



Achieving Industrial Targets

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BPA Energy Smart Industrial Program

Presented by:
Jennifer Eskil, Industrial Sector Lead
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BPA Energy Smart Industrial

- Currently **84** utilities participating
- Over 1,800 aMW of industrial load utilities of the 2,400 aMW in the 6th Power Plan in ESI program.
- ESI Branding/Marketing:
 - Web site: www.EnergySmartIndustrial.com
 - Utility/End user/Stakeholder collateral
 - Program and component-specific presentations
- PTR system custom project pipeline:
 - CPPs submitted since 10/01/09: 63 (over 16 aMW)
 - Total CPPs: 173 (nearly 25 aMW)

ESI Program Components

- Energy Project Manager (EPM):
 - Very popular; lots of interest.
 - Clark PUD/SEH America: first executed EPM agreement
 - Cowlitz/Steelscape: utility signed; offered to industry
 - Seattle City Light, Grays Harbor and Pend Oreille PUD: reviewing and offering to their key industrial end users.
- Track and Tune (T&T):
 - One T&T agreement signed
 - Major work completed to provide detail in the IM
 - PTR upload spreadsheet complete
- High Performance Energy Management (HPEM):
 - ESI to set up HPEM networking group for Southwest, WA / Northwest, OR.



ESI Program and Other Services

- **NW Trade Ally Network – Industrial:**
 - Focus on lighting
- **Small Industrial measures:**
 - Compressed Air calculator to in PTR system
- **Technical Service Proposals:**
 - 16 proposals contracted since 10/01/09
- **Green Motors Initiative:**
 - 74 utilities participating



BPA Energy Smart Industrial

- BPA Implementation Manual fine tuning:
 - Energy Management (EM), particularly EPM and T&T
 - Future work: clarification of sector definitions (e.g., industrial vs. agricultural vs. commercial).
- Evaluation Contractor (Cadmus) has concluded ESI logic models and indicators:
 - EM decision tree being developed to evaluate the ESI program.
- Water/Wastewater focused strategy:
 - High interest
 - Many walk-through and scoping assessments represent over 12 utility service territories.

BPA Energy Smart Industrial

- Program/Opportunities Challenges:
 - Acquire the savings
 - Keep ESI program costs below ~\$2M/aMW
 - Fill the PTR custom project pipeline
 - EM: Measurement and verification, persistence, simplify process
 - Communication and relationship building:
 - BPA – program partner – utility – end user
 - Streamline and speed up TSP process
 - EM acknowledged as kWh acquisition
 - More calculators for Small Industrial measures
- Energy Smart Industrial (ESI) and Energy Smart Utility Efficiency (ESUE) programs are part of the industrial sector.

