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# **Energy & Utilities Policy Committee**

**Thursday, April 1, 2010  
Morris Hall  
8:45 AM – 9:45 AM**

# **ACTION PACKET**

**Larry Cretul  
Speaker**

**Stephen Precourt  
Chair**

**COMMITTEE MEETING REPORT**  
**Energy & Utilities Policy Committee**

**4/1/2010 8:45:00AM**

**Location:** Morris Hall (17 HOB)

**Summary:**

**Energy & Utilities Policy Committee**

*Thursday April 01, 2010 08:45 am*

PCB EUP 10-05 Favorable

Yeas: 12 Nays: 0

**Committee meeting was reported out: Thursday, April 01, 2010 11:32:10AM**

# COMMITTEE MEETING REPORT

## Energy & Utilities Policy Committee

4/1/2010 8:45:00AM

**Location:** Morris Hall (17 HOB)

**Attendance:**

	<i>Present</i>	<i>Absent</i>	<i>Excused</i>
Stephen Precourt (Chair)	X		
Esteban Bovo, Jr.	X		
Jennifer Carroll	X		
Clay Ford	X		
Joseph Gibbons	X		
Mike Horner	X		
Matt Hudson	X		
Seth McKeel	X		
Dave Murzin	X		
Maria Sachs	X		
Robert Schenck	X		
Darren Soto	X		
Charles Van Zant	X		
Alan Williams	X		
<b>Totals:</b>	<b>14</b>	<b>0</b>	<b>0</b>

Committee meeting was reported out: Thursday, April 01, 2010 11:32:10AM

# COMMITTEE MEETING REPORT

## Energy & Utilities Policy Committee

4/1/2010 8:45:00AM

Location: Morris Hall (17 HOB)

PCB EUP 10-05 : Public Records Exceptions - Office of Regulatory Staff

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Esteban Bovo, Jr.	X				
Jennifer Carroll	X				
Clay Ford	X				
Joseph Gibbons	X				
Mike Horner	X				
Matt Hudson	X				
Seth McKeel	X				
Dave Murzin				X	
Maria Sachs	X				
Robert Schenck	X				
Darren Soto	X				
Charles Van Zant			X		
Alan Williams	X				
Stephen Precourt (Chair)	X				
<b>Total Yeas: 12</b>		<b>Total Nays: 0</b>			

Committee meeting was reported out: Thursday, April 01, 2010 11:32:10AM

# COMMITTEE MEETING REPORT

## Energy & Utilities Policy Committee

4/1/2010 8:45:00AM

**Location:** Morris Hall (17 HOB)

### Other Business Appearance:

Discussion of the Florida Energy Efficiency and Conservation Act (FEECA)

Susan Glickman (Lobbyist) - Information Only

Southern Alliance for Clean Energy

P.O. Box 310

Indian Rocks Beach Florida 33785

Phone: 727-595-7314

Discussion of the Florida Energy Efficiency and Conservation Act (FEECA)

Mark Futrell (State Employee) (At Request Of Chair) - Information Only

FL Public Service Commission

2540 Shumard Oak Blvd

Tallahassee Florida 32399

Phone: 850-413-6692

Discussion of the Florida Energy Efficiency and Conservation Act (FEECA)

John Masiello - Information Only

Progress Energy Florida

3300 Exchange Place

Lake Mary Florida 32746

Phone: 407-942-9304

Discussion of the Florida Energy Efficiency and Conservation Act (FEECA)

Barbara A. DeVane (Lobbyist) - Information Only

Florida NAACP

625 East Brevard Street

Tallahassee Florida 32308

Phone: 850-222-3969

Discussion of the Florida Energy Efficiency and Conservation Act (FEECA)

Christopher Maingot - Information Only

Florida Solar Energy Industries Association

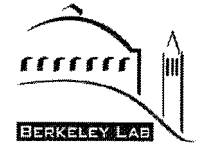
275 Hunt Park Cove

Longwood Florida 32750

Phone: 407-331-9077

Committee meeting was reported out: Thursday, April 01, 2010 11:32:10AM

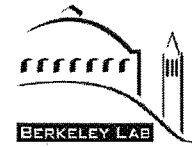
# Cost Tests by State



Primary Cost Test Used by Different States					
PCT	UCT/PAC	RIM	TRC	SCT	Unspecified
	CT, DC, TX	FL	CA, CO, DE, IL, MA, MO, NH, NJ, NM, RI, UT	AZ, ME, MN, VT, WI	AR, CO, DE, GA, HI, IA, ID, IN, KS, KY, MD, MT, NC, ND,, NV, OK, OR, PA, SC, VA, WA, WY

Secondary Cost Test Used by Different States				
PCT	UCT/PAC	RIM	TRC	SCT
AR, FL, GA, HI, IA, IN, MN, VA	AT, CA, CT, HI, IA, IN, MN, MO, NV, NY, OR, UT, VA, TX	AR, DC, FL, GA, HI, IA, IN, KS, MN, NH, VA	AR, CA, CT, FL, GA, HI, IL, IN, KS, MA, ME, MN, MO, MT, NH, NM, NY, UT, VA	AZ, CO, GA, HI, IA, IN, MW, MN, MT, NV, OR, VA, VT, WI

# Summary of Costs and Benefits



- High level summary of costs and benefits included in each cost test
- Each state adjusts these definitions depending on circumstances
- Details can significantly affect the type of energy efficiency implemented

Component	PCT	PAC	RIM	TRC	SCT
<b>Energy and capacity related avoided costs.</b>	-	Benefit	Benefit	Benefit	Benefit
<b>Additional resource savings</b>	-	-	-	Benefit	Benefit
<b>Non-monetized benefits</b>	-	-	-		Benefit
<b>Incremental equipment and install costs</b>	Cost	-	-	Cost	Cost
<b>Program overhead costs</b>	-	Cost	Cost	Cost	Cost
<b>Incentive payments</b>	Benefit	Cost	Cost	-	-
<b>Bill Savings</b>	Benefit		Cost	-	-

Extracted from



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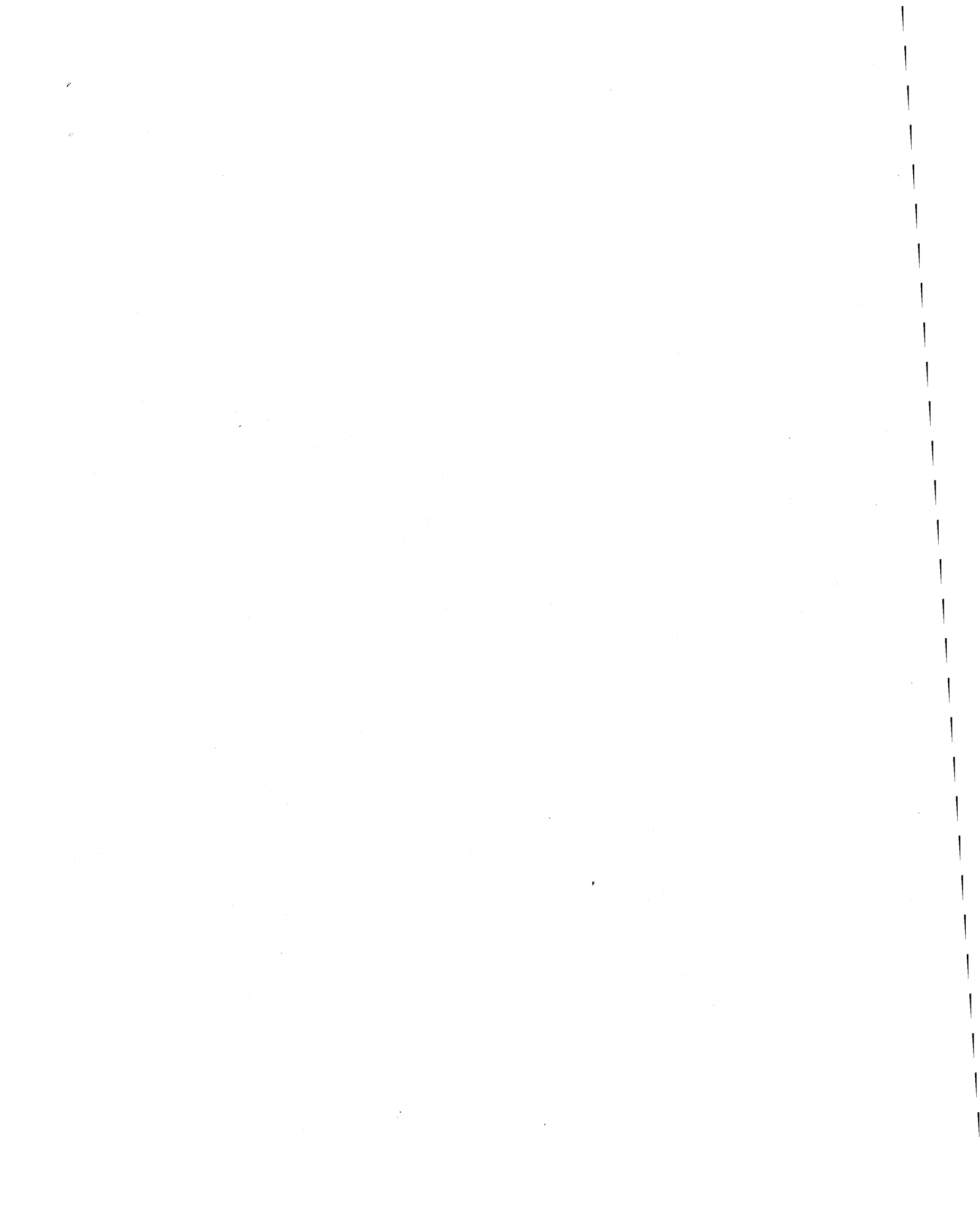
# **Total Resource Cost (TRC) Test and Avoided Costs**

