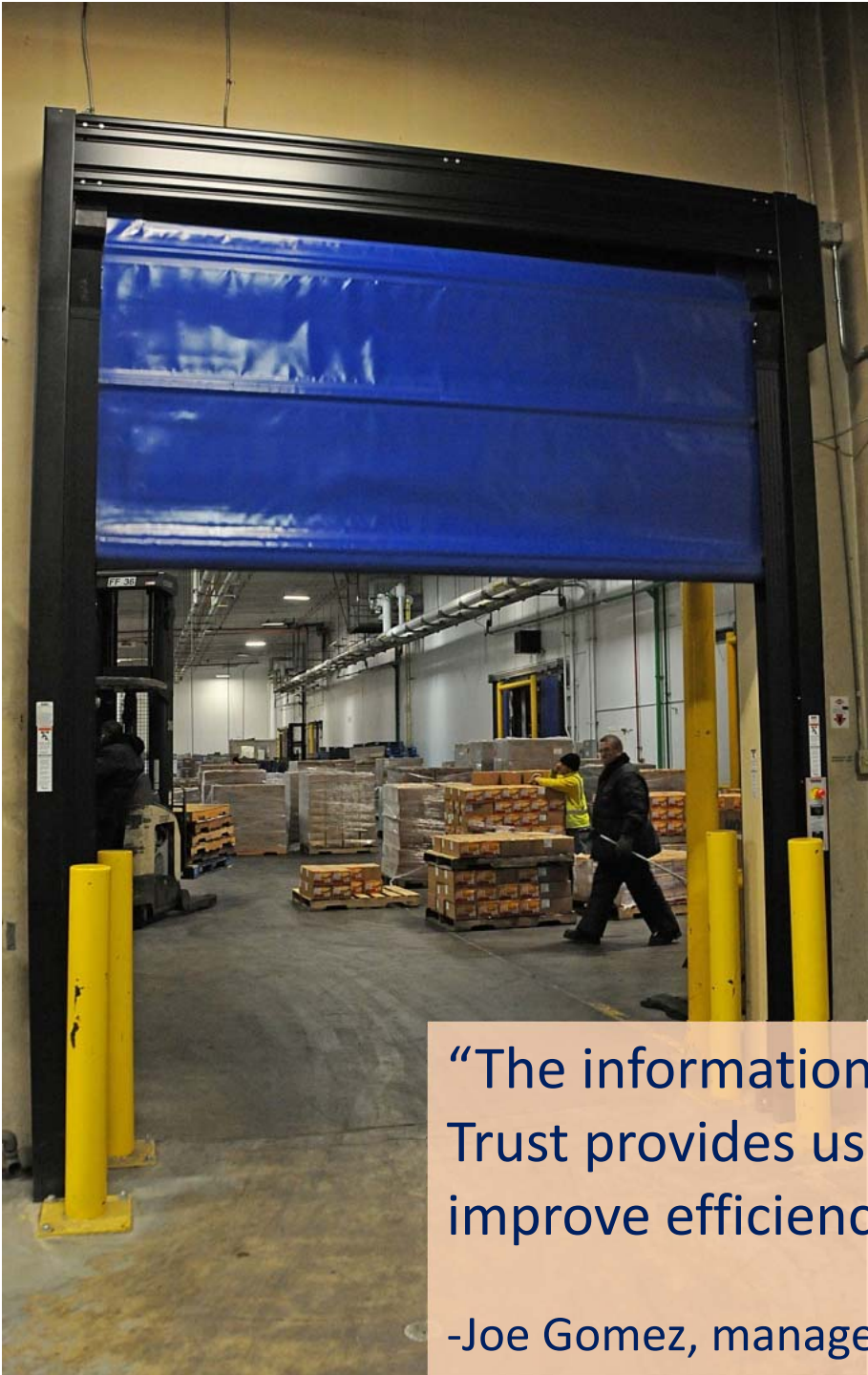
High Speed Door Installation

\$13,000 Project cost

\$ 6,500 Energy Trust incentive

74,000 Annual kWh savings

\$4,800 estimated annual savings



“The information and training we get from Energy Trust provides us with ideas and options that help us improve efficiency and save money.”