Contact

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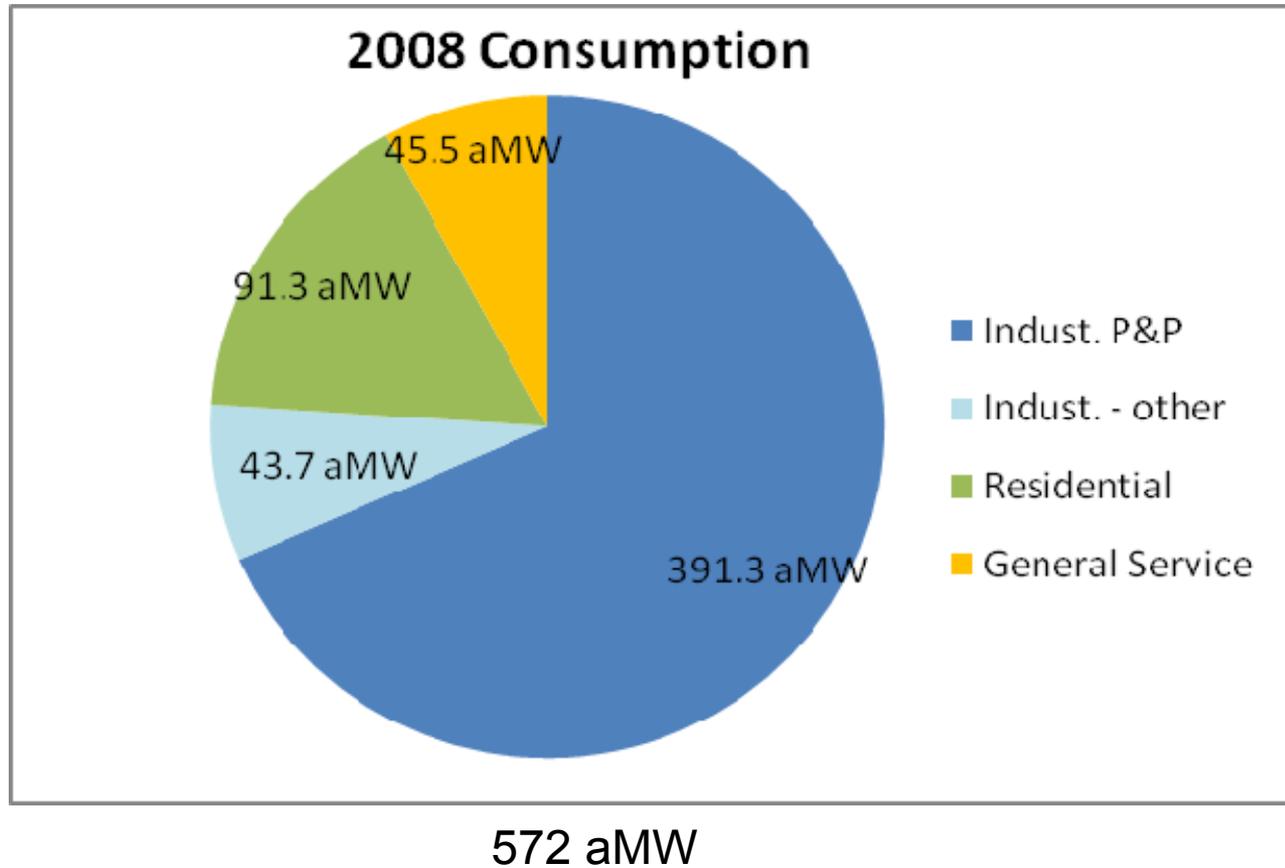
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***One utility's early
experiences with
Energy Smart Industrial***



Cowlitz PUD - Background



Cowlitz PUD

Why we signed up for ESI

- More Engineering “boots on the ground”
- Engineer with different skill set to closely collaborate with.
- Assistance to deploy new pilot “Energy Management” programs.
- Customizable
- Nothing to lose by signing up.