## **Public Utilities Commission of Ohio Workshop**

Wednesday, August 5, 2009  
8:30am – 12:30pm

Presentations by Snuller Price and Richard Sedano  
Representing  
Electricity Markets and Policy Group  
Environmental Energy Technologies Division  
Lawrence Berkeley National Laboratory (LBNL)





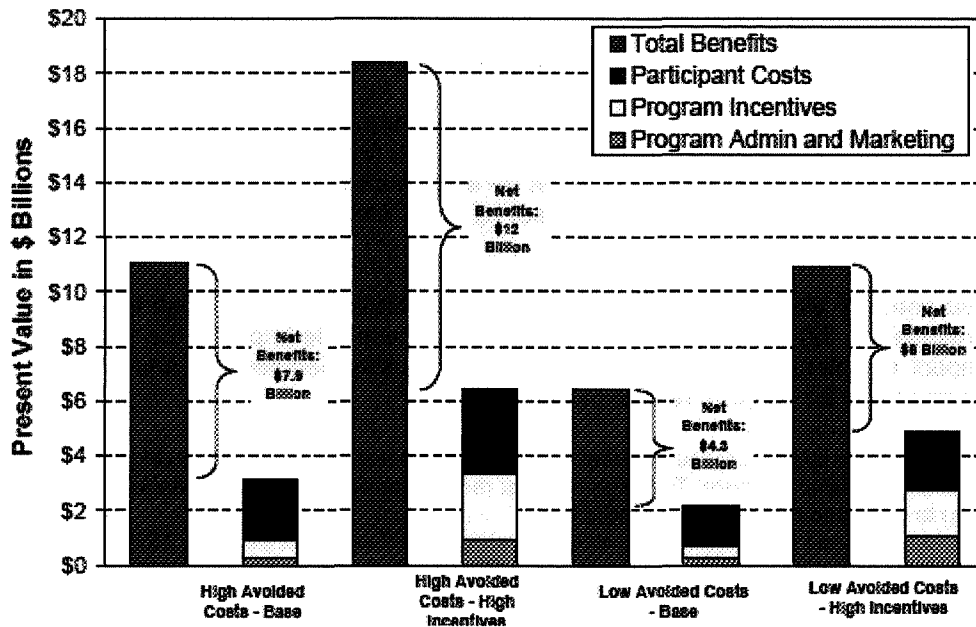
## Texas' Energy Efficiency Resource Standard: A History of Progress

### Overview

Since 2007, Texas has required electric utilities to meet an energy efficiency goal equal to 20% of load growth, currently about 0.34% of prior year sales. Originally enacted in 1999 and revised to its current form in 2009, the Public Utilities Commission of Texas (PUC) has the responsibility to establish and oversee these energy savings targets. As required by the legislation, the PUC commissioned a report to estimate energy efficiency potential in Texas to respond to the Texas Legislature's questions regarding energy efficiency goals and policies. The study, completed by Itron, Inc., found that higher energy efficiency goals, reducing load growth by 30% by 2010 and 50% by 2015, are feasible.<sup>1</sup> This information may inform other states looking to either put an energy efficiency goal in play as Florida is currently doing or strengthen one such as Texas is considering.

The "worst-case" rate impacts in Texas, as estimated by Itron, Inc., are about 0.04 ¢/kWh. Even after paying this slight rate increase, customers on average would have **lower bills**. Lower bills are forecast because the benefits of the programs were forecast to be about three times the costs (including uncollected revenues to pay for utility infrastructure).

The pro-consumer findings of Itron's study for the PUC are illustrated below; the estimated program costs are contrasted with the energy and peak savings projected from the programs under four different scenarios. In all but one case, the benefit-cost ratio is greater than 3.0. The net benefits to the citizens of Texas range from \$4.2 billion to \$11.9 billion as a result of capturing the savings from expanded energy efficiency programs over the next several years.



<sup>1</sup> Itron, Inc., 2008, *Assessment of the Feasible and Achievable Levels of Electricity Savings from Investor Owned Utilities in Texas: 2009-2018*.

### Study Background: Achievable Potential and the Feasibility of Attaining the Savings Goals

Itron provided a total of four scenarios to evaluate achievable energy efficiency potential and the feasibility of attaining the higher savings goals. A High<sup>2</sup> and Base<sup>3</sup> (low) forecast of achievable savings was based on estimated customer adoption rates under a range of incentive and marketing levels, and under two utility avoided cost and retail rate scenarios (thus, four scenarios).

Different assumptions about avoided costs and program incentive level were used to produce the four scenarios of achievable savings. In all cases, the measures included in the forecasts of achievable savings were restricted to those measures that pass the total resource cost test.<sup>4</sup> The four scenarios are described below.

Scenario Name	Avoided Cost Forecast	Incentive Level as a Fraction of Incremental Measure Cost
Base Case – Low Avoided Cost	Avoided cost increases at rate of inflation (2% per year)	33%
Base Case – High Avoided Cost	Avoided cost increases at 5% per year (last 5 year trend)	55%
High Case – Low Avoided Cost	Avoided cost increases at rate of inflation (2% per year)	67%
High Case – High Avoided Cost	Avoided cost increases at 5% per year (last 5 year trend)	67%

### Rate and Bill Impacts of the Proposed Energy Savings Levels

It is generally true that setting higher energy savings goals requires increased energy efficiency program funding, which will lead to short-term rate impacts. For Texas, Itron found that such rate impacts would be modest but would also produce highly positive net benefits to utility customers. Itron's analysis shows that slightly higher rates will be more than doubly offset by lower energy bills for the average customer in the longer run.

Itron estimated potential average rate impacts associated with its Base and High incentive cases ranges from 0.01 cents/kWh to 0.04 cents per kWh.<sup>5</sup> Translating these rate impacts, the table on the next page shows the impact of potential revenue impacts<sup>6</sup> (from the utility perspective) and bill savings (from the customer's perspective) for a typical residential household.

<sup>2</sup> The High forecast incorporated increased marketing efforts and incentive levels, increasing the Base incentive level to roughly 67% of the incremental costs. The High forecast resulted in significant increases in the estimated number of customers willing to purchase more efficient products.

<sup>3</sup> The Base forecast assumes incentive levels similar to recent incentive levels (roughly 33% of incremental measure costs) but utilities are allowed to expand their program offerings and market them more directly to customers after 2009.

<sup>4</sup> The present value of the net benefits of the energy and peak savings from the programs must exceed the value of the sum of the program cost and the incremental costs to program participants of purchasing and installing the efficiency measures.

<sup>5</sup> The estimated rate impact depends on the avoided cost forecast (because these values affect the present value of savings achieved by programs) and the assumed level of program funding (the Base or the High incentive cases).

<sup>6</sup> Potential revenue impacts are calculated as the lost revenues (at full retail price) minus avoided cost benefits plus program costs divided by total residential sales times a typical residential usage of 833 kWh/month (10,000 kWh/year). Itron's model calculated the lost revenue associated with each achievable funding scenario.

Scenario Definition	Average Annual Potential Revenue Impacts*		Average Annual Bill Savings
	Cents per kWh	\$/Household-Month**	\$/Household-Month**
Base Incentive – Low Retail Rate	0.01 ¢	\$ 0.09	\$ 0.18
Base Incentive – High Retail Rate	0.014 ¢	\$ 0.12	\$ 0.25
High Incentive – Low Retail Rate	0.033 ¢	\$ 0.27	\$ 0.48
High Incentive – High Retail Rate	0.04 ¢	\$ 0.36	\$ 0.62

\*Revenue reduction from reduced sales (at retail rate of \$0.12/kWh reduced) minus avoided cost benefits (at ~\$0.08 per kWh saved) plus program costs.

