

SB 220

ALASKA SUSTAINABLE ENERGY ACT



**DEPARTMENT OF TRANSPORTATION & PUBLIC
FACILITIES**

AND



DEPARTMENT OF ADMINISTRATION

2010 PROGRESS REPORT

Submitted January 2011

EXECUTIVE SUMMARY

In accordance with AS 44.42.067(d), this is the FY11 Progress Report detailing the progress of the State of Alaska Department of Transportation and Public Facilities (DOT&PF) in reducing the state's energy consumption.

AS 44.42.067 requires the DOT&PF to retrofit at least 25 percent of all State of Alaska public facilities over 10,000 square feet no later than January 1, 2020. The milestones to accomplishing this include:

- Implementing a standardized method to collect energy consumption and cost data for facilities and generating Energy Use Indexes (AS 37.07.040 (12)).
- Identifying and prioritizing the least energy efficient facilities.
- Determining project scopes for energy retrofit work in those facilities that will meet net cost savings within 15 years.
- Working with the state agencies to arrange funding for the determined energy retrofit projects.
- Contracting with Energy Services Companies to perform energy performance contracts.
- Executing the energy retrofit projects and verifying the energy savings.
- Continuous monitoring of state energy consumption to be compared to levels of past years.

The DOT&PF is currently gathering utility bills from the past two years for all state-owned buildings that are over 10,000 SF. Several agencies have provided the information and the DOT&PF is generating Energy Use Indexes in order to prioritize the buildings from least to most energy efficient. Concurrently, the DOT&PF has received responses to the Request for Proposals for contracting with up to three Energy Service Companies (ESCOs).

Initial funding for energy efficiency retrofit projects will come from grant funding through the American Recovery and Reinvestment Act (ARRA). Once those funds are committed, funding of the energy retrofit projects will be through the Alaska Energy Efficiency Revolving Loan Fund Program administered by the Alaska Housing Finance Corporation and other potential sources.

Prior to 2010, the DOT&PF had previously completed energy retrofit projects under two phases of energy performance contracting across multiple facilities. The first phase of energy performance contracting, completed in 2006, resulted in energy cost avoidance of \$365,991 in its first year. The second phase, completed in 2009, resulted in \$793,395 of cost avoidance in its first year.

Facility energy efficiency retrofit projects have also been completed through conventional contracting means in multiple state facilities and are detailed in this report.

The DOT&PF is also coordinating with the Alaska Housing Finance Corporation (AHFC), the Alaska Energy Authority (AEA), and the Office of Management and Budget (OMB) to determine the method to collect energy data and catalog it for use by all state agencies.

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1.0 INTRODUCTION

Senate Bill 220, known as the ‘Alaska Sustainable Energy Act,’’, was enacted into law in July 2010. The State of Alaska Department of Transportation and Public Facilities (DOT&PF), in consultation with the Department of Administration, present this FY11 progress report to the legislature. Progress in this report includes work completed in 2010 and prior.

The DOT&PF is in the process of collecting utility bill and energy information from all executive branch agencies. One-hundred and seventy-six (176) state-owned facilities are 10,000 square feet or more and fall into the facility definition of SB220¹. To date, the DOT&PF has received utility information for over 70 facilities from different agencies including the Department of Administration, Department of Transportation and Public Facilities, Department of Education-Mt. Edgecumbe High School and Department of Labor-AVTEC. Other agencies are currently in the process of collecting utility data for their facilities and the DOT&PF is expecting to receive more information before the end of 2010.

Utility information provided by the other state agencies is being used to generate an Energy Use Indexes (EUI) for each building. The EUI, a comparable measure of energy used per square foot of building space, will assist the DOT&PF in prioritizing the facilities. The DOT&PF is working with the Alaska Energy Authority to develop the process for prioritizing the facilities with an eye towards the long-term increase in energy efficiency and reduction of energy costs. This process will be finalized and documented in the upcoming months.

The DOT&PF has long been aware that remodeling facilities to increase energy efficiency was an effective method to reduce energy costs. To date, the DOT&PF has already had two phases of energy savings performance contracting (ESPC), has completed remodels on existing facilities with the specific goal of saving on energy costs at those facilities, and always keeps energy efficiency at the fore-front of the design when working on every renovation and new facility project. The DOT&PF has received proposals for a new term agreement with Energy Service Companies for a third phase of energy savings performance contracting to assist in achieving the goals of SB220.

Subsequent sections of this report will provide details about current and past energy consumption and the associated costs of state facilities, Benchmarks/EUIs that have been calculated, the RFP for an Energy Services company that has been advertised, current and past construction projects focusing on energy efficiency, and the DOT&PF’s relationship with other agencies.

