



For Businesses



For Homes



Renewable Energy



For Trade Allies



About Us

# EnergyTrust of Oregon

## Holding Contractors Accountable: Carrot, Stick, Both, Neither?

**May 9, 2007**

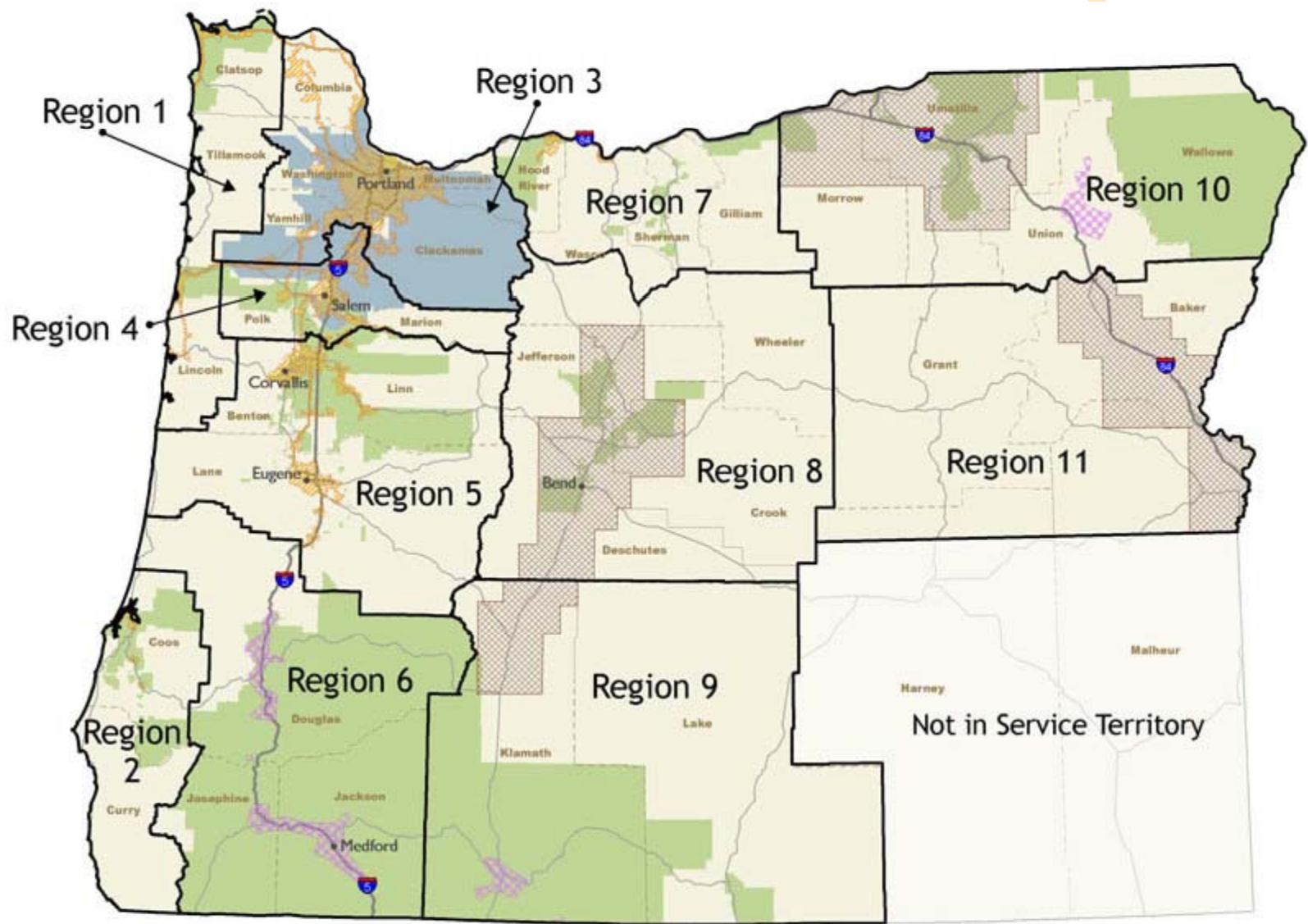
**AESP Implementation Conference**



# Energy Trust of Oregon



# Service Territory





# Organization Goals

- 2.6 million MWh of electricity saved by 2012
- 19 million therms of gas saved by 2012
- Meet 10% of Oregon's energy needs with renewable energy
- Electric levelized cost of  $> \$0.02$  per kWh
- Gas levelized cost of  $> \$0.30$  per therm

# Getting to Levelized Cost

- Average weighted measure life =
- Sum of the products (energy saved per year, life of energy savings measures, number of measures)
- Divided by sum of the products (energy saved, number of measures)