\*\*For a typical household with annual consumption of 10,000 kWh/year. Typical equivalent monthly bill would be roughly \$100/month at \$0.12/kWh.

### Costs and Benefits of Expanding Energy Efficiency Programs

A recent study by the Consumer Federation of America detailed several key characteristics of states that invest in high levels of energy efficiency (the best states) and those that do not (the worst states).<sup>7</sup> Overall, states that invest in energy efficiency have slower rates of load growth and electricity rates have been trending up at a higher rate than states with no energy efficiency programs.<sup>8</sup> Even though energy efficiency helps reduce load growth and does contribute to electricity rate increases, other factors explain the majority of the difference in the trend between the two groups.

The Consumer Federation of America study also found that households in every state would be better off if aggressive programs captured the full benefit of energy efficiency. Investments that reduce energy use by 30% by 2030 would lead to direct benefits in every state: from a low of just over \$300 per year in Idaho to a high of more than \$600 per year in Connecticut. The reductions in bills would be largest where the current bills are highest.

In Florida, if electricity consumption were reduced by 20% by 2030, consumers could realize an annual net savings of about \$219 per household over that timeframe. If electricity consumption were reduced by 30% over that same timeframe, net savings would increase to \$328 per household.<sup>9</sup>

<sup>7</sup> Mark Cooper, 2010, *Building on the Success of Energy Efficiency Programs to Ensure an Affordable Energy Future: State-by-State Savings on Residential Utility Bills from Aggressive Energy Efficiency Policies.*

<sup>8</sup> Energy usage per customer grew by a cumulative total of 16.7% in the worst states over the seventeen-year period evaluated. Consumption growth includes the increase in the number of customers. In contrast, over that same time frame usage in the best states grew by a cumulative total of just 2.6%. In the states with the higher consumption growth rate (the worst states), prices increased by 19% while prices increased by 58% in the states with the slowest growth (the best states). Per capita spending on energy efficiency programs was quite low in the worst states, \$6.7 per capita, in contrast to \$89.2 in the best states. Not surprisingly, energy savings resulting from efficiency programs was near zero in the worst states (.06%), but quite substantial in the best states (3.6%).

<sup>9</sup> See Footnote 7.

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

**Residential**

- \_SF 100 109 HVAC Proper Sizing
- \_SF 100 112 AC Maintenance (Outdoor Coil Cleaning)
- \_SF 100 114 Proper Refrigerant Charging and Air Flow
- \_SF 100 115 Electronically Commutated Motors (ECM) on an Air Handler Unit
- \_SF 130 135 HVAC Proper Sizing
- \_SF 130 138 AC Maintenance (Outdoor Coil Cleaning)
- \_SF 130 140 Proper Refrigerant Charging and Air Flow
- \_SF 130 141 Electronically Commutated Motors (ECM) on an Air Handler Unit
- \_SF 220 221 CFL (18-Watt integral ballast), 0.5 hr/day
- \_SF 230 231 CFL (18-Watt integral ballast), 2.5 hr/day
- \_SF 240 241 CFL (18-Watt integral ballast), 6.0 hr/day
- \_SF 250 252 RET 2L4T8, 1EB
- \_SF 260 252 RET 2L4T8, 1EB
- \_SF 400 405 Low Flow Showerhead
- \_SF 400 407 Faucet Aerators
- \_SF 400 408 Water Heater Blanket
- \_SF 400 409 Water Heater Temperature Check and Adjustment
- \_SF 400 411 Heat Trap
- \_SF 800 801 Two Speed Pool Pump (1.5 hp)
- \_SF 800 802 High Efficiency One Speed Pool Pump (1.5 hp)
- \_SF 900 901 Energy Star TV
- \_SF 910 911 Energy Star TV
- \_SF 920 921 Energy Star Set-Top Box
- \_SF 930 931 Energy Star DVD Player
- \_SF 940 941 Energy Star VCR
- \_SF 950 951 Energy Star Desktop PC
- \_SF 960 961 Energy Star Laptop PC
- MF 100 109 HVAC Proper Sizing
- MF 100 120 Window Tinting
- MF 100 121 Default Window With Sunscreen
- MF 130 135 HVAC Proper Sizing
- MF 130 141 Electronically Commutated Motors (ECM) on an Air Handler Unit
- MF 130 146 Window Tinting
- MF 130 147 Default Window With Sunscreen
- MF 220 221 CFL (18-Watt integral ballast), 0.5 hr/day
- MF 230 231 CFL (18-Watt integral ballast), 2.5 hr/day
- MF 240 241 CFL (18-Watt integral ballast), 6.0 hr/day
- MF 250 252 RET 2L4T8, 1EB
- MF 260 252 RET 2L4T8, 1EB
- MF 400 405 Low Flow Showerhead
- MF 400 407 Faucet Aerators
- MF 400 408 Water Heater Blanket
- MF 400 411 Heat Trap
- MF 800 801 Two Speed Pool Pump (1.5 hp)

- MF 800 802 High Efficiency One Speed Pool Pump (1.5 hp)
- MF 900 901 Energy Star TV
- MF 910 911 Energy Star TV
- MF 920 921 Energy Star Set-Top Box
- MF 930 931 Energy Star DVD Player
- MF 940 941 Energy Star VCR
- MF 950 951 Energy Star Desktop PC
- MF 960 961 Energy Star Laptop PC
- MH 100 109 HVAC Proper Sizing
- MH 100 112 AC Maintenance (Outdoor Coil Cleaning)
- MH 130 135 HVAC Proper Sizing
- MH 130 141 Electronically Commutated Motors (ECM) on an Air Handler Unit
- MH 220 221 CFL (18-Watt integral ballast), 0.5 hr/day
- MH 230 231 CFL (18-Watt integral ballast), 2.5 hr/day
- MH 240 241 CFL (18-Watt integral ballast), 6.0 hr/day
- MH 250 252 RET 2L4T8, 1EB
- MH 260 252 RET 2L4T8, 1EB
- MH 400 405 Low Flow Showerhead
- MH 400 407 Faucet Aerators
- MH 400 408 Water Heater Blanket
- MH 400 411 Heat Trap
- MH 800 801 Two Speed Pool Pump (1.5 hp)
- MH 800 802 High Efficiency One Speed Pool Pump (1.5 hp)
- MH 900 901 Energy Star TV
- MH 910 911 Energy Star TV
- MH 920 921 Energy Star Set-Top Box
- MH 930 931 Energy Star DVD Player
- MH 940 941 Energy Star VCR
- MH 950 951 Energy Star Desktop PC
- MH 960 961 Energy Star Laptop PC

**Commercial**

- 10-110-111 Premium T8, Electronic Ballast
- 10-110-112 Premium T8, EB, Reflector
- 10-110-115 Lighting Control Tuneup
- 10-120-121 ROB Premium T8, 1EB
- 10-120-122 ROB Premium T8, EB, Reflector
- 10-130-131 CFL Screw-in 18W
- 10-140-141 CFL Hardwired, Modular 18W
- 10-150-151 PSMH, 250W, magnetic ballast
- 10-150-153 High Bay T5
- 10-160-161 LED Exit Sign
- 10-300-301 Centrifugal Chiller, 0.51 kW/ton, 500 tons
- 10-300-302 High Efficiency Chiller Motors
- 10-300-304 EMS - Chiller
- 10-300-306 VSD for Chiller Pumps and Towers
- 10-300-307 EMS Optimization
- 10-300-308 Aerosole Duct Sealing

Sector Base Ref. Measure Num.