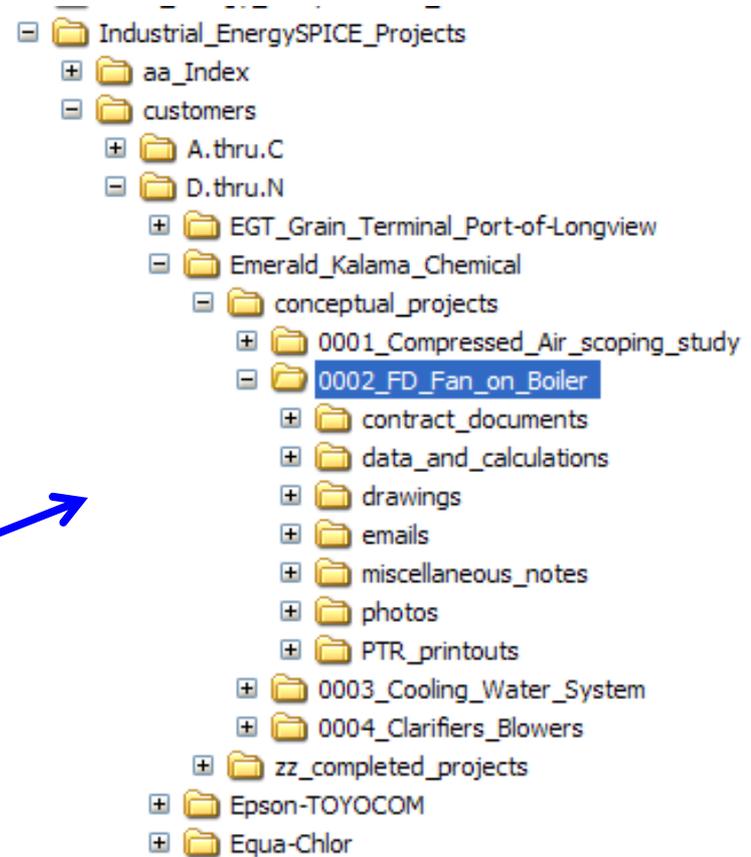
Cowlitz PUD - Strategy

“DIVIDE and CONQUER”

- Frank Busch (ESIP to Cowlitz) to engage with “Small Industrial” customers.
- Frank to help us deploy pilot “Energy Management Programs” (EPM, T&T, HPEM).
- Cowlitz PUD (Doug) would still maintain “Key Account Manager” role for EE with “BIG 3.”

Cowlitz PUD – Early actions

- Had ESIP sign Confidentiality Agreement
- VPN Server Access
lots of information on project opportunities and past studies.



Cowlitz PUD – Early actions [Cont'd]

Workspace for ESIP

(Note: Frank's cubicle adjacent to Doug)

- *Facilitates better communication.*
- *Reinforces message to ESIP (and to others in PUD) that he is a welcome and valued partner.*



Frank (aka 'uber ESIP')

Cowlitz PUD – Early actions [Cont'd]

Scheduled Introduction Meetings w/ 10-12 Customers

Purpose: *To introduce Frank and to update customers on recent program enhancements.*

Other benefits of Introduction Meetings:

- ESIP-Customer relationships established ahead of time.
- “No change” to Custom Project Program they were already familiar with (except incentive rates).
- Emphasize that ESIP and PUD are a close team.
- Engage w/Customers and stir the pot on any languishing opportunities in light of new higher incentives.

Cowlitz PUD – A few early results

- Development of 500,000+ kWh Cooling Water Pump & Cooling Tower Fan opportunity.
- Two EPM Agreements issued to customers.
- One T&T Project underway at “Big 3” customer.
- Invited by customer to 90 minute HPEM presentation.
- Long-forgotten Chiller opportunity being looked into again by one of the “Big-3” customers.

Cowlitz PUD – Early results [Cont'd]

- New battery charger opportunity and datalogging to support possible new “Small Industrial” offering (Paul Warila).
- Two separate wastewater opportunities identified and being developed.

Cowlitz PUD – Conclusion

*Our Industrial Customers are starting to see that we not only can offer them incentive funds for projects, but can also now offer access to sorely needed, impartial (and at no cost to them) **Engineering resources** to help them better understand, identify, quantify, and verify their opportunities.*

? Questions ?

Contact Info.

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Energy Smart Utility Efficiency Program

Presented by:

