



U.S. Department of Energy
Energy Efficiency and Renewable Energy

federal energy management program

ESPC Dashboards

Ab Ream

Federal Energy Management Program

January 13th 2010



Welcome

federal energy management program

- The purpose of today's meeting is to ask for your input regarding measurement and verification of ESPCs. To that end, it would be most helpful to us that you provide us, based on your personal experience:
 - your individual advice,
 - information, or
 - facts regarding this topic.
- It is not the object of this session to obtain any group position or consensus.
- Rather, the Department is seeking as many recommendations as possible from all individuals at this meeting.
- To most effectively use our limited time, please refrain from passing judgment on another participant's recommendations or advice instead concentrating on your individual experiences.



Keeping current on:

- Quantity
- Quality
- Training
- Long Term Performance
- Customer Satisfaction



Where do we get the data?

- Multiple databases, populated with information extracted from TO Schedules and Final Proposals, are used to compile the report.

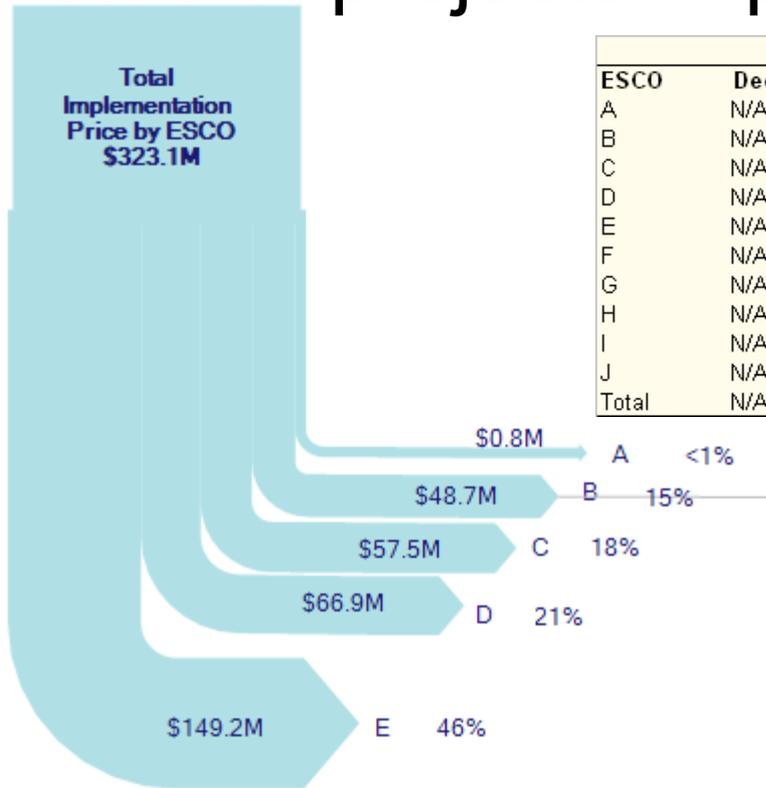
Project #	ESCO	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Today
												12/15/2009
1	ESCO							6/23/2008		6/23/2008	6/23/2009	
2	ESCO										6/28/2009	Have report
3	ESCO									6/30/2008		0-3 months late
4	ESCO											3-6 months late
5	ESCO											6+ months late
6	ESCO											Term Ended
7	ESCO											
8	ESCO										4/6/2009	
9	ESCO											
10	ESCO										8/24/2009	
11	ESCO											
12	ESCO											
13	ESCO											
14	ESCO											
15	ESCO											
16	ESCO											
17	ESCO											
18	ESCO											
19	ESCO											
20	ESCO						3/16/2005	3/16/2006	3/16/2007	3/16/2008	3/16/2009	
21	ESCO											
22	ESCO											
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25	ESCO											
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27	ESCO											
28	ESCO											
29	ESCO											
30	ESCO											
31	ESCO											

Project Number	FY	Tech Category	Description	Renewable	Renewable Investment	Installation \$	Mark-Up	Investment \$	Implementation (D04)	MMBTU	Total \$ Savings	Simple ECM Payback
2	2010	5	Lighting			\$1,509,872	26.00%	\$1,902,439	\$1,902,439	14,057	\$346,311	5.5
2	2010	13	Water Conservation	R	10141303	\$7,985,278	27.00%	\$10,141,303	\$10,141,303	4,416	\$2,141,148	4.7
2	2010	13	Sewage Treatment Plant Study			\$67,523	27.00%	\$85,755	\$85,755			
2	2010	13	Water Storage Tank Design			\$128,954	27.00%	\$163,772	\$163,772			
2	2010	17	Feasibility & Design Cost			\$530,104	26.80%	\$532,980	\$532,980			
1	2009	19	Proposal Development Energy Surveys			\$541,808	27.00%	\$688,096				
1	2009	3	EMCS and HVAC Controls Optimization			\$2,398,602	26.00%	\$2,888,790	\$2,888,790	8,823	\$666,997	4.3
1	2009	5	Lighting			\$3,907,617	20.00%	\$4,716,367	\$4,716,367	11,458	\$898,100	5.3
1	2009	11	Solar PV	R	5495081	\$4,371,276	25.00%	\$5,495,081	\$5,495,081	1,403	\$106,050	51.8
3	2009	1	Fire Tanks Insulation and Heating System Modification			\$948,331	29.50%	\$1,238,183	\$1,242,881	739	\$214,437	5.8
3	2009	2	Chiller Equipment Upgrade			\$1,413,510	29.50%	\$1,845,605	\$2,036,657	5,425	\$183,629	11.1
3	2009	2	Building Management System Improvement			\$618,971	29.50%	\$837,384	\$861,018	6,057	\$77,165	11.2
3	2009	2	Boiler Fuel Switch - Fuel Oil to Electric			\$1,671,239	29.50%	\$2,183,830	\$2,191,284	7,642	\$1,483,207	1.5