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

10-300-309 Duct/Pipe Insulation  
10-320-327 DX Coil Cleaning  
10-320-328 Optimize Controls  
10-320-329 Aerosole Duct Sealing  
10-320-330 Duct/Pipe Insulation  
10-340-344 Aerosole Duct Sealing  
10-340-345 Duct/Pipe Insulation  
10-360-361 HE PTAC, EER=9.6, 1 ton  
10-600-608 Heat Recovery Unit  
10-600-609 Heat Trap  
10-700-701 PC Manual Power Management Enabling  
10-700-702 PC Network Power Management Enabling  
10-710-711 Energy Star or Better Monitor  
10-710-712 Monitor Power Management Enabling  
10-720-721 Energy Star or Better Monitor  
10-730-731 Energy Star or Better Copier  
10-730-732 Copier Power Management Enabling  
10-740-741 Printer Power Management Enabling  
10-900-901 Vending Misers (cooled machines only)  
1-110-111 Premium T8, Electronic Ballast  
1-110-112 Premium T8, EB, Reflector  
1-110-114 Continuous Dimming  
1-110-115 Lighting Control Tuneup  
11-110-111 Premium T8, Electronic Ballast  
11-110-112 Premium T8, EB, Reflector  
11-110-114 Continuous Dimming  
11-110-115 Lighting Control Tuneup  
11-120-121 ROB Premium T8, 1EB  
11-120-122 ROB Premium T8, EB, Reflector  
11-120-124 Lighting Control Tuneup  
11-130-131 CFL Screw-in 18W  
11-140-141 CFL Hardwired, Modular 18W  
11-150-151 PSMH, 250W, magnetic ballast  
11-150-153 High Bay T5  
11-160-161 LED Exit Sign  
1-120-121 ROB Premium T8, 1EB  
1-120-122 ROB Premium T8, EB, Reflector  
1-120-124 Lighting Control Tuneup  
11-300-308 Aerosole Duct Sealing  
11-300-309 Duct/Pipe Insulation  
1-130-131 CFL Screw-in 18W  
11-320-327 DX Coil Cleaning  
11-320-328 Optimize Controls  
11-320-329 Aerosole Duct Sealing  
11-320-330 Duct/Pipe Insulation  
11-340-344 Aerosole Duct Sealing  
11-340-345 Duct/Pipe Insulation  
1-140-141 CFL Hardwired, Modular 18W  
1-150-151 PSMH, 250W, magnetic ballast  
1-150-153 High Bay T5  
11-600-609 Heat Trap  
1-160-161 LED Exit Sign  
11-700-701 PC Manual Power Management Enabling  
11-700-702 PC Network Power Management Enabling  
11-710-711 Energy Star or Better Monitor  
11-710-712 Monitor Power Management Enabling  
11-720-721 Energy Star or Better Monitor  
11-730-731 Energy Star or Better Copier  
11-730-732 Copier Power Management Enabling  
11-740-741 Printer Power Management Enabling  
11-900-901 Vending Misers (cooled machines only)  
11-900-901 Vending Misers (cooled machines only)  
1-200-202 Outdoor Lighting Controls (Photocell/Timeclock)  
1-300-307 EMS Optimization  
1-300-308 Aerosole Duct Sealing  
1-300-309 Duct/Pipe Insulation  
1-320-327 DX Coil Cleaning  
1-320-328 Optimize Controls  
1-320-329 Aerosole Duct Sealing  
1-320-330 Duct/Pipe Insulation  
1-340-344 Aerosole Duct Sealing  
1-340-345 Duct/Pipe Insulation  
1-400-403 Air Handler Optimization  
1-600-609 Heat Trap  
1-700-701 PC Manual Power Management Enabling  
1-700-702 PC Network Power Management Enabling  
1-710-711 Energy Star or Better Monitor  
1-710-712 Monitor Power Management Enabling  
1-720-721 Energy Star or Better Monitor  
1-730-731 Energy Star or Better Copier  
1-730-732 Copier Power Management Enabling  
1-740-741 Printer Power Management Enabling  
1-900-901 Vending Misers (cooled machines only)  
2-110-111 Premium T8, Electronic Ballast  
2-110-112 Premium T8, EB, Reflector  
2-110-114 Continuous Dimming  
2-110-115 Lighting Control Tuneup  
2-120-121 ROB Premium T8, 1EB  
2-120-122 ROB Premium T8, EB, Reflector  
2-120-124 Lighting Control Tuneup  
2-130-131 CFL Screw-in 18W  
2-140-141 CFL Hardwired, Modular 18W  
2-150-151 PSMH, 250W, magnetic ballast  
2-150-153 High Bay T5  
2-160-161 LED Exit Sign  
2-300-301 Centrifugal Chiller, 0.51 kW/ton, 500 tons  
2-300-305 Chiller Tune Up/Diagnostics  
2-300-306 VSD for Chiller Pumps and Towers  
2-300-307 EMS Optimization  
2-300-308 Aerosole Duct Sealing  
2-300-309 Duct/Pipe Insulation  
2-320-323 Geothermal Heat Pump, EER=13, 10 tons

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

- 2-320-326 DX Tune Up/ Advanced Diagnostics
- 2-320-327 DX Coil Cleaning
- 2-320-328 Optimize Controls
- 2-320-329 Aerosole Duct Sealing
- 2-320-330 Duct/Pipe Insulation
- 2-320-332 Window Film (Standard)
- 2-320-334 Ceiling Insulation
- 2-320-335 Roof Insulation
- 2-340-342 Geothermal Heat Pump, EER=13, 10 tons
- 2-340-344 Aerosole Duct Sealing
- 2-340-345 Duct/Pipe Insulation
- 2-340-347 Window Film (Standard)
- 2-340-349 Ceiling Insulation
- 2-340-350 Roof Insulation
- 2-360-361 HE PTAC, EER=9.6, 1 ton
- 2-400-403 Air Handler Optimization
- 2-400-407 Separate Makeup Air / Exhaust Hoods AC
- 2-600-608 Heat Recovery Unit
- 2-600-609 Heat Trap
- 2-700-701 PC Manual Power Management Enabling
- 2-700-702 PC Network Power Management Enabling
- 2-710-711 Energy Star or Better Monitor
- 2-710-712 Monitor Power Management Enabling
- 2-720-721 Energy Star or Better Monitor
- 2-730-731 Energy Star or Better Copier
- 2-730-732 Copier Power Management Enabling
- 2-740-741 Printer Power Management Enabling
- 2-900-901 Vending Misers (cooled machines only)
- 3-110-111 Premium T8, Electronic Ballast
- 3-110-112 Premium T8, EB, Reflector
- 3-110-114 Continuous Dimming
- 3-110-115 Lighting Control Tuneup
- 3-120-121 ROB Premium T8, 1EB
- 3-120-122 ROB Premium T8, EB, Reflector
- 3-120-124 Lighting Control Tuneup
- 3-130-131 CFL Screw-in 18W
- 3-140-141 CFL Hardwired, Modular 18W
- 3-150-151 PSMH, 250W, magnetic ballast
- 3-150-153 High Bay T5
- 3-160-161 LED Exit Sign
- 3-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 3-300-301 Centrifugal Chiller, 0.51 kW/ton, 500 tons
- 3-300-306 VSD for Chiller Pumps and Towers
- 3-300-307 EMS Optimization
- 3-300-308 Aerosole Duct Sealing
- 3-300-309 Duct/Pipe Insulation
- 3-320-327 DX Coil Cleaning
- 3-320-328 Optimize Controls
- 3-320-329 Aerosole Duct Sealing
- 3-320-330 Duct/Pipe Insulation
- 3-340-344 Aerosole Duct Sealing
- 3-340-345 Duct/Pipe Insulation
- 3-340-347 Window Film (Standard)
- 3-340-349 Ceiling Insulation
- 3-340-350 Roof Insulation
- 3-360-361 HE PTAC, EER=9.6, 1 ton
- 3-400-404 Electronically Commutated Motors (ECM) on an Air Handler Unit
- 3-600-609 Heat Trap
- 3-700-701 PC Manual Power Management Enabling
- 3-700-702 PC Network Power Management Enabling
- 3-710-711 Energy Star or Better Monitor
- 3-710-712 Monitor Power Management Enabling
- 3-720-721 Energy Star or Better Monitor
- 3-730-731 Energy Star or Better Copier
- 3-730-732 Copier Power Management Enabling
- 3-740-741 Printer Power Management Enabling
- 3-900-901 Vending Misers (cooled machines only)
- 4-110-111 Premium T8, Electronic Ballast
- 4-110-112 Premium T8, EB, Reflector
- 4-110-114 Continuous Dimming
- 4-110-115 Lighting Control Tuneup
- 4-120-121 ROB Premium T8, 1EB
- 4-120-122 ROB Premium T8, EB, Reflector
- 4-120-124 Lighting Control Tuneup
- 4-130-131 CFL Screw-in 18W
- 4-140-141 CFL Hardwired, Modular 18W
- 4-150-151 PSMH, 250W, magnetic ballast
- 4-150-153 High Bay T5
- 4-160-161 LED Exit Sign
- 4-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 4-300-301 Centrifugal Chiller, 0.51 kW/ton, 500 tons
- 4-300-305 Chiller Tune Up/Diagnostics
- 4-300-306 VSD for Chiller Pumps and Towers
- 4-300-307 EMS Optimization
- 4-300-308 Aerosole Duct Sealing
- 4-300-309 Duct/Pipe Insulation
- 4-320-326 DX Tune Up/ Advanced Diagnostics
- 4-320-327 DX Coil Cleaning
- 4-320-328 Optimize Controls
- 4-320-329 Aerosole Duct Sealing
- 4-320-330 Duct/Pipe Insulation
- 4-320-332 Window Film (Standard)
- 4-320-334 Ceiling Insulation
- 4-320-335 Roof Insulation
- 4-340-342 Geothermal Heat Pump, EER=13, 10 tons
- 4-340-344 Aerosole Duct Sealing
- 4-340-345 Duct/Pipe Insulation
- 4-340-347 Window Film (Standard)
- 4-340-349 Ceiling Insulation
- 4-400-401 High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%
- 4-400-402 Variable Speed Drive Control
- 4-400-403 Air Handler Optimization
- 4-400-407 Separate Makeup Air / Exhaust Hoods AC
- 4-500-502 Strip curtains for walk-ins