-Joe Gomez, manager of plant services, Unified Grocers

DPI Lighting Upgrade

- LED Fixtures and lamps
- High-performance T8 fluorescent fixtures and lamps
- Bi-level ballast and fixture controls

\$194,000 Project cost

\$113,881 Energy Trust incentive

536,319 Annual kWh savings

\$37,000 estimated yearly savings

“Workers are telling us the lighting is better inside and out. They can see better and we’ve noticed that accuracy has improved.”



Roseburg Urban Sanitary Authority

- ACWA's Sustainable Energy Management Systems Training
- Created Energy Team
- Development of energy management plan
- Implemented energy projects (no-cost and lighting)
- Tracked and reported on progress
- \$29,000 annual savings

“Today, our staff members are much more aware of the plant’s energy use. At the end of day, it means lower fixed costs, which is better for our

Strategic Energy Management (SEM) Program Objectives

Increase awareness of energy use and efficiency opportunities; Increase commitment and capacity to manage energy

Energy Savings

- Direct energy savings from low and no cost actions (behavioral, O&M) to reduce energy waste.
- Increased ability to implement capital efficiency projects in the future

Persistence of SEM practices in the organization and persistence of savings

SEM: An Emerging Source of Savings

NW region programs leading in this area
past 7 years

- Northwest Energy Efficiency Alliance (NEEA), Energy Trust, Bonneville Power Administration (BPA), BC Hydro

National and International

- Superior Energy Performance – US DOE
- ISO 50001
- CEE and a growing number of its members

How Can SEM be a Game-changer?

Enables/ equips customers to take a deep, comprehensive approach to energy use now.

Improves their ability to tackle complex process efficiency projects, emerging technologies, DR, CHP in the future.

Energy models/ SEM could change how programs are designed or savings evaluated in the future – performance based vs measures





Thank You

Kim Crossman

Industry & Ag Sector Lead

Kim.Crossman@energytrust.