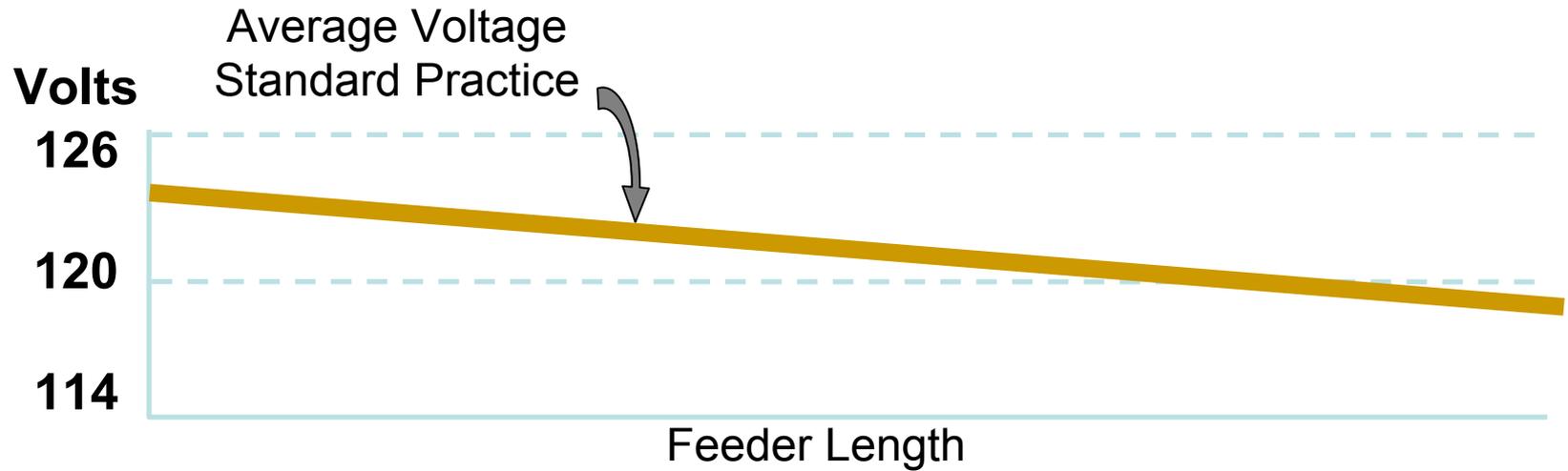
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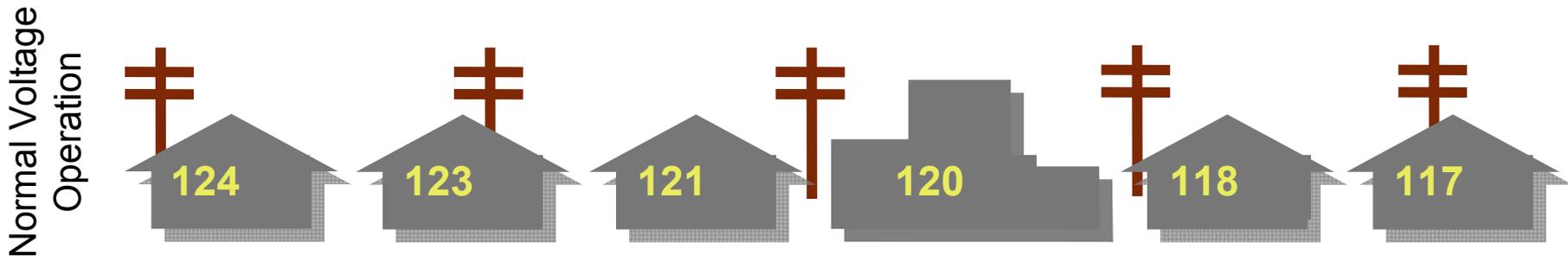
Energy Smart Utility Efficiency Measures

- System Improvements
 - Service conductor replacement, balance loads and phases, add parallel feeders, transformer load management, etc.
(see BPA Implementation Manual, Section 6, Energy Smart Utility Efficiency)
- Voltage Optimization (VO)
- Combined VO and System Improvements