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

- 4-500-503 Night covers for display cases
- 4-500-505 Efficient compressor motor
- 4-500-507 Floating head pressure controls
- 4-500-508 Refrigeration Commissioning
- 4-500-509 Demand Hot Gas Defrost
- 4-500-510 Demand Defrost Electric
- 4-500-511 Anti-sweat (humidistat) controls
- 4-500-516 Freezer-Cooler Replacement Gaskets
- 4-600-608 Heat Recovery Unit
- 4-600-609 Heat Trap
- 4-700-701 PC Manual Power Management Enabling
- 4-700-702 PC Network Power Management Enabling
- 4-710-711 Energy Star or Better Monitor
- 4-710-712 Monitor Power Management Enabling
- 4-720-721 Energy Star or Better Monitor
- 4-730-731 Energy Star or Better Copier
- 4-730-732 Copier Power Management Enabling
- 4-740-741 Printer Power Management Enabling
- 4-900-901 Vending Misers (cooled machines only)
- 5-110-111 Premium T8, Electronic Ballast
- 5-110-112 Premium T8, EB, Reflector
- 5-110-114 Continuous Dimming
- 5-110-115 Lighting Control Tuneup
- 5-120-122 ROB Premium T8, EB, Reflector
- 6-120-124 Lighting Control Tuneup
- 5-130-131 CFL Screw-in 18W
- 5-140-141 CFL Hardwired, Modular 18W
- 5-150-151 PSMH, 250W, magnetic ballast
- 5-150-153 High Bay T5
- 5-160-161 LED Exit Sign
- 5-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 5-300-307 EMS Optimization
- 5-300-308 Aerosole Duct Sealing
- 5-300-309 Duct/Pipe Insulation
- 5-320-327 DX Coil Cleaning
- 5-320-328 Optimize Controls
- 5-320-329 Aerosole Duct Sealing
- 5-320-330 Duct/Pipe Insulation
- 5-340-344 Aerosole Duct Sealing
- 5-340-345 Duct/Pipe Insulation
- 5-400-403 Air Handler Optimization
- 5-600-603 Heat Pump Water Heater (air source)
- 5-600-608 Heat Recovery Unit
- 5-600-609 Heat Trap
- 5-700-701 PC Manual Power Management Enabling
- 5-700-702 PC Network Power Management Enabling
- 5-710-711 Energy Star or Better Monitor
- 5-710-712 Monitor Power Management Enabling
- 5-720-721 Energy Star or Better Monitor
- 5-730-731 Energy Star or Better Copier
- 5-730-732 Copier Power Management Enabling
- 5-740-741 Printer Power Management Enabling
- 5-900-901 Vending Misers (cooled machines only)
- 6-110-111 Premium T8, Electronic Ballast
- 6-110-114 Continuous Dimming
- 6-110-115 Lighting Control Tuneup
- 6-120-124 Lighting Control Tuneup
- 6-130-131 CFL Screw-in 18W
- 6-140-141 CFL Hardwired, Modular 18W
- 6-150-151 PSMH, 250W, magnetic ballast
- 6-150-153 High Bay T5
- 6-160-161 LED Exit Sign
- 6-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 6-210-211 Outdoor Lighting Controls (Photocell/Timeclock)
- 6-300-307 EMS Optimization
- 6-300-308 Aerosole Duct Sealing
- 6-300-309 Duct/Pipe Insulation
- 6-320-327 DX Coil Cleaning
- 6-320-328 Optimize Controls
- 6-320-329 Aerosole Duct Sealing
- 6-320-330 Duct/Pipe Insulation
- 6-340-344 Aerosole Duct Sealing
- 6-340-345 Duct/Pipe Insulation
- 6-400-403 Air Handler Optimization
- 6-400-404 Electronically Commutated Motors (ECM) on an Air Handler Unit
- 6-600-603 Heat Pump Water Heater (air source)
- 6-600-606 Demand controlled circulating systems
- 6-600-609 Heat Trap
- 6-700-701 PC Manual Power Management Enabling
- 6-700-702 PC Network Power Management Enabling
- 6-710-711 Energy Star or Better Monitor
- 6-710-712 Monitor Power Management Enabling
- 6-720-721 Energy Star or Better Monitor
- 6-730-731 Energy Star or Better Copier
- 6-730-732 Copier Power Management Enabling
- 6-740-741 Printer Power Management Enabling
- 6-900-901 Vending Misers (cooled machines only)
- 7-110-111 Premium T8, Electronic Ballast
- 7-110-112 Premium T8, EB, Reflector
- 7-110-114 Continuous Dimming
- 7-110-115 Lighting Control Tuneup
- 7-120-121 ROB Premium T8, 1EB
- 7-120-122 ROB Premium T8, EB, Reflector
- 7-120-124 Lighting Control Tuneup
- 7-130-131 CFL Screw-in 18W
- 7-140-141 CFL Hardwired, Modular 18W
- 7-150-151 PSMH, 250W, magnetic ballast
- 7-150-153 High Bay T5
- 7-160-161 LED Exit Sign
- 7-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 7-300-301 Centrifugal Chiller, 0.51 kW/ton, 500 tons



**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

- 7-300-302 High Efficiency Chiller Motors
- 7-300-304 EMS - Chiller
- 7-300-305 Chiller Tune Up/Diagnostics
- 7-300-306 VSD for Chiller Pumps and Towers
- 7-300-307 EMS Optimization
- 7-300-308 Aerosole Duct Sealing
- 7-300-309 Duct/Pipe Insulation
- 7-300-311 Window Film (Standard)
- 7-320-323 Geothermal Heat Pump, EER=13, 10 tons
- 7-320-326 DX Tune Up/ Advanced Diagnostics
- 7-320-327 DX Coil Cleaning
- 7-320-328 Optimize Controls
- 7-320-329 Aerosole Duct Sealing
- 7-320-330 Duct/Pipe Insulation
- 7-320-332 Window Film (Standard)
- 7-320-334 Ceiling Insulation
- 7-320-335 Roof Insulation
- 7-340-342 Geothermal Heat Pump, EER=13, 10 tons
- 7-340-344 Aerosole Duct Sealing
- 7-340-345 Duct/Pipe Insulation
- 7-340-347 Window Film (Standard)
- 7-340-349 Ceiling Insulation
- 7-340-350 Roof Insulation
- 7-360-361 HE PTAC, EER=9.6, 1 ton
- 7-400-401 High Efficiency Fan Motor, 15hp, 1800rpm, 92.4%
- 7-400-402 Variable Speed Drive Control
- 7-400-403 Air Handler Optimization
- 7-400-404 Electronically Commutated Motors (ECM) on an Air Handler Unit
- 7-600-601 High Efficiency Water Heater (electric)
- 7-600-603 Heat Pump Water Heater (air source)
- 7-600-606 Demand controlled circulating systems
- 7-600-608 Heat Recovery Unit
- 7-600-609 Heat Trap
- 7-700-701 PC Manual Power Management Enabling
- 7-700-702 PC Network Power Management Enabling
- 7-710-711 Energy Star or Better Monitor
- 7-710-712 Monitor Power Management Enabling
- 7-720-721 Energy Star or Better Monitor
- 7-730-731 Energy Star or Better Copier
- 7-730-732 Copier Power Management Enabling
- 7-740-741 Printer Power Management Enabling
- 7-900-901 Vending Misers (cooled machines only)
- 8-110-111 Premium T8, Electronic Ballast
- 8-110-112 Premium T8, EB, Reflector
- 8-110-114 Continuous Dimming
- 8-110-115 Lighting Control Tuneup
- 8-120-121 ROB Premium T8, 1EB
- 8-120-122 ROB Premium T8, EB, Reflector
- 8-120-124 Lighting Control Tuneup
- 8-130-131 CFL Screw-in 18W
- 8-140-141 CFL Hardwired, Modular 18W
- 8-150-151 PSMH, 250W, magnetic ballast
- 8-150-153 High Bay T5
- 8-160-161 LED Exit Sign
- 8-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 8-300-305 Chiller Tune Up/Diagnostics
- 8-300-307 EMS Optimization
- 8-300-308 Aerosole Duct Sealing
- 8-300-309 Duct/Pipe Insulation
- 8-320-327 DX Coil Cleaning
- 8-320-328 Optimize Controls
- 8-320-329 Aerosole Duct Sealing
- 8-320-330 Duct/Pipe Insulation
- 8-340-344 Aerosole Duct Sealing
- 8-340-345 Duct/Pipe Insulation
- 8-400-403 Air Handler Optimization
- 8-600-606 Demand controlled circulating systems
- 8-600-608 Heat Recovery Unit
- 8-600-609 Heat Trap
- 8-700-701 PC Manual Power Management Enabling
- 8-700-702 PC Network Power Management Enabling
- 8-710-711 Energy Star or Better Monitor
- 8-710-712 Monitor Power Management Enabling
- 8-720-721 Energy Star or Better Monitor
- 8-730-731 Energy Star or Better Copier
- 8-730-732 Copier Power Management Enabling
- 8-740-741 Printer Power Management Enabling
- 8-900-901 Vending Misers (cooled machines only)
- 9-110-111 Premium T8, Electronic Ballast
- 9-110-112 Premium T8, EB, Reflector
- 9-110-115 Lighting Control Tuneup
- 9-120-121 ROB Premium T8, 1EB
- 9-120-122 ROB Premium T8, EB, Reflector
- 9-130-131 CFL Screw-In 18W
- 9-140-141 CFL Hardwired, Modular 18W
- 9-150-151 PSMH, 250W, magnetic ballast
- 9-150-153 High Bay T5
- 9-160-161 LED Exit Sign
- 9-200-202 Outdoor Lighting Controls (Photocell/Timeclock)
- 9-300-308 Aerosole Duct Sealing
- 9-300-309 Duct/Pipe Insulation
- 9-320-327 DX Coil Cleaning
- 9-320-329 Aerosole Duct Sealing
- 9-320-330 Duct/Pipe Insulation
- 9-340-344 Aerosole Duct Sealing
- 9-340-345 Duct/Pipe Insulation
- 9-600-609 Heat Trap
- 9-700-701 PC Manual Power Management Enabling
- 9-700-702 PC Network Power Management Enabling
- 9-710-711 Energy Star or Better Monitor
- 9-710-712 Monitor Power Management Enabling