503.459-4074



Back-up Slides

PE Cash Incentives

Custom Capital

\$0.25/kWh

\$2/therm

Capped at 50%
project cost

Custom O+M

\$.08/kWh

\$.40/therm

Capped at 90%
project cost if
complete in 90 days

Strategic Energy Management

\$.02/kWh

\$.20/therm

Equipment Rebates

Custom Lighting

\$.25/kWh

Capped at 50%
project cost

Calculated equipment incentives



Top Trends from Industry & Ag

Predictability yields consistent savings

Volume growth from small, simple projects

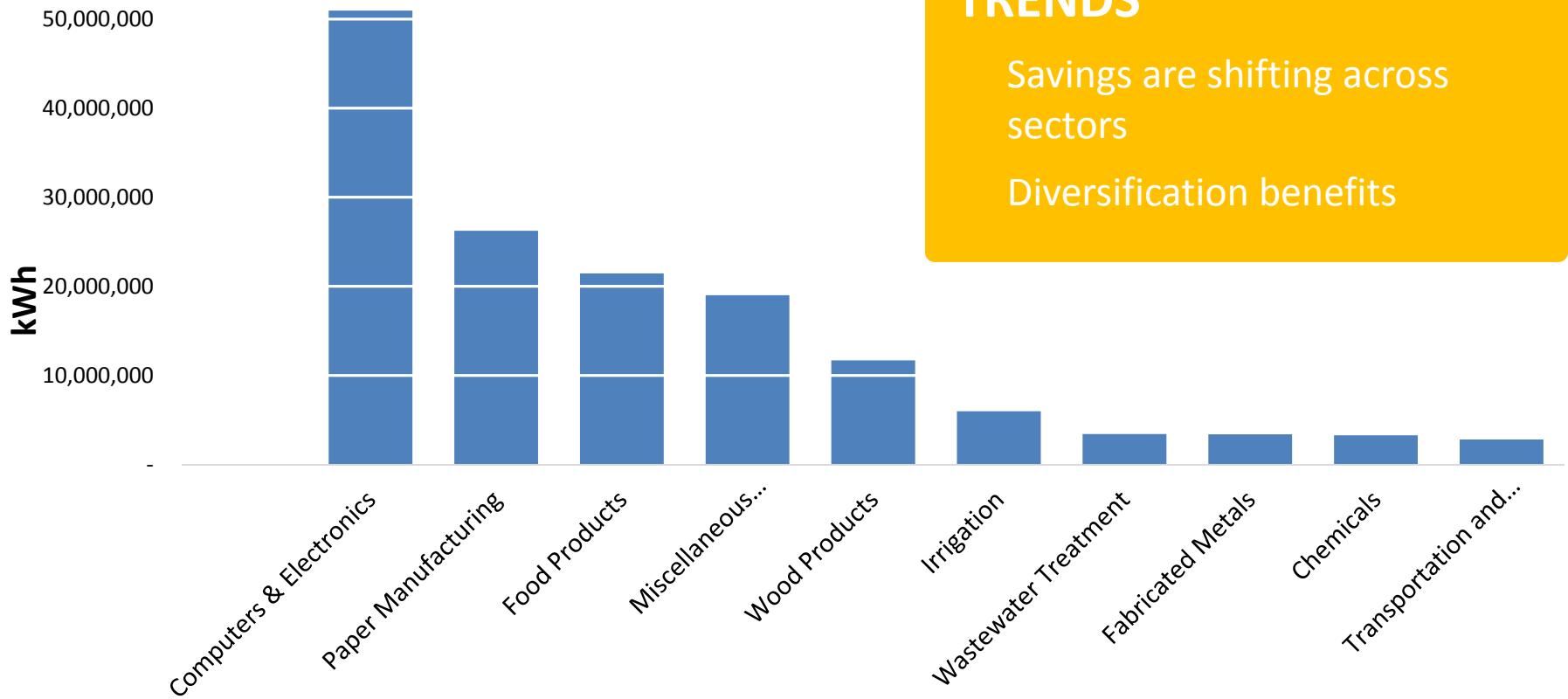
Savings growth from large, complex projects