¹ As determined from State of Alaska Risk Management 2008 Assets Property list.

2.0 ENERGY CONSUMPTION AND COSTS

As of December 2010, the DOT&PF does not have full utility data for all state-owned facilities. Tabular and graphical energy consumption and costs presented in this section include only the facilities the DOT&PF has been able to compile data for thus far. The state facilities comprising the information shown in this section are included in Appendix A.

2.1 METHODOLOGIES OF UTILITY DATA COLLECTION

Current methods of storing and tracking utility data are varied across agencies and as of this date there is no standard or central point of collection. Methodologies range from utility information being centrally maintained at the agency level, being maintained at the department regional level, or being maintained at individual facilities.

The Office of Management and Budget (OMB) is currently coordinating with the Alaska Housing Finance Corporation, the Alaska Energy Authority and the DOT&PF in the development of standard methodology to collect future energy consumption and expense data for state facilities. In the interim, before it is developed and implemented, the DOT&PF is obtaining utility information directly from individual departments to compile the data.

2.2 CURRENT CONSUMPTION AND COST

Table 1 below is a summary of the energy consumption and costs for FY 2010 of state-owned facilities 10,000 square feet or greater in size². Energy units for electricity (kilowatt hours-kWh) and heating energy (therms) have been converted to the common energy unit of MMBtus (millions of Btus) to represent the profile of energy use for state facilities.

FY 2010	Consumption		Cost
Electrical Energy	24,311,633 kWh	82,976 MMBtus	\$2,633,196
Heating Energy	1,026,944 Therms	102,694 MMBtus	\$1,531,661
Total		185,670 MMBtus	\$4,164,857

Table 1: FY 2010 Energy Consumption & Cost

Figures 1 and 2 graphically depict the energy usage profile between electrical and heating energy and electrical and heating costs respectively.

² Of available compiled data from State Facilities 10,000 square feet and over.