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

9-720-721 Energy Star or Better Monitor  
9-730-731 Energy Star or Better Copier  
9-730-732 Copier Power Management Enabling  
9-740-741 Printer Power Management Enabling  
9-900-901 Vending Misers (cooled machines only)

**Industrial**

5 800 803 CFL Screw-in 18W  
14 800 803 CFL Screw-in 18W  
1 800 803 CFL Screw-in 18W  
7 800 803 CFL Screw-in 18W  
13 800 803 CFL Screw-in 18W  
15 800 803 CFL Screw-in 18W  
10 800 803 CFL Screw-in 18W  
12 800 803 CFL Screw-in 18W  
9 800 803 CFL Screw-in 18W  
11 800 803 CFL Screw-in 18W  
2 800 803 CFL Screw-in 18W  
16 800 803 CFL Screw-in 18W  
8 800 803 CFL Screw-in 18W  
3 800 803 CFL Screw-in 18W  
4 800 803 CFL Screw-in 18W  
6 800 803 CFL Screw-in 18W  
7 200 209 Fans - ASD (6-100 hp)  
6 200 209 Fans - ASD (6-100 hp)  
9 200 209 Fans - ASD (6-100 hp)  
4 200 209 Fans - ASD (6-100 hp)  
16 200 209 Fans - ASD (6-100 hp)  
15 200 209 Fans - ASD (6-100 hp)  
13 200 209 Fans - ASD (6-100 hp)  
5 200 209 Fans - ASD (6-100 hp)  
1 200 209 Fans - ASD (6-100 hp)  
8 200 209 Fans - ASD (6-100 hp)  
11 200 209 Fans - ASD (6-100 hp)  
14 200 209 Fans - ASD (6-100 hp)  
3 200 209 Fans - ASD (6-100 hp)  
10 200 209 Fans - ASD (6-100 hp)  
12 200 209 Fans - ASD (6-100 hp)  
2 200 209 Fans - ASD (6-100 hp)  
7 300 309 Pumps - ASD (6-100 hp)  
6 300 309 Pumps - ASD (6-100 hp)  
9 300 309 Pumps - ASD (6-100 hp)  
4 300 309 Pumps - ASD (6-100 hp)  
16 300 309 Pumps - ASD (6-100 hp)  
15 300 309 Pumps - ASD (6-100 hp)  
13 300 309 Pumps - ASD (6-100 hp)  
5 300 309 Pumps - ASD (6-100 hp)  
1 300 309 Pumps - ASD (6-100 hp)  
8 300 309 Pumps - ASD (6-100 hp)  
11 300 309 Pumps - ASD (6-100 hp)  
14 300 309 Pumps - ASD (6-100 hp)

3 300 309 Pumps - ASD (6-100 hp)  
10 300 309 Pumps - ASD (6-100 hp)  
12 300 309 Pumps - ASD (6-100 hp)  
2 300 309 Pumps - ASD (6-100 hp)  
7 100 109 Comp Air - ASD (6-100 hp)  
6 100 109 Comp Air - ASD (6-100 hp)  
9 100 109 Comp Air - ASD (6-100 hp)  
4 100 109 Comp Air - ASD (6-100 hp)  
16 100 109 Comp Air - ASD (6-100 hp)  
15 100 109 Comp Air - ASD (6-100 hp)  
13 100 109 Comp Air - ASD (6-100 hp)  
5 100 109 Comp Air - ASD (6-100 hp)  
1 100 109 Comp Air - ASD (6-100 hp)  
8 100 109 Comp Air - ASD (6-100 hp)  
11 100 109 Comp Air - ASD (6-100 hp)  
14 100 109 Comp Air - ASD (6-100 hp)  
3 100 109 Comp Air - ASD (6-100 hp)  
10 100 109 Comp Air - ASD (6-100 hp)  
12 100 109 Comp Air - ASD (6-100 hp)  
2 100 109 Comp Air - ASD (6-100 hp)  
7 720 727 Aerosole Duct Sealing  
6 720 727 Aerosole Duct Sealing  
9 720 727 Aerosole Duct Sealing  
4 720 727 Aerosole Duct Sealing  
16 720 727 Aerosole Duct Sealing  
15 720 727 Aerosole Duct Sealing  
13 720 727 Aerosole Duct Sealing  
5 720 727 Aerosole Duct Sealing  
1 720 727 Aerosole Duct Sealing  
8 720 727 Aerosole Duct Sealing  
11 720 727 Aerosole Duct Sealing  
14 720 727 Aerosole Duct Sealing  
3 720 727 Aerosole Duct Sealing  
10 720 727 Aerosole Duct Sealing  
12 720 727 Aerosole Duct Sealing  
2 720 727 Aerosole Duct Sealing  
8 400 417 O&M - Extruders/Injection Moulding  
2 300 301 Pumps - O&M  
12 300 301 Pumps - O&M  
10 300 301 Pumps - O&M  
3 300 301 Pumps - O&M  
14 300 301 Pumps - O&M  
11 300 301 Pumps - O&M  
8 300 301 Pumps - O&M  
5 300 301 Pumps - O&M  
1 300 301 Pumps - O&M  
13 300 301 Pumps - O&M  
15 300 301 Pumps - O&M  
16 300 301 Pumps - O&M  
9 300 301 Pumps - O&M  
4 300 301 Pumps - O&M