Quantity

- Cumulative awards for twelve-month period.
- Value of projects in pipeline.



Value of Projects in Pipeline (millions) by month

ESCO	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09
A	N/A	569.0	569.0	577.0	577.0	409.0	399.0	399.0	399.0	399.0	394.9	394.9
B	N/A	13.1	13.1	13.1	13.1	13.1	11.1	11.1	11.1	11.1	11.1	11.1
C	N/A	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
D	N/A	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
E	N/A	18.0	18.0	18.0	18.0	18.0	3.0	3.0	3.0	3.0	3.0	3.0
F	N/A	145.8	169.7	169.7	166.7	165.2	139.3	139.3	136.3	136.3	130.5	116.5
G	N/A	160.9	160.9	155.0	155.9	139.1	103.8	103.8	97.3	83.5	44.3	44.3
H	N/A	253.0	231.0	223.0	223.0	232.6	201.5	181.8	134.3	106.1	106.1	106.1
I	N/A	305.1	305.1	305.1	268.6	268.6	268.6	268.6	212.9	212.9	165.5	165.5
J	N/A	0.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	5.0	5.0
Total	N/A	1549.8	1556.7	1550.8	1512.2	1335.5	1216.2	1196.5	1078.8	1036.8	945.3	931.3



Quality

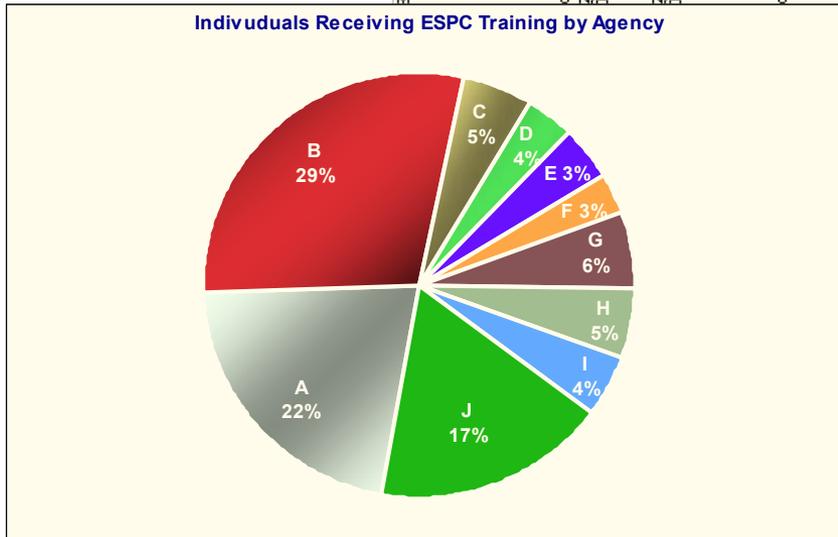
- Pricing, financing, and energy savings.
 - Site BTU/yr savings per dollar.
 - Investment weighted interest rate, index rate, premium, and term.
 - Average project size.
 - Percentage of payments over term to PPS, financing, project investment.
 - Percentage of renewables.
- Cycle time from kick-off to award.
- Total reports received in previous year including the average delivery delay for outstanding reports.



Training

- Tally of individuals who received ESPC Training.