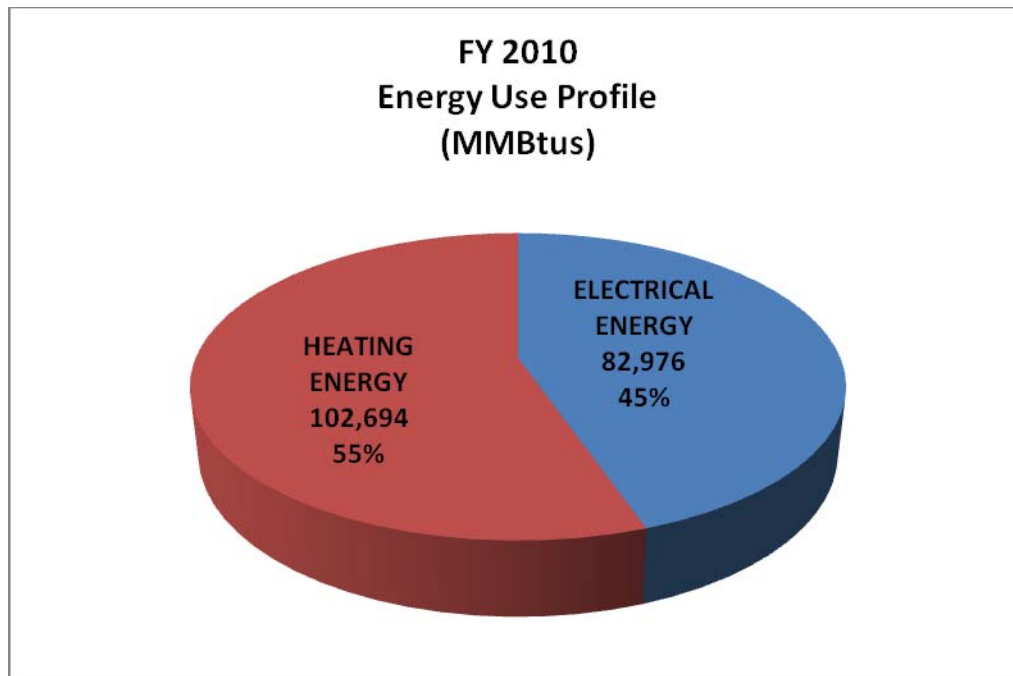


Figure 1: FY 2010 Energy Use Profile

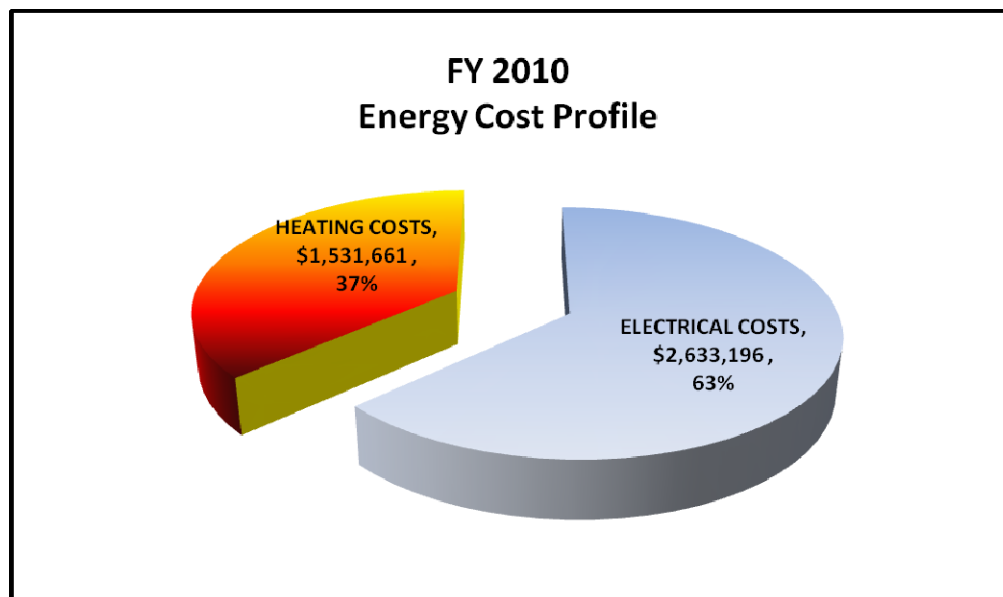


Figure 2: FY 2010 Energy Cost Profile

2.3 PAST ENERGY CONSUMPTION AND COST

The following tables and graphs include comparative summaries of the energy consumption and costs for FY 2009 and 2010.

	Energy Consumption (MMBtus)		Cost \$	
	FY 2009	FY 2010	FY 2009	FY 2010
Electrical Energy	87,039	82,976	\$2,922,377	\$2,633,196
Heating Energy	129,621	102,694	\$1,798,736	\$1,531,661
Total	216,660	185,670	\$4,721,113	\$4,164,857

Table 2: FY2009 & FY2010 Energy Consumption and Cost

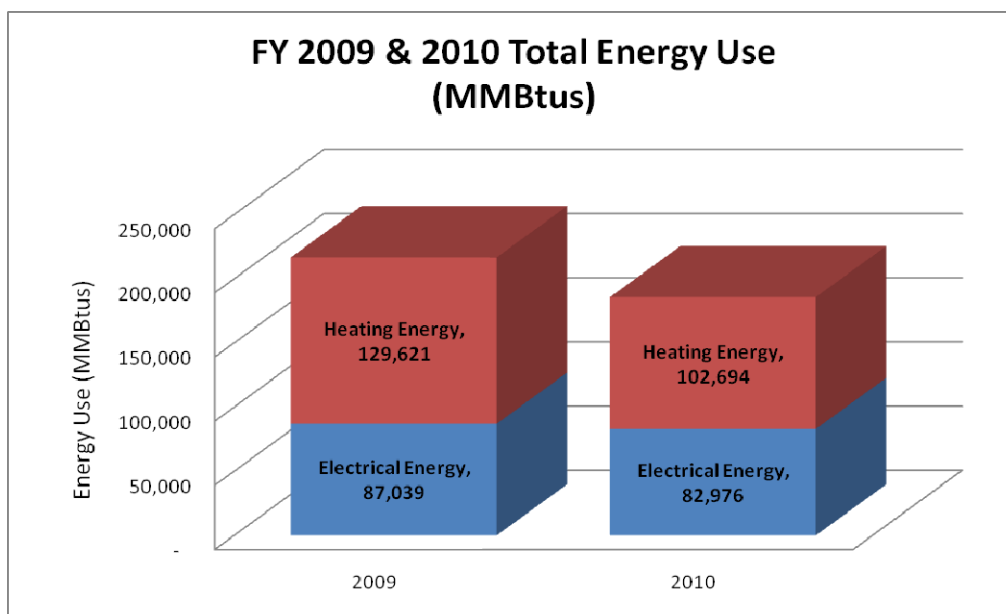


Figure 3: FY2009 & FY2010 Total Energy Consumption (in Million Btus -MMBtus)

