

# FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

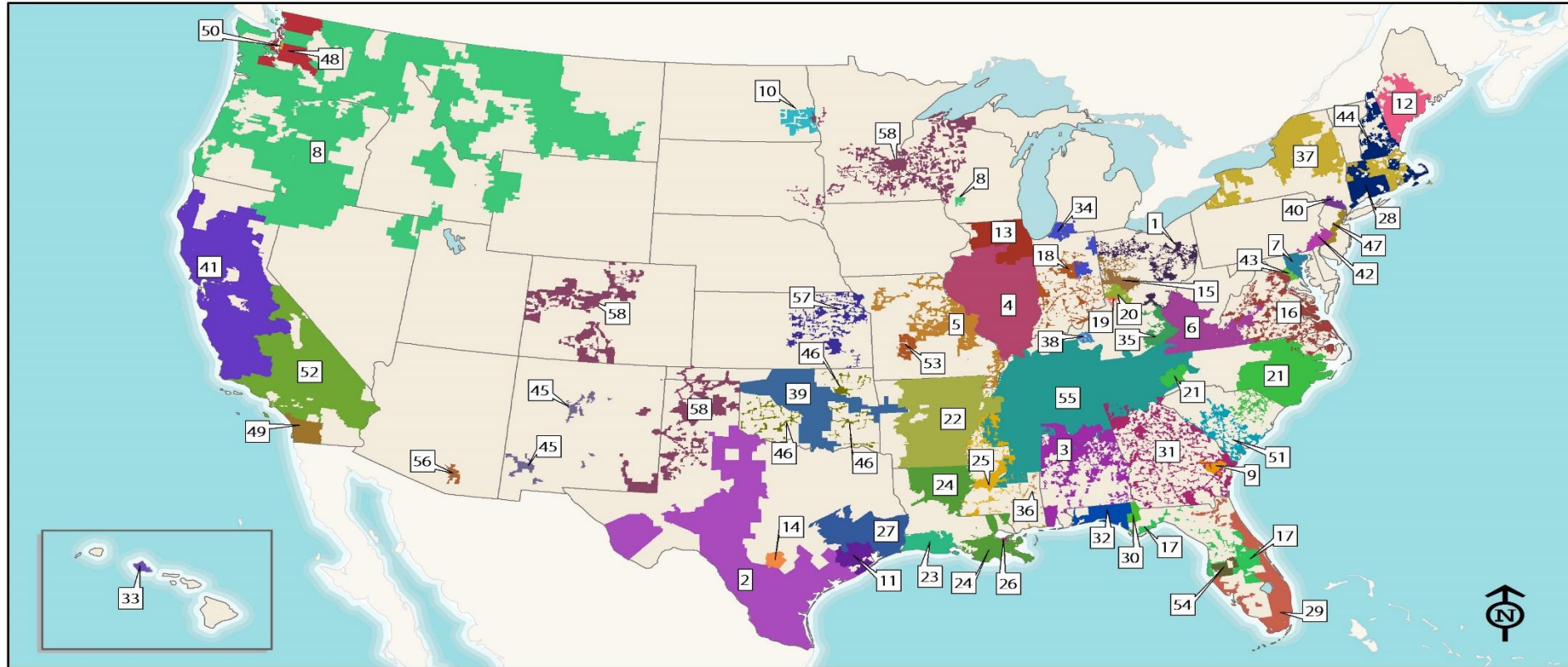
November 3-4, 2015  
Houston, TX

## Best Practices *Escalation Rates*

Hosted by:



# Electric Utilities Offering UESCs to Federal Facilities



## Companies with UESCs

- 1. AEP Ohio
- 2. AEP Texas
- 3. Alabama Power Co
- 4. Ameren Illinois
- 5. Ameren Missouri
- 6. Appalachian Power
- 7. Baltimore Gas & Electric Co
- 8. Bonneville Power Administration
- 9. Canoochee EMC
- 10. Cass County Electric Coop
- 11. CenterPoint Energy
- 12. Central Maine Power Co
- 13. Commonwealth Edison Co

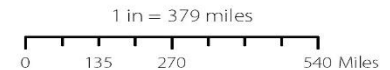
- 14. CPS Energy
- 15. Dayton Light & Power Co
- 16. Dominion Virginia Power
- 17. Duke Energy Florida
- 18. Duke Energy Indiana
- 19. Duke Energy Kentucky
- 20. Duke Energy Ohio
- 21. Duke Energy Progress
- 22. Entergy Arkansas
- 23. Entergy Gulf States Louisiana
- 24. Entergy Louisiana
- 25. Entergy Mississippi
- 26. Entergy New Orleans
- 27. Entergy Texas
- 28. Eversource Energy