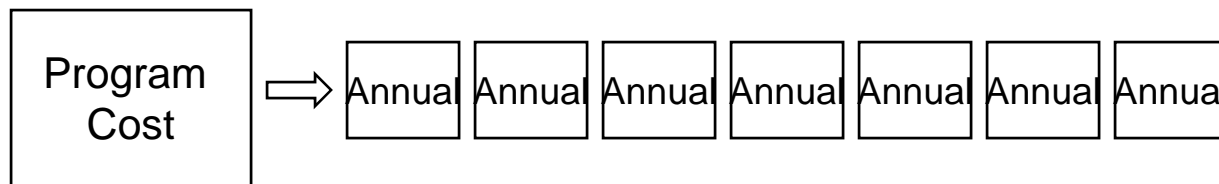
Description	kWh/ Unit	Therms/ Unit	Measure Life	Quantity
<b>Products</b>				
Clothes Washers	145	3.00	14	5,000
Light bulbs	50	0	7	80,000
<b>Electric weighted avg measure life</b>			<b>8.1</b>	
<b>Gas weighted avg measure life</b>			<b>14.0</b>	

# Getting to Levelized Cost

- Annual payment = program contract cost spread over the average weighted measure life of the program

–  $\text{Cost} \times (r / (1 - (1 + r)^{-n}))$

r = 3% discount rate & n = aver. weight. measure life



- Levelized cost = annual payment / annual savings
- Levelized cost compares to avoided cost to illustrate overall program cost effectiveness

# Getting to Levelized Cost

Description	Default Incentive	kWh/ Unit	Therms/ Unit	Measure Life	Enter Quantity
<b>Products</b>					
Clothes Washers, MEF 2+	\$ 85.00	73	3.30	14	1,000
SWAT: CFL 18 W	\$ 1.35	56		7	80,000
<b>Electric weighted avg measure life</b>				<b>7.1</b>	
<b>Gas weighted avg measure life</b>				<b>14.0</b>	
<b>New Homes</b>					
BOP: Gas Heat, AC Home, Zone I	\$ 550.00	1,006	182.00	28	200
Gas Furnace, Stand Alone, Zone I	\$ 150.00	-	86.00	25	300
<b>Electric weighted avg measure life</b>				<b>28.0</b>	
<b>Gas weighted avg measure life</b>				<b>26.8</b>	
<b>Manufactured Homes</b>					
Manufactured Home, Electric	\$ 350.00	4,012	-	45	250
Manufactured Home, Gas	\$ 350.00	131	181.00	45	50
<b>Electric weighted avg measure life</b>				<b>45.0</b>	
<b>Gas weighted avg measure life</b>				<b>45.0</b>	
<b>Overall Summary Electric weighted avg measure life</b>				<b>14.5</b>	
<b>Overall Combined Gas weighted avg measure life</b>				<b>28.4</b>	
		<b>PMC Contract</b>			
Total kWh Savings Estimated		5,763,750	kWh		
Total Contract Therm Savings Estimated		74,550	therms		
Electric Share of Implementation & Incentives		\$1,000,000			
Gas Share of Implementation & Incentives		\$400,000			
Overall Levelized Cost for Electric (\$/kWh)		\$ 0.015			
Overall Levelized Cost for Gas (\$/Therm)		\$ 0.283			

# Compensating Performance

- Level 1: Conservative Savings Goal / Percentage Fee Compensation
- Level 2: Best Case Savings Goal / Program Savings Performance Compensation
- Level 3: Exceeding the Program Efficacy Metric / Program Efficacy Performance Compensation



# PMC Budget

- Budget
  - Implementation
  - Program Incentives
  - Profit\*\*
  - Performance Compensation

Energy Trust of Oregon			Program Name:			
Contract Pricing Proposal Form			Contractor Name: ABC Contractor			
			Task # and Name:			
<b>I. Labor</b>						
	Last name	First Name	Title	2007 Salary/Hr	2007 Hours	2007 Subtotal
1	Mouse	Mickey	Director	\$ 45	500	\$ 22,500
2	Mouse	Minney	Manager	\$ 30	2000	\$ 60,000
3	Duck	Donald	Support	\$ 25	750	\$ 18,750
					Yr. 1 Labor:	\$ 101,250
<b>II. Labor Overhead Expenses</b>						
	Overhead Type	Overhead Code	2007 Rate	2007 Subtotal		
1	General OH & GA	-	140.00%	\$ 141,750		
				2007 Overhead	\$ 141,750	
<b>III. Subcontractors/Consultants</b>						
	Company Name	2007 Labor	2007 ODCs	Total		
1	DEF Subcontractor	\$ 100,000	\$ -	\$ 100,000		
2	GHI Inc.	\$ 15,000	\$ -	\$ 15,000		
				Subcontractor total:	\$ 115,000	
<b>IV. Other Direct Costs</b>						
	Type	2007 ODCs				
1	Marketing Directs	\$ 10,000				
2	Miscellaneous	\$ 200				
3	Postage	\$ 500				
		Total ODCs:	\$ 10,700			
<b>V. Fee</b>						
	Category	Subtotal	Percent Fee	Total		
I.	Labor	\$ 101,250	5.00%	\$ 5,063		
II.	Overhead	\$ 141,750	5.00%	\$ 7,088		
III.	Subcontractors	\$ 115,000	5.00%	\$ 5,750		
IV.	Other Direct Costs	\$ 10,700	5.00%	\$ 535		
				Total fee:	\$ 18,435	
<b>VI. Grand Total</b>						
	Labor	\$ 101,250				
	Overhead	\$ 141,750				
	Subcontractors	\$ 115,000				
	Other Direct Costs	\$ 10,700				
	Fee	\$ 18,435				
	<b>GRAND TOTAL:</b>	<b>\$ 387,135</b>				