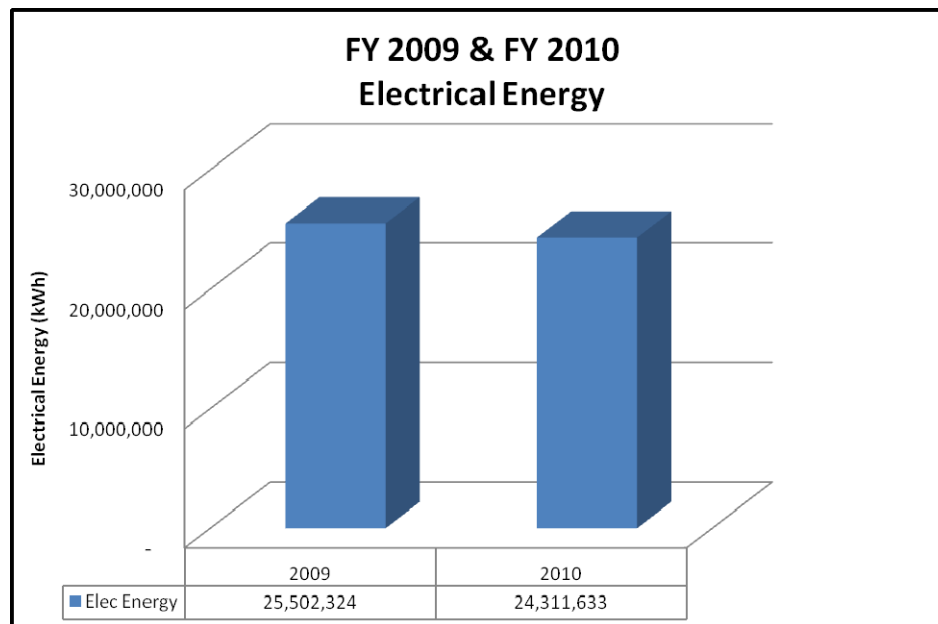


Figure 4: FY2009 & FY2010 Electrical Energy Consumption

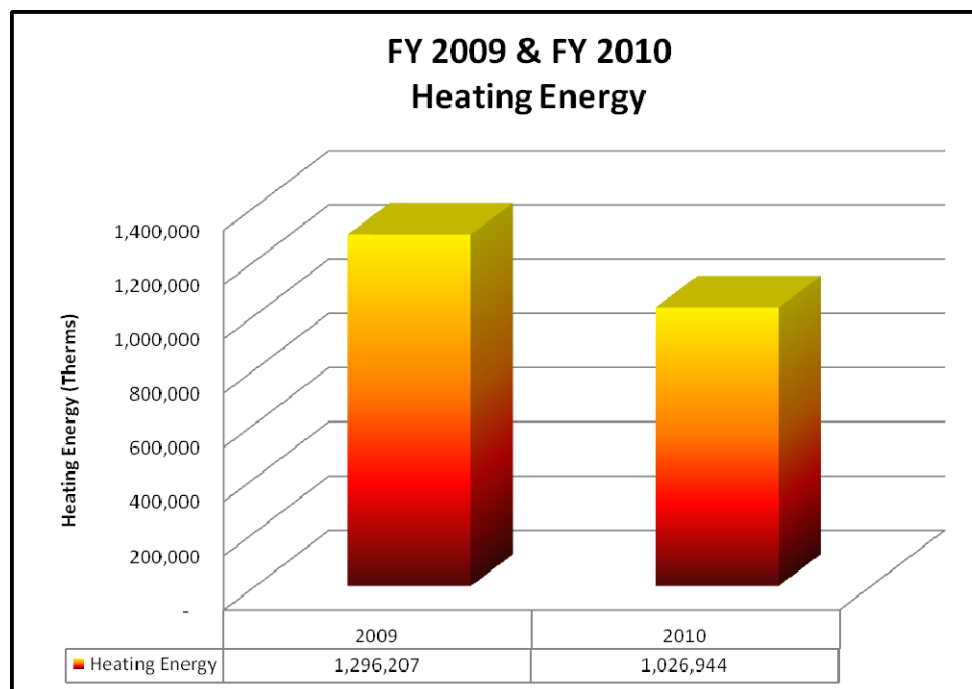


Figure 5: FY2009 & FY2010 Heating Energy Consumption

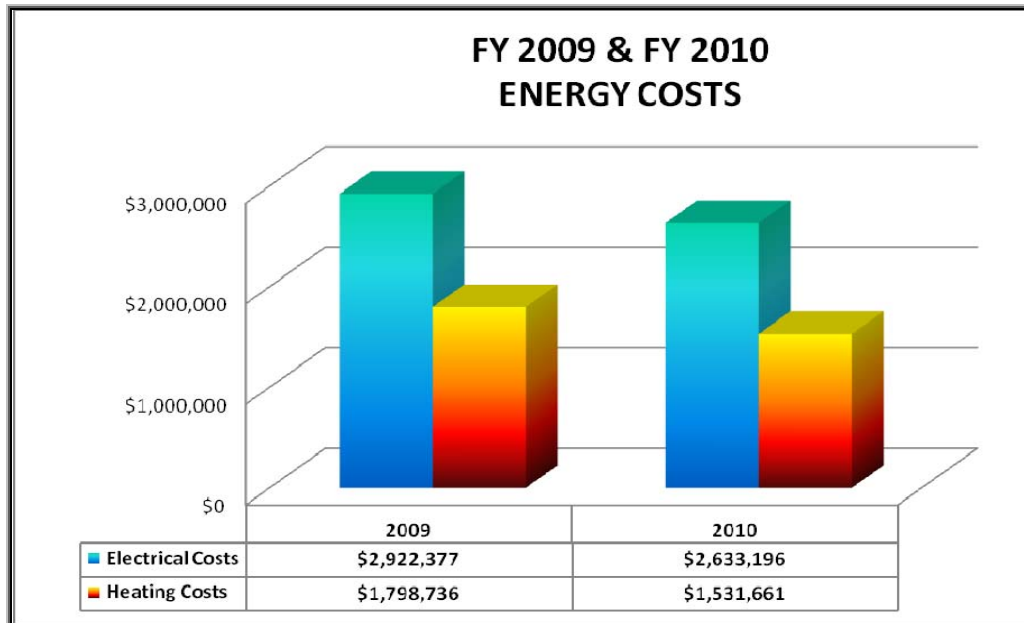


Figure 6: FY2009 & FY2010 Electrical and Heating Costs

3.0 ENERGY USE INDEXES

To determine current energy use of state facilities (over 10,000 square feet), the DOT&PF has begun collecting utility bills and other data from state agencies for their public facilities as defined in AS 44.42.067. The utility data is being used to generate Energy Use Indexes (EUIs), which will assist in determining comparative energy use and energy efficiency of the facilities.

The EUI is a calculated number representing the annual total of all energy used per square foot of building area, represented as thousand BTUs per square foot (kBtUs /sq.ft.). The total energy consumption for the building comprises the electrical power, natural gas, heating fuel oil, and, in some specific sites, propane used to operate the building.

The energy consumed is converted into BTUs and divided by the square footage of the building. The EUI can then be used to compare and rank all facilities. The larger the EUI, the more energy consumed per square foot. Different types of facilities will have different EUIs based on their operational function, equipment, space usage and occupancies. For example, a health care or laboratory facility, an office facility, and a parking facility will all have very different EUIs, ranging from highest to lowest respectively.

Table 3 shows typical units for measuring the energy consumption.

Energy Source	Category	Measured In Units of	
Electrical Consumption	Electricity	Kilowatt-hours	kWh
Electrical Demand	Electricity	Kilowatt	kW
Natural Gas	Heating	Thousand Cubic Feet	ccf
Heating Fuel Oil	Heating	Gallons	gal
Propane	Heating	Gallons	gal

Table 3: Typical Energy Units

The following Table 4 is a summary of the FY 2010 EUIs the DOT&PF has calculated to date. EUI data may be subject to change as missing utility information is gathered and compiled, data is verified and calculations are updated.