Streamlined still major source of gas savings

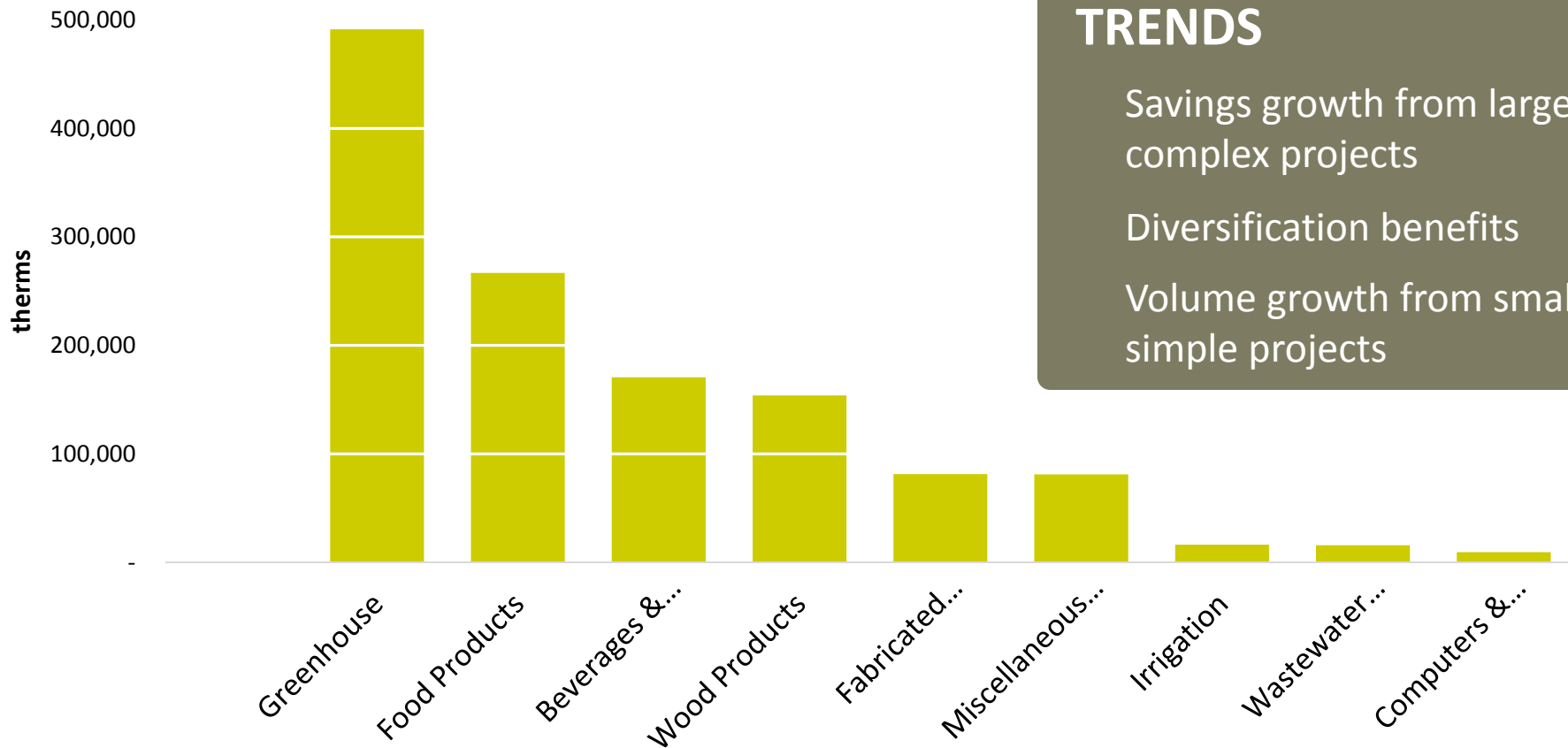
Savings are shifting across sectors

Diversification benefits continue to drive growth and hedge portfolio risk

2013 kWh Savings by Industry Sector



2013 Gas Savings by Industry Sector



TRENDS

Savings growth from large, complex projects

Diversification benefits

Volume growth from small, simple projects



50 HP VFD Air Compressor

Project Cost: \$51,000

Incentive: \$25,500

Payback: 2.8 Years

Energy Savings:

116,000 kWh / year

Estimated Yearly Savings

\$8,000 Utility Bill

+ \$1,200 Maintenance

\$9,200 Estimated Total



CalPortland

Participated in Energy Trust's Industrial Energy Improvement SEM training and tech support

Completed six energy-efficiency projects

- Received \$28,169 in Energy Trust incentives

Estimated annual savings

- \$54,676 per year
- 729,014 kilowatt hours
- 277 tons of carbon dioxide



“

The energy team is now a fixture within the organization. Operational management is performed with energy as a driving factor.

”

Bill Jerald, CEM
Energy Manager

We offer:

Well qualified Program Delivery Contractors (PDCs) make participation easy

- Customer outreach, engagement and long term support
- Facility assessments – identify opportunities and verify savings
- Project application and documentation

No-cost technical assistance

- Technical and economic analysis of potential capital projects
- Enhanced technical services to reduce energy waste in O&M
- Training of site leadership and staff for continuous energy improvement

Cash incentives to buy down costs of energy saving projects