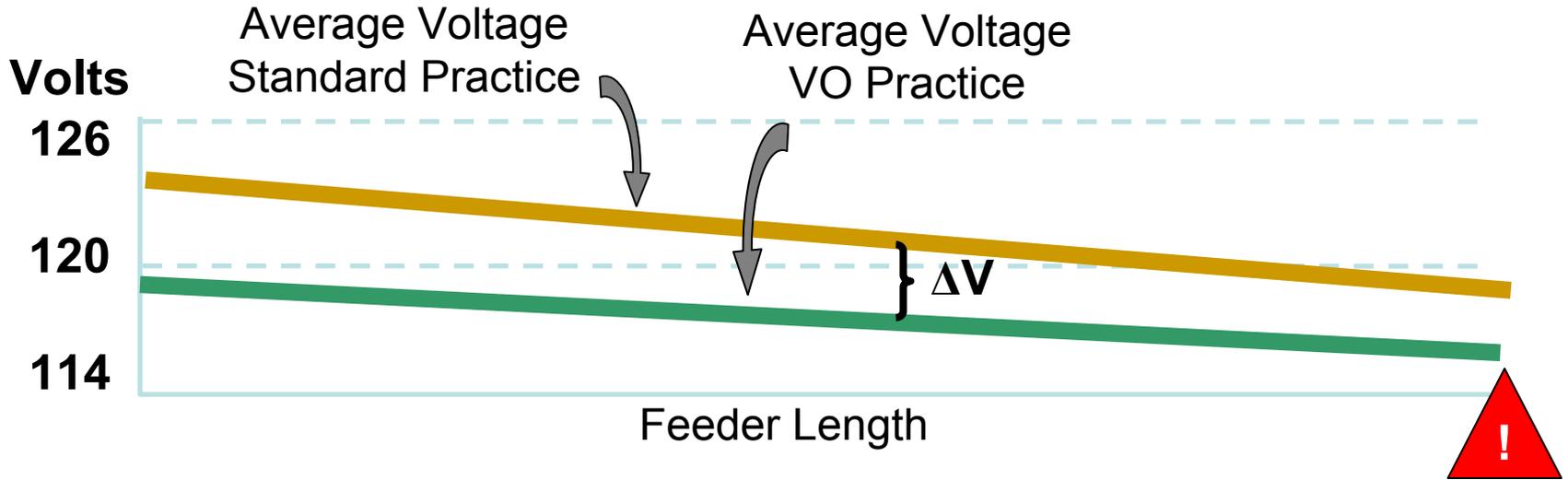
What is Voltage Optimization



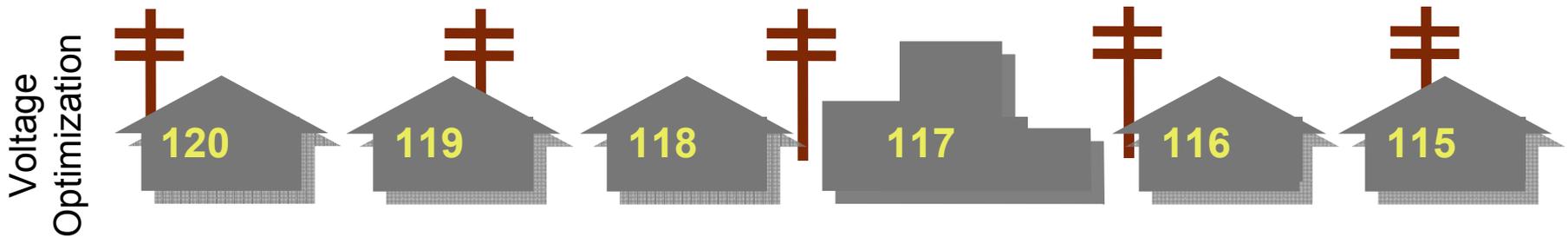
Normal Voltage Operating Range in Current Practice by Utilities



What is Voltage Optimization



Normal Voltage Operating Range by Utilities practicing VO



Overview of ESUE Program Offer

- Financial incentives: \$0.25/kWh or 70% of project incremental cost.
- Technical services available to VO and/or System Improvements
- Progress payments available for qualifying projects
- All documentation prepared by BPA-provided technical services experts (Optional for System Improvements)
- Average substation could save 300,000-500,000 kWh

First Utility to Participate: Cowlitz PUD

- Cowlitz PUD shares some of the results from first VO technical service – conducted March 11-12, 2010.

What Conservation Staff Need to Know

- A Technical Work Group reviews program elements, technical feasibility and M&V protocols
 - 42 utility members, mostly engineer staff
- Follows Custom Project model, with exceptions:
 - Documentation prepared by BPA-provided TSP experts (optional for System Improvements)
 - Standardized assessment process (e.g., data collection templates)
 - Existing inventory can be included in CPP (if installation is part of CPP Plan)
 - VO requires BPA-provided technical services
- Talk to your engineering/operations staff and encourage them to review the benefits of participation.

Contacts

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