Table 4: FY 2010 Energy Use Indexes of Available Facilities

DEPT	BUILDING NAME	LOCATION	ENERGY USE INTENSITY (KBTUs / Sq.Ft.)
DOA	Atwood Bldg	Anchorage	91.7
DOA	Linny Pacillo Parking Garage (Atwood Bldg)	Anchorage	32.4
DOA	Palmer State Office Bldg	Palmer	116.9
DOA	Fairbanks Regional Office Bldg	Fairbanks	63.8
DOA	State Office Bldg	Juneau	148.9
DOA	Community Bldg	Juneau	62.3
DOA	Public Safety Bldg	Juneau	157.4
DOA	Dimond Courthouse Bldg	Juneau	217.5
DOA	Douglas Island Bldg	Douglas	89.0
DOA	Museum	Juneau	166.3
DOTPF-NR	Cantwell Garage	Cantwell	173.9
DOTPF-NR	Large Vehicle Warm Storage	Fairbanks	43.4
DOTPF-NR	Warm Storage	Nome	93.9
DOTPF-NR	Combined Facility	Tok	60.3
DOTPF-NR	Maintenance Facility	Tok	188.3
DOTPF-CR	Annex Bldg	Anchorage	56.3
DOTPF-CR	Anchorage Hwy Maintenance Shop	Anchorage	191.3
DOTPF-CR	Anchorage Maintenance Shop / SEF	Anchorage	46.2
DOTPF-CR	Communication Bldg	Anchorage	208.2
DOTPF-CR	Boney Courthouse	Anchorage	77.8
DOTPF-CR	Boney Parking Garage	Anchorage	9.0
DOTPF-CR	Palmer Maintenance /SEF	Palmer	273.8
DOTPF-CR	Soldotna Maintenance/SEF	Soldotna	139.7
DOTPF-CR	Soldotna Sand Storage	Soldotna	67.6
DOTPF-CR	Kenai Combined Facility	Kenai	136.8
DOTPF-CR	Kodiak Regional Office	Kodiak	121.3
DOTPF-CR	Kodiak Combined Facility (State Court/Office)	Kodiak	85.4
DOTPF-CR	Adak Maintenance / SEF	Adak	124.9
DOTPF-CR	Hooper Bay Maint Shop	Hooper Bay	9.5
DOL	AVTEC First Lake Facility Admin Bldg	Seward	115.1
DOL	AVTEC Student Service Center (5 Bldgs)	Seward	111.1
DOL	AVTEC Auto / Hvy Equipment Shop	Seward	68.0

3.1 PROJECT PRIORITIZATION

The DOT&PF is working with Alaska Energy Authority in determining prioritization of the facilities. The current method is to establish baseline EUIs using the most recent years of utility data, and to sort the facilities beginning by the least energy efficient.

Priority will be given to facilities that are least energy efficient, though individual facility and department needs as well as the geographic locations of the facilities must also be considered.

Because completing the work as cost effectively as possible is essential, when commencing energy efficiency retrofit projects, the DOT&PF intends to group projects by geographic locations to the extent possible. This will assist in expediting project completions, reducing project costs, and maximizing project resources. However, it may mean one group of facilities includes multiple departments and multiple funding sources and that energy retrofits to facilities are not completed in exact order of their baseline EUIs.

4.0 PROGRESS

4.1 ENERGY SERVICES COMPANY RFP

A Request for Proposal (RFP) for a term agreement with up to three Energy Service Companies (ESCOs) was advertised in October 2010 and proposals are currently in review for selection. Selection of the qualified ESCOs is anticipated by early January 2011.

The ESCOs will perform investment grade energy audits, energy improvement projects and energy savings verification to state-owned facilities. Contracting with multiple ESCOs in the term agreement allows for competition for the energy retrofit projects and enables enough ESCOs to complete the foreseeable work load.

The ESCOs shall perform work in three phases:

- Phase I requires the completion of an investment grade audit and energy services proposal that identifies cost-effective recommended projects for the identified state facilities.
- Phase II requires the ESCOs to perform all management, engineering, design, construction, commissioning, and training necessary for the retrofit as identified in their energy services proposal.
- Phase III requires the ESCOs to measure and verify the guaranteed energy and water savings.

4.2 COMPLETED ENERGY EFFICIENCY PROJECTS (FY06 – FY11)

Energy retrofit projects completed by the DOT&PF include two energy performance contracts performed across multiple facilities as well as energy efficiency retrofit projects at individual facilities.

The DOT&PF has completed construction of two phases of energy performance contracts at state facilities. The facilities and the reported annual monetary energy savings are shown in the tables below.

4.2.1 ENERGY PERFORMANCE CONTRACT PROJECTS

<u>Facility</u>	<u>Agency</u>	<u>Location</u>	<u>Project Scopes and Status:</u>
Dimond Courthouse	DOA	Juneau	<p><i>Energy performance contract services with guaranteed energy savings were performed by Siemens.</i></p> <p><i>Construction was completed in 2006.</i></p> <p><i>Currently, Siemens is monitoring the energy improvements implemented during the construction work. They are nearing the end of their 3-year term of monitoring and guaranteed energy savings.</i></p>
Alaska Office Bldg	DOA	Juneau	
Court Plaza	DOA	Juneau	
Douglas Island Bldg	DOA	Juneau	
State Office Bldg	DOA	Juneau	
Aviation Bldg	DOTPF	Anchorage	
DOTPF Annex	DOTPF	Anchorage	
Public Safety Bldg	DPS	Anchorage	
Reported Annual Energy Savings		2,881,786 kWh 13,324 Therms 94,324 Gal Fuel Oil	
Reported Annual Avoided Cost		\$366,991	