- 29. Florida Power & Light Co
- 30. Florida Public Utilities
- 31. Georgia Power Co
- 32. Gulf Power Co
- 33. Hawaiian Electric Co, Inc
- 34. Indiana Michigan Power
- 35. Kentucky Power
- 36. Mississippi Power Co
- 37. National Grid
- 38. Nolin Rural Electric Coop Corp
- 39. Oklahoma Gas & Electric Co
- 40. Orange & Rockland Utilities
- 41. Pacific Gas & Electric Co
- 42. PECO Energy Co
- 43. Potomac Electric Power Co

- 44. Public Service Co of New Hampshire
- 45. Public Service Co of New Mexico
- 46. Public Service Co of Oklahoma
- 47. Public Service Electric & Gas Co
- 48. Puget Sound Energy
- 49. San Diego Gas & Electric
- 50. Seattle City Light
- 51. South Carolina Electric & Gas \*
- 52. Southern California Edison Co
- 53. Southwest Electric Power Co
- 54. Tampa Electric
- 55. Tennessee Valley Authority
- 56. Tucson Electric Power
- 57. Westar Energy
- 58. Xcel Energy \*

\* = Incentives Only

Source: Ventryx Data ©2012 Ventryx



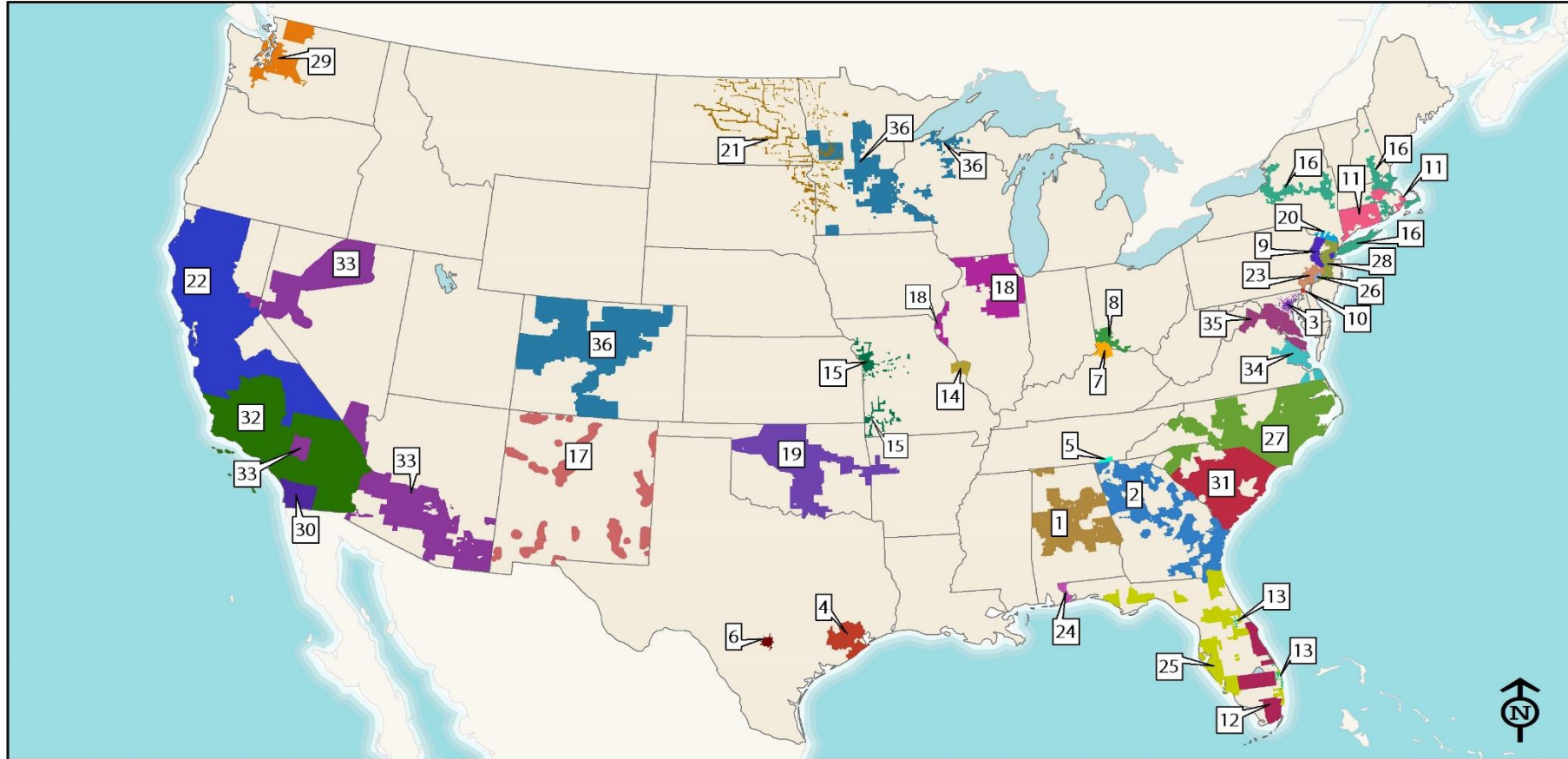
This map was produced by the  
National Renewable Energy Laboratory  
for the Department of Energy.  
Meghan Mooney, September, 2015.