Individuals receiving ESPC Training by Agency													
Agency	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Total, Previous 12 months
A	6	N/A	N/A	31	16	16	31	17	15	16	22	10	180
B	2	N/A	N/A	3	0	1	2	4	0	0	3	1	16
C	4	N/A	N/A	4	6	6	17	17	5	4	17	8	88
D	6	N/A	N/A	4	7	2	10	12	11	7	29	7	95
E	7	N/A	N/A	2	6	3	8	5	6	9	5	5	56
F	0	N/A	N/A	3	3	5	9	8	4	4	5	2	43
G	3	N/A	N/A	9	5	2	6	3	0	2	0	0	30
H	5	N/A	N/A	4	2	0	8	3	2	5	6	1	36
I	2	N/A	N/A	1	2	4	0	0	0	0	2	2	13
J	11	N/A	N/A	9	3	3	3	5	1	3	6	4	48
K	4	N/A	N/A	7	6	0	10	3	6	2	3	3	44
L	0	N/A	N/A	3	8	2	0	0	1	0	0	0	14
M	4	N/A	N/A	0	6	3	6	2	1	6	8	4	40
	0	N/A	N/A	0	1	0	2	2	1	0	2	0	8
	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	5	6	2	3	1	0	0	0	0	0	0	18
	4	1	4	0	0	4	1	0	4	1	0	0	16
	0	0	0	0	0	0	0	0	0	0	0	0	3
	2	1	9	10	3	0	0	0	1	0	0	0	25
	0	0	0	0	0	0	0	0	0	1	0	0	1
	6	0	1	2	0	0	2	0	0	2	0	0	16
	7	3	5	6	5	0	5	3	5	0	5	3	39
	0	57	137	101	64	63	117	50					829





New Projects

- Newly awarded projects are highlighted in the report.

#XXX Project	
Award Date	11/17/2009
Agency	A
ESCO	A
Term	7
PF	AAA
FFS	BBB
Implementation Price	\$12,826,249
One-time Payment	\$ -
Financing Procurement Price	\$ 1,360,657
Interest	\$ 2,295,592
Performance Period Savings	\$ 215,803
Payments over term	\$16,448,773
Interest Rate	5.89%
Premium	3.02%
Annual Energy Savings (Mbtu)	18,473
Guaranteed Cost Savings	\$16,448,780
Financed Amount	\$1,397,378
Principal	\$13,937,378
ECMs	
Lighting	Sewage Treatment Plant Study
Water Conservation	Water Storage Tank Design



Website

- Not currently accessible to the public
- The current monthly report is displayed on the website along with additional graphs.
- All previous reports are available to download and compare.

The screenshot shows a web dashboard with a green header. The word "Dashboard" is on the left, and "by Oak Ridge National Laboratory" is on the right. Below the header is a navigation bar with links for HOME, QUANTITY, QUALITY, TRAINING, and NEW PROJECTS. The main content area has a "Welcome!" heading followed by a paragraph: "To download a complete copy of the current dashboard report or older reports please visit our download page." Below this is a link labeled "Download Page". At the bottom left, there is a copyright notice: "Copyright © 2009".



Dashboard

by Oak Ridge National Laboratory

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Quality

Pricing, Financing, Energy Savings	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09
Average site BTU/yr savings per dollar invested over previous year	5,922	5,943	5,976	6,075	6,076	6,198	5,958	3,748	15,273	12,607	13,092	12,677
Dollars paid per million site BTUs saved	9.96	9.89	9.69	9.62	9.59	9.47	9.40	12.15	3.42	4.17	4.02	4.17
Investment-weighted project interest rate	6.58%	6.56%	6.63%	6.69%	6.76%	6.76%	6.79%	7.05%	7.64%	7.57%	7.56%	7.50%
Investment-weighted index rate	4.50%	4.44%	4.46%	4.43%	4.39%	4.39%	4.35%	3.89%	3.97%	3.97%	3.95%	3.91%
Investment-weighted premium (basis points)	209	212	217	226	236	238	244	316	366	360	361	359
Investment-weighted term for previous 12 months	17.9	17.7	17.9	17.8	17.6	17.4	17.4	17.0	17.9	17.6	17.3	16.9
Size of average project over previous 12 months (millions)	13.7	13.5	13.9	12.4	11.9	12.6	12.7	6.7	15.7	18.2	19.3	19.
% of payments over term to performance period services	19%	19%	18%	19%	18%	18%	18%	19%	46%	41%	42%	41%
% of payments over term to financing	33%	33%	33%	34%	34%	34%	34%	33%	22%	24%	24%	24%
% of payments over term to project investment	48%	49%	48%	48%	48%	47%	47%	48%	32%	34%	34%	34%
% of investment in renewables over previous 12 months	31%	30%	31%	34%	35%	36%	35%	16%	60%	49%	51%	49%
Speed												
Cycle time from kick-off to award (months)	22	21	21	20	21	24	24	27	26	26	26	26



Customer Satisfaction

- As part of FEMP ESPC Life-of-Contract (LOC) services, a survey was distributed to ***evaluate practices in the maintenance of Energy Savings Performance (ESPC) contracts at Federal Agencies.***
- The survey was designed to discover customer needs and practices in:
 - Measurement and Verification (M&V) procedures
 - Contractual management of ECMs
 - Managing operations and maintenance (O&M) of ECMs
 - Monitoring of utility rates (where applicable)
 - Clear assignment of roles and responsibilities



Use of Customer Feedback

- The survey established a baseline understanding of current practices in the field for ESPCs in the performance period.
- Information from the survey report can be used to provide:
 - Input for future guidance and/or policy and procedure and training changes
 - Information for the ESPC Steering Committee on current practices
 - A basis for future survey design for consistent ongoing periodic field surveys
 - Feedback for ESCOs



Thank You!

- Comments?