Table 5: Energy Performance Contract – Phase I

<u>Facility</u>	<u>Agency</u>	<u>Location</u>	<u>Project Scopes and Status:</u>
Anchorage Correctional Center	DOC	Anchorage	<p><i>Energy performance contract services with guaranteed energy savings were performed by Siemens.</i></p> <p><i>Construction was completed in 2010.</i></p> <p><i>Currently, Siemens is monitoring the facility improvement measures that were put in place during the construction work. This is the first year of performance evaluations and the energy savings this year were greater than what was guaranteed.</i></p>
Hiland Mt. / Meadow Creek Correctional Center	DOC	Eagle River	
Spring Creek Correctional Center	DOC	Seward	
Wildwood Correctional Center	DOC	Kenai	
Fairbanks Correctional Center	DOC	Fairbanks	
Lemon Creek Correctional Center	DOC	Juneau	
Anvil Mt. Correctional Center	DOC	Nome	
Yukon Kuskokwim Correctional Center	DOC	Bethel	
Reported Annual Energy Savings		3,648,000 kWh 52,480 Therms 2,509 Gal Fuel Oil	
Reported Annual Avoided Cost		\$793,295	

Table 6: Energy Performance Contract – Phase II

4.2.2 INDIVIDUAL FACILITY ENERGY RETROFIT PROJECTS

The DOT&PF has also recently completed individual energy retrofit projects at the facilities shown in Table 7 below:

<u>Facility</u>	<u>Agency</u>	<u>Location</u>	<u>Project Scopes and Status:</u>
Anchorage Pioneer Home	DHSS	Anchorage	Energy efficiency lighting upgrade completed in 2010, including replacement of existing fluorescent lighting with energy efficient fluorescent lighting throughout the facility.
Mt. Edgecumbe H.S. Boys Dorm	DEED	Sitka	Energy efficiency lighting upgrade completed in 2010, including replacement of existing fluorescent lighting with energy efficient fluorescent and LED lighting throughout the facility.
Galena Snow Removal Equipment Bldg	DOT-NR	Galena	Energy efficiency upgrade completed in 2010, including upgrades of all lighting, heating, ventilation and building control systems throughout the facility.
Nome ARFF SREB	DOT-NR	Nome	Energy efficiency upgrades completed in 2009 including installation of lighting occupancy sensors and heating and ventilation upgrades.
Boney Courthouse	DOT-CR	Anchorage	Energy efficiency heating upgrade completed in 2008, including replacement of existing heating system with high-efficiency boilers.
ANC North Terminal	DOT-AIA	Anchorage	Energy efficiency lighting upgrade completed in 2008, including replacement of existing fluorescent lighting with energy efficient fluorescent lighting throughout the facility.

Table 7: Energy Retrofit Projects

5.0 RELATIONSHIPS WITH OTHER AGENCIES

The DOT&PF is coordinating with all state departments to collect data and utility information for state facilities over 10,000 square feet and to coordinate the energy retrofit projects at those facilities. The DOT&PF is also working closely with both the Alaska Housing Finance Corporation (AHFC) and Alaska Energy Authority (AEA); both close partners in the efforts to achieve the goals of SB220.

AHFC was the recipient of a \$40 million grant from the American Recovery and Reinvestment Act of 2009 (ARRA), of which \$10 million was allocated to energy efficiency upgrades in executive branch departments. AHFC has entered into a reimbursable services agreement with the DOT&PF for this amount. DOT&PF, with OMB's approval, has sub-allocated the ARRA funding based upon the square footage of building managed by a department.

Along with the ARRA funding, AHFC has created and will administer the Alaska Energy Efficiency Revolving Loan (AEERL) Fund Program. State agencies will be able to use the loan program to fund the energy efficiency retrofits. The loans are expected to be repaid by the savings the facility sees due to the improvements to the energy efficiency.

The DOT&PF is also working with the AEA to develop the method for prioritization of facilities for energy retrofits and to collect data for use in producing the Investment Grade Audits. SB 220 Section 46 requires the DOT&PF and AEA to work together to develop the method for prioritization of facilities.

AHFC, AEA and the DOT&PF are working together to gather data related to the energy efficiency of facilities throughout the state. AEA is primarily focused on private commercial and residential facilities, but will also be using the data the DOT&PF collects on state-owned facilities.

Both AEA's and AHFC's goal is to collect energy consumption data for facilities and residences throughout the state to determine total energy usage. The DOT&PF will assist in that effort by supplying the consumption data we collect for state-owned facilities.