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# Natural Gas Utilities Offering UESCs to Federal Facilities



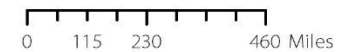
## Companies with UESCs

- |                                |                              |                                 |                                      |
|--------------------------------|------------------------------|---------------------------------|--------------------------------------|
| 1. Alabama Gas Corp            | 9. Elizabethtown Gas         | 18. Nicor Gas                   | 27. Piedmont Natural Gas Co          |
| 2. Atlanta Gas Light           | 10. Elkton Gas               | 19. Oklahoma Gas & Electric Co  | 28. Public Service Electric & Gas Co |
| 3. Baltimore Gas & Electric Co | 11. Eversource Energy        | 20. Orange & Rockland Utilities | 29. Puget Sound Energy               |
| 4. CenterPoint Energy          | 12. Florida City Gas         | 21. Otter Tail Power Co         | 30. San Diego Gas & Electric         |
| 5. Chattanooga Gas             | 13. Florida Public Utilities | 22. Pacific Gas & Electric Co   | 31. South Carolina Electric & Gas *  |
| 6. CPS Energy                  | 14. Laclede Gas              | 23. PECO Energy Co              | 32. Southern California Gas Co       |
| 7. Duke Energy Kentucky        | 15. Missouri Gas Energy      | 24. Pensacola Energy            | 33. Southwest Gas Corp               |
| 8. Duke Energy Ohio            | 16. National Grid            | 25. Peoples Gas                 | 34. Virginia Natural Gas             |
|                                | 17. New Mexico Gas           | 26. Philadelphia Gas Works      | 35. Washington Gas Light Co          |
|                                |                              | 36. Xcel Energy Inc *           |                                      |

\* = Incentives Only

Source: Ventryx Data ©2012 Ventryx

1 in = 379 miles



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# Best Practices: Escalation Rate

## Value of future energy savings

- Provides purchasing power for implementing a robust, comprehensive and customized ECM set
- Provides an option for paying back financing in the shortest possible time



# Best Practices: Escalation Rate

## Cautions:

- Over-estimating future energy savings
  - Savings < Costs
- Under-estimating the value of future energy savings may result in
  - Cutting potential ECMs = exposure to higher future energy costs
  - Missing site objectives and goals
  - Longer payback term = greater interest costs

# Hypothetical Project #1

Year-1 Savings	Escalation Rate	Payback Term	Future Value of Energy Savings (Total payments potential)
\$1M	0%	20 years	\$ 20M
\$1M	2%	20 years	\$24.8M
\$1M	2.5%	20 years	\$26.2M

These future savings can be used to buy more capital or payback financing faster!

# Hypothetical Project #2

Investment	Interest Rate	Escalation Rate	Years to pay off	Total Interest Paid
\$10M	6%	1%	15 Years	\$5.4M
\$10M	6%	4%	12 years	\$4.6M

Increased escalation rate supports larger payments, resulting in a shorter payback and lower interest paid

# Best Practices: Escalation Rate

How can we capture the power of future energy costs to maximize the work we can get done today?



## Escalation Rates – Source

- DOE's Energy Information Administration (EIA) develops energy price forecasts
- NIST uses EIA's forecasts in FEMP tools
  - Life-cycle cost
  - EERC, a calculator that provides average escalations given project term and area of country

# Energy Escalation Rate Calculator (EERC)

- EERC reflects forecasts (for energy prices and inflation) of government experts
- Recommended by DOE FEMP
- Used by Industry and Agencies

*Has been proven accurate and eliminates lots of negotiation*

Download EERC 2.0-15

<http://energy.gov/eere/femp/energy-escalation-rate-calculator-download>

# “Use the tool!”

## High escalation rate

### Benefit:

- more “future dollar savings” to spend on ECMs
- Shortest payback term = lowest interest costs

### Risk:

- over-estimated “future savings” won’t cover costs of ECMs

target escalation rate = escalation rate from EERC

## Low escalation rate

### Benefit:

- Ensure savings cover payments

### Risk:

- Leave “future savings” on the table
- Longest payback = highest interest costs

# For More Information and Assistance

“Escalation Rates in Energy Savings Performance Contracts”, by Philip Coleman, *Energy Engineering*, Vol. 112, No. 5 2015

Direct UESC Project Support:

<http://energy.gov/eere/femp/contacts-federal-utility-energy-service-contracts>