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

7 300 301 Pumps - O&M	1 550 551 Efficient Refrigeration - Operations
6 300 301 Pumps - O&M	2 100 101 Compressed Air-O&M
1 400 401 Bakery - Process (Mixing) - O&M	12 100 101 Compressed Air-O&M
2 100 104 Compressed Air- Sizing	10 100 101 Compressed Air-O&M
12 100 104 Compressed Air- Sizing	3 100 101 Compressed Air-O&M
10 100 104 Compressed Air- Sizing	14 100 101 Compressed Air-O&M
3 100 104 Compressed Air- Sizing	11 100 101 Compressed Air-O&M
14 100 104 Compressed Air- Sizing	8 100 101 Compressed Air-O&M
11 100 104 Compressed Air- Sizing	5 100 101 Compressed Air-O&M
8 100 104 Compressed Air- Sizing	1 100 101 Compressed Air-O&M
5 100 104 Compressed Air- Sizing	13 100 101 Compressed Air-O&M
1 100 104 Compressed Air- Sizing	15 100 101 Compressed Air-O&M
13 100 104 Compressed Air- Sizing	16 100 101 Compressed Air-O&M
15 100 104 Compressed Air- Sizing	4 100 101 Compressed Air-O&M
16 100 104 Compressed Air- Sizing	9 100 101 Compressed Air-O&M
9 100 104 Compressed Air- Sizing	7 100 101 Compressed Air-O&M
4 100 104 Compressed Air- Sizing	6 100 101 Compressed Air-O&M
7 100 104 Compressed Air- Sizing	3 400 403 Air conveying systems
6 100 104 Compressed Air- Sizing	5 800 801 Premium T8, Electronic Ballast
6 720 725 DX Coil Cleaning	16 800 801 Premium T8, Electronic Ballast
5 720 725 DX Coil Cleaning	15 800 801 Premium T8, Electronic Ballast
10 720 725 DX Coil Cleaning	14 800 801 Premium T8, Electronic Ballast
7 720 725 DX Coil Cleaning	13 800 801 Premium T8, Electronic Ballast
11 720 725 DX Coil Cleaning	2 800 801 Premium T8, Electronic Ballast
15 720 725 DX Coil Cleaning	3 800 801 Premium T8, Electronic Ballast
14 720 725 DX Coil Cleaning	12 800 801 Premium T8, Electronic Ballast
13 720 725 DX Coil Cleaning	7 800 801 Premium T8, Electronic Ballast
16 720 725 DX Coil Cleaning	6 800 801 Premium T8, Electronic Ballast
12 720 725 DX Coil Cleaning	11 800 801 Premium T8, Electronic Ballast
8 720 725 DX Coil Cleaning	4 800 801 Premium T8, Electronic Ballast
2 720 725 DX Coil Cleaning	1 800 801 Premium T8, Electronic Ballast
9 720 725 DX Coil Cleaning	8 800 801 Premium T8, Electronic Ballast
1 720 725 DX Coil Cleaning	9 800 801 Premium T8, Electronic Ballast
3 720 725 DX Coil Cleaning	14 400 427 Drives - Optimization process (M&T)
4 720 725 DX Coil Cleaning	14 500 510 Heating - Optimization process (M&T)
2 200 201 Fans - O&M	10 800 801 Premium T8, Electronic Ballast
12 200 201 Fans - O&M	15 400 427 Drives - Optimization process (M&T)
10 200 201 Fans - O&M	12 400 427 Drives - Optimization process (M&T)
3 200 201 Fans - O&M	12 500 510 Heating - Optimization process (M&T)
14 200 201 Fans - O&M	11 400 427 Drives - Optimization process (M&T)
11 200 201 Fans - O&M	11 500 510 Heating - Optimization process (M&T)
8 200 201 Fans - O&M	2 300 302 Pumps - Controls
5 200 201 Fans - O&M	12 300 302 Pumps - Controls
1 200 201 Fans - O&M	10 300 302 Pumps - Controls
13 200 201 Fans - O&M	3 300 302 Pumps - Controls
15 200 201 Fans - O&M	14 300 302 Pumps - Controls
16 200 201 Fans - O&M	11 300 302 Pumps - Controls
9 200 201 Fans - O&M	8 300 302 Pumps - Controls
4 200 201 Fans - O&M	5 300 302 Pumps - Controls
7 200 201 Fans - O&M	1 300 302 Pumps - Controls
6 200 201 Fans - O&M	13 300 302 Pumps - Controls

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

15 300 302 Pumps - Controls	8 200 212 Fans - ASD (100+ hp)
16 300 302 Pumps - Controls	11 200 212 Fans - ASD (100+ hp)
9 300 302 Pumps - Controls	14 200 212 Fans - ASD (100+ hp)
4 300 302 Pumps - Controls	3 200 212 Fans - ASD (100+ hp)
7 300 302 Pumps - Controls	10 200 212 Fans - ASD (100+ hp)
6 300 302 Pumps - Controls	12 200 212 Fans - ASD (100+ hp)
7 700 707 Aerosole Duct Sealing - Chiller	2 200 212 Fans - ASD (100+ hp)
6 700 707 Aerosole Duct Sealing - Chiller	4 400 407 High Consistency forming
9 700 707 Aerosole Duct Sealing - Chiller	2 800 804 High Bay T5
4 700 707 Aerosole Duct Sealing - Chiller	3 800 804 High Bay T5
16 700 707 Aerosole Duct Sealing - Chiller	12 800 804 High Bay T5
15 700 707 Aerosole Duct Sealing - Chiller	1 800 804 High Bay T5
13 700 707 Aerosole Duct Sealing - Chiller	4 400 406 Gap Forming papermachine
5 700 707 Aerosole Duct Sealing - Chiller	11 800 804 High Bay T5
1 700 707 Aerosole Duct Sealing - Chiller	14 800 804 High Bay T5
8 700 707 Aerosole Duct Sealing - Chiller	15 800 804 High Bay T5
11 700 707 Aerosole Duct Sealing - Chiller	4 800 804 High Bay T5
14 700 707 Aerosole Duct Sealing - Chiller	10 800 804 High Bay T5
3 700 707 Aerosole Duct Sealing - Chiller	5 800 804 High Bay T5
10 700 707 Aerosole Duct Sealing - Chiller	13 800 804 High Bay T5
12 700 707 Aerosole Duct Sealing - Chiller	5 400 409 Efficient practices printing press
2 700 707 Aerosole Duct Sealing - Chiller	16 800 804 High Bay T5
2 100 103 Compressed Air - System Optimization	8 800 804 High Bay T5
12 100 103 Compressed Air - System Optimization	9 500 504 Top-heating (glass)
10 100 103 Compressed Air - System Optimization	2 200 204 Fans- Improve components
3 100 103 Compressed Air - System Optimization	12 200 204 Fans- Improve components
14 100 103 Compressed Air - System Optimization	10 200 204 Fans- Improve components
11 100 103 Compressed Air - System Optimization	3 200 204 Fans- Improve components
8 100 103 Compressed Air - System Optimization	14 200 204 Fans- Improve components
5 100 103 Compressed Air - System Optimization	11 200 204 Fans- Improve components
1 100 103 Compressed Air - System Optimization	8 200 204 Fans- Improve components
13 100 103 Compressed Air - System Optimization	5 200 204 Fans- Improve components
15 100 103 Compressed Air - System Optimization	1 200 204 Fans- Improve components
16 100 103 Compressed Air - System Optimization	13 200 204 Fans- Improve components
4 100 103 Compressed Air - System Optimization	15 200 204 Fans- Improve components
9 100 103 Compressed Air - System Optimization	16 200 204 Fans- Improve components
6 100 103 Compressed Air - System Optimization	9 200 204 Fans- Improve components
7 100 103 Compressed Air - System Optimization	4 200 204 Fans- Improve components
10 500 507 Near Net Shape Casting	7 200 204 Fans- Improve components
9 800 804 High Bay T5	6 200 204 Fans- Improve components
7 800 804 High Bay T5	1 500 501 Bakery - Process
6 800 804 High Bay T5	9 400 423 Process control
7 200 212 Fans - ASD (100+ hp)	3 400 404 Replace V-Belts
6 200 212 Fans - ASD (100+ hp)	2 300 304 Pumps - Sizing
9 200 212 Fans - ASD (100+ hp)	12 300 304 Pumps - Sizing
4 200 212 Fans - ASD (100+ hp)	10 300 304 Pumps - Sizing
16 200 212 Fans - ASD (100+ hp)	3 300 304 Pumps - Sizing
15 200 212 Fans - ASD (100+ hp)	14 300 304 Pumps - Sizing
13 200 212 Fans - ASD (100+ hp)	11 300 304 Pumps - Sizing
5 200 212 Fans - ASD (100+ hp)	8 300 304 Pumps - Sizing
1 200 212 Fans - ASD (100+ hp)	5 300 304 Pumps - Sizing