APPENDIX A

FY 2009 Energy Use Data

FY 2010 Energy Use Data

Appendix A

DEPT	BUILDING NAME	LOCATION	BLDG TYPE	BLDG SQ. FT.	FY 2009 ANNUAL ENERGY DATA									NOTES / COMMENTS
					2009 ANNUAL ELEC ENERGY (kWh)	2009 ELEC ENERGY (MMBTUs)	2009 ELECTRICAL COSTS	2009 HEATING ENERGY (THERMS)	2009 HEATING ENERGY (MMBTUs)	2009 HEATING COSTS	2009 ENERGY COST	2009 TOTAL BLDG ENERGY (MMBTUS)	2009 ENERGY USE INTENSITY (KBTUs / Sq.Ft.)	
DOA	Atwood Bldg	Anchorage	Office	338,000	6,139,136	20,953	\$ 572,405	196,192	19,619	\$ 207,701	\$ 780,106	40,572	120.0	
DOA	Linny Pacillo Prking Garage (Atwood Bldg)	Anchorage	Parking Garage	220,000	875,840	2,989	\$ 70,718	34,339	3,434	\$ 66,674	\$ 137,392	6,423	29.2	
DOA	Palmer State Office Bldg	Palmer	Office	79,193	1,320,120	4,506	\$ 154,487	131,089	13,109	\$ 159,370	\$ 313,857	17,614	222.4	
DOA	Fairbanks Regional Office Bldg	Fairbanks	Office	92,942	942,400	3,216	\$ 145,232	29,806	2,981	\$ 21,887	\$ 167,119	6,197	66.7	
* DOA	State Office Bldg	Juneau	Office	287,850	7,721,300	26,353	\$ 845,475	206,110	20,611	\$ 305,112	\$ 1,150,587	46,964	163.2	
DOA	Community Bldg	Juneau	Office	22,400	170,320	581	\$ 18,988	12,468	1,247	\$ 18,325	\$ 37,313	1,828	81.6	
DOA	Public Safety Bldg	Juneau	Office	19,200	348,510	1,189	\$ 34,439	18,739	1,874	\$ 27,511	\$ 61,950	3,063	159.5	
DOA	Dimond Courthouse Bldg	Juneau	Office	77,000	1,175,280	4,011	\$ 128,988	148,237	14,824	\$ 238,268	\$ 367,256	18,835	244.6	
DOA	Douglas Island Bldg	Douglas	Office	41,980	468,920	1,600	\$ 49,100	25,061	2,506	\$ 37,865	\$ 86,965	4,106	97.8	
DOA	Museum	Juneau		29,420	419,920	1,433	\$ 40,406	33,230	3,323	\$ 52,287	\$ 92,693	4,756	161.7	
					-	-		-	-					
DOTPF-NR	Cantwell Garage	Cantwell	Service/Shop	9,180	126,720	432	\$ 18,607	15,250	1,525	\$ 25,917	\$ 44,524	1,957	213.2	
DOTPF-NR	Large Vehicle Warm Storage	Fairbanks	Service/Shop	18,000		-		15,065	1,507	\$ 21,354	\$ 21,354	1,507	83.7	
DOTPF-NR	Warm Storage	Nome	Service/Shop	12,140	52,180	178	\$ 18,239	10,596	1,060	\$ 45,512	\$ 63,751	1,238	102.0	
DOTPF-NR	Combined Facility	Tok		10,934	90,800	310	\$ 33,490	9,500	950	\$ 15,674	\$ 49,164	1,260	115.2	Missing Sept. 2009 electrical data
DOTPF-NR	Maintenance Facility	Tok	Service/Shop	9,600	176,240	602	\$ 64,583	20,078	2,008	\$ 34,225	\$ 98,808	2,609	271.8	Missing Sept. 2009 electrical data
					-	-		-	-					
DOTPF-CR	Annex Bldg	Anchorage	Office	24,240	188,920	645	\$ 18,701	8,438	844	\$ 8,317	\$ 27,018	1,489	61.4	
* DOTPF-CR	Anchorage Hwy Maintenance Shop	Anchorage	Service / Shop	24,000	275,587	941	\$ 38,619	40,711	4,071	\$ 38,967	\$ 77,586	5,012	208.8	
* DOTPF-CR	Anchorage Maintenance Shop / SEF	Anchorage	Service / Shop	21,350	301,440	1,029	\$ 40,825		-		\$ 40,825	1,029	48.2	Natural Gas shared between facilities
DOTPF-CR	Communication Bldg	Anchorage		12,432	423,040	1,444	\$ 53,562	11,903	1,190	\$ 11,652	\$ 65,214	2,634	211.9	
DOTPF-CR	Boney Courthouse	Anchorge	Office	169,293	1,768,000	6,034	\$ 158,208	85,626	8,563	\$ 81,496	\$ 239,704	14,597	86.2	
DOTPF-CR	Boney Parking