# Level 1: Conservative Case

- Energy Trust “accrues” 5% fee/profit every month based on billing.
- If Level 1 met, contractor receives 5% profit.
- Conservative case = 75% of expected goal (“best case”)
- Must meet conservative case for BOTH gas and electric at the levelized costs for both.

## Level 2: Best Case

- Best case = 100% of expected goal
- Contractor must meet the Level 1 goals AND
- Meet best case goals for EITHER gas or electric at the levelized cost (or both gas and electric!).
- Up to \$25,000 compensation (divided between gas and electric)

# Level 3: Program Efficacy

- Meet Level 1 and Level 2
- Reduce the levelized costs for EITHER gas or electric
- Incremental payment per unit reduction with a not-to-exceed cap
- Up to \$50,000 in compensation

	Electric	Natural Gas	Total
Levelized Cost per Unit Reduction	\$0.10/MWh	\$0.010/Dth	N/A
Payment Per Unit Reduction	\$1,748	\$958	N/A
Not-to-Exceed Payment Cap	\$27,965	\$22,035	\$50,000

# Contracts

Program:	Program Name Here		
<b>Level 1: Conservative Savings Goal/Percentage Fee Compensation</b>			
During the period from January 1, 2007 and continuing until December 31, 2007, PMC shall calculate 5% of the amounts billed monthly for Contract Payments on its invoice, as indicated in Exhibit E, up to a not to exceed cap as set forth below. Each month Energy Trust will set aside that 5% amount on behalf of PMC (the "Percentage Fee Compensation"). To receive all such set aside Percentage Fee Compensation from Energy Trust, PMC must achieve BOTH the electric and gas savings goals at the levelized costs identified below.			
	Electric	Natural Gas	Total
Conservative Savings Goals	20,000 MWh	40,000 Dth	N/A
Levelized Cost	\$20.00/MWh	\$3.000/Dth	N/A
Payment Upon Reaching Conservative Savings Goal-Percentage Fee Compensation:			\$200,000
<b>Level 2: Best-Case Savings Goal/Program Savings Performance Compensation</b>			
In addition to the Percentage Fee Compensation, to receive Program Savings Performance Compensation, PMC must achieve the Conservative Savings Goal (both electric and gas components) and meet either or both of the electric or gas savings Best Case Savings Goals at the levelized costs identified below.			
	Electric	Natural Gas	Total
Best Case Savings Goals	30,000 MWh	60,000 Dth	N/A
Levelized Cost	\$18.00/MWh	\$2.500/Dth	N/A
Payment Upon Reaching Either of the Best Case Savings Goals-	\$14,000	\$11,000	\$25,000
<b>Level 3: Exceeding the Program Efficacy Metric/Program Efficacy Performance Compensation</b>			
In addition to the Percentage Fee Compensation and the Program Savings Performance Compensation, to receive Program Efficacy Performance Compensation, PMC must achieve Best Case Savings Goals (for either or both of electric or gas savings) and reduce the Program's levelized costs (for either or both of electric or gas savings) below the Best Case Savings Goals' levelized cost targets. Program Efficacy Performance Compensation is awarded on an incremental basis up to a not-to-exceed payment cap as follows:			
	Electric	Natural Gas	Total
Levelized Cost per Unit Reduction	\$0.10/MWh	\$0.010/Dth	N/A
Payment Per Unit Reduction	\$1,748	\$958	N/A
Not-to-Exceed Payment Cap	\$27,965	\$22,035	\$50,000
<b>Key Assumptions and Calculation Inputs</b>			
Following are the key inputs to the determination of savings and calculation of levelized cost.			
	Electric	Natural Gas	
Contract Payments	\$2,500,000	\$1,400,000	
Incentives	\$2,600,000	\$1,400,000	
Weighted Average Measure Life (Projected)	12.2 years	26.6 years	





# Carrot or Stick?

- Stick
  - No profit unless contractor meets 75% of goals
- Carrot
  - Up to \$75,000 per year in performance compensation



# Contact

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