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

1 300 304 Pumps - Sizing	2 720 726 Optimize Controls
13 300 304 Pumps - Sizing	9 720 726 Optimize Controls
15 300 304 Pumps - Sizing	1 720 726 Optimize Controls
16 300 304 Pumps - Sizing	3 720 726 Optimize Controls
4 300 304 Pumps - Sizing	4 720 726 Optimize Controls
9 300 304 Pumps - Sizing	9 400 405 Drives - EE motor
7 300 304 Pumps - Sizing	7 600 607 Refinery Controls
6 300 304 Pumps - Sizing	2 200 213 Fans - Motor practices-1 (100+ HP)
7 300 312 Pumps - ASD (100+ hp)	12 200 213 Fans - Motor practices-1 (100+ HP)
6 300 312 Pumps - ASD (100+ hp)	10 200 213 Fans - Motor practices-1 (100+ HP)
9 300 312 Pumps - ASD (100+ hp)	3 200 213 Fans - Motor practices-1 (100+ HP)
4 300 312 Pumps - ASD (100+ hp)	14 200 213 Fans - Motor practices-1 (100+ HP)
16 300 312 Pumps - ASD (100+ hp)	11 200 213 Fans - Motor practices-1 (100+ HP)
15 300 312 Pumps - ASD (100+ hp)	8 200 213 Fans - Motor practices-1 (100+ HP)
13 300 312 Pumps - ASD (100+ hp)	5 200 213 Fans - Motor practices-1 (100+ HP)
5 300 312 Pumps - ASD (100+ hp)	1 200 213 Fans - Motor practices-1 (100+ HP)
1 300 312 Pumps - ASD (100+ hp)	13 200 213 Fans - Motor practices-1 (100+ HP)
8 300 312 Pumps - ASD (100+ hp)	15 200 213 Fans - Motor practices-1 (100+ HP)
11 300 312 Pumps - ASD (100+ hp)	16 200 213 Fans - Motor practices-1 (100+ HP)
14 300 312 Pumps - ASD (100+ hp)	4 200 213 Fans - Motor practices-1 (100+ HP)
3 300 312 Pumps - ASD (100+ hp)	9 200 213 Fans - Motor practices-1 (100+ HP)
10 300 312 Pumps - ASD (100+ hp)	6 200 213 Fans - Motor practices-1 (100+ HP)
12 300 312 Pumps - ASD (100+ hp)	16 800 802 CFL Hardwired, Modular 18W
2 300 312 Pumps - ASD (100+ hp)	5 800 802 CFL Hardwired, Modular 18W
7 100 112 Comp Air - ASD (100+ hp)	13 800 802 CFL Hardwired, Modular 18W
6 100 112 Comp Air - ASD (100+ hp)	5 900 901 Replace V-belts
9 100 112 Comp Air - ASD (100+ hp)	14 900 901 Replace V-belts
4 100 112 Comp Air - ASD (100+ hp)	1 900 901 Replace V-belts
16 100 112 Comp Air - ASD (100+ hp)	7 900 901 Replace V-belts
15 100 112 Comp Air - ASD (100+ hp)	13 900 901 Replace V-belts
13 100 112 Comp Air - ASD (100+ hp)	15 900 901 Replace V-belts
5 100 112 Comp Air - ASD (100+ hp)	10 900 901 Replace V-belts
1 100 112 Comp Air - ASD (100+ hp)	12 900 901 Replace V-belts
8 100 112 Comp Air - ASD (100+ hp)	9 900 901 Replace V-belts
11 100 112 Comp Air - ASD (100+ hp)	11 900 901 Replace V-belts
14 100 112 Comp Air - ASD (100+ hp)	2 900 901 Replace V-belts
3 100 112 Comp Air - ASD (100+ hp)	16 900 901 Replace V-belts
10 100 112 Comp Air - ASD (100+ hp)	8 900 901 Replace V-belts
12 100 112 Comp Air - ASD (100+ hp)	3 900 901 Replace V-belts
2 100 112 Comp Air - ASD (100+ hp)	4 900 901 Replace V-belts
6 720 726 Optimize Controls	15 800 802 CFL Hardwired, Modular 18W
5 720 726 Optimize Controls	14 800 802 CFL Hardwired, Modular 18W
10 720 726 Optimize Controls	8 800 802 CFL Hardwired, Modular 18W
7 720 726 Optimize Controls	10 400 426 Efficient drives - rolling
11 720 726 Optimize Controls	12 800 802 CFL Hardwired, Modular 18W
15 720 726 Optimize Controls	11 800 802 CFL Hardwired, Modular 18W
14 720 726 Optimize Controls	7 200 213 Fans - Motor practices-1 (100+ HP)
13 720 726 Optimize Controls	3 800 802 CFL Hardwired, Modular 18W
16 720 726 Optimize Controls	2 800 802 CFL Hardwired, Modular 18W
12 720 726 Optimize Controls	4 800 802 CFL Hardwired, Modular 18W
8 720 726 Optimize Controls	1 800 802 CFL Hardwired, Modular 18W

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

10 800 802 CFL Hardwired, Modular 18W	13 100 102 Compressed Air - Controls
7 800 802 CFL Hardwired, Modular 18W	15 100 102 Compressed Air - Controls
6 800 802 CFL Hardwired, Modular 18W	16 100 102 Compressed Air - Controls
9 800 802 CFL Hardwired, Modular 18W	4 100 102 Compressed Air - Controls
7 200 216 Refinery Controls	9 100 102 Compressed Air - Controls
5 400 412 Efficient drives	6 100 102 Compressed Air - Controls
14 400 429 Machinery	7 100 102 Compressed Air - Controls
7 700 706 EMS Optimization - Chiller	3 400 405 Drives - EE motor
6 700 706 EMS Optimization - Chiller	16 400 428 Drives - Scheduling
9 700 706 EMS Optimization - Chiller	13 400 428 Drives - Scheduling
4 700 706 EMS Optimization - Chiller	7 300 315 Refinery Controls
16 700 706 EMS Optimization - Chiller	7 700 705 VSD for Chiller Pumps and Towers
15 700 706 EMS Optimization - Chiller	6 700 705 VSD for Chiller Pumps and Towers
13 700 706 EMS Optimization - Chiller	9 700 705 VSD for Chiller Pumps and Towers
5 700 706 EMS Optimization - Chiller	4 700 705 VSD for Chiller Pumps and Towers
1 700 706 EMS Optimization - Chiller	16 700 705 VSD for Chiller Pumps and Towers
8 700 706 EMS Optimization - Chiller	15 700 705 VSD for Chiller Pumps and Towers
11 700 706 EMS Optimization - Chiller	13 700 705 VSD for Chiller Pumps and Towers
14 700 706 EMS Optimization - Chiller	5 700 705 VSD for Chiller Pumps and Towers
3 700 706 EMS Optimization - Chiller	1 700 705 VSD for Chiller Pumps and Towers
10 700 706 EMS Optimization - Chiller	8 700 705 VSD for Chiller Pumps and Towers
12 700 706 EMS Optimization - Chiller	11 700 705 VSD for Chiller Pumps and Towers
2 700 706 EMS Optimization - Chiller	14 700 705 VSD for Chiller Pumps and Towers
15 400 429 Machinery	3 700 705 VSD for Chiller Pumps and Towers
12 400 429 Machinery	10 700 705 VSD for Chiller Pumps and Towers
11 400 429 Machinery	12 700 705 VSD for Chiller Pumps and Towers
13 400 429 Machinery	2 700 705 VSD for Chiller Pumps and Towers
16 400 430 Efficient Machinery	2 300 303 Pumps - System Optimization
14 600 603 New transformers welding	12 300 303 Pumps - System Optimization
13 600 604 Efficient processes (welding, etc.)	10 300 303 Pumps - System Optimization
15 600 603 New transformers welding	3 300 303 Pumps - System Optimization
12 600 603 New transformers welding	14 300 303 Pumps - System Optimization
11 600 603 New transformers welding	11 300 303 Pumps - System Optimization
11 500 511 Heating - Scheduling	8 300 303 Pumps - System Optimization
12 500 511 Heating - Scheduling	5 300 303 Pumps - System Optimization
4 400 405 Drives - EE motor	1 300 303 Pumps - System Optimization
14 400 428 Drives - Scheduling	13 300 303 Pumps - System Optimization
15 400 428 Drives - Scheduling	15 300 303 Pumps - System Optimization
11 400 428 Drives - Scheduling	16 300 303 Pumps - System Optimization
12 400 428 Drives - Scheduling	4 300 303 Pumps - System Optimization
2 400 402 O&M/drives spinning machines	9 300 303 Pumps - System Optimization
7 600 602 Efficient desalter	6 300 303 Pumps - System Optimization
2 100 102 Compressed Air - Controls	7 300 303 Pumps - System Optimization
12 100 102 Compressed Air - Controls	6 400 413 Clean Room - Controls
10 100 102 Compressed Air - Controls	2 100 113 Comp Air - Motor practices-1 (100+ HP)
3 100 102 Compressed Air - Controls	12 100 113 Comp Air - Motor practices-1 (100+ HP)
14 100 102 Compressed Air - Controls	10 100 113 Comp Air - Motor practices-1 (100+ HP)
11 100 102 Compressed Air - Controls	3 100 113 Comp Air - Motor practices-1 (100+ HP)
8 100 102 Compressed Air - Controls	14 100 113 Comp Air - Motor practices-1 (100+ HP)
5 100 102 Compressed Air - Controls	11 100 113 Comp Air - Motor practices-1 (100+ HP)
1 100 102 Compressed Air - Controls	8 100 113 Comp Air - Motor practices-1 (100+ HP)

**Exhibit No. (JAM 17) List of Measures That Are Eliminated  
Based on 2 Year Payback Criteria**

- 5 100 113 Comp Air - Motor practices-1 (100+ HP)
- 1 100 113 Comp Air - Motor practices-1 (100+ HP)
- 13 100 113 Comp Air - Motor practices-1 (100+ HP)
- 15 100 113 Comp Air - Motor practices-1 (100+ HP)
- 16 100 113 Comp Air - Motor practices-1 (100+ HP)
- 4 100 113 Comp Air - Motor practices-1 (100+ HP)
- 9 100 113 Comp Air - Motor practices-1 (100+ HP)
- 6 100 113 Comp Air - Motor practices-1 (100+ HP)
- 7 100 113 Comp Air - Motor practices-1 (100+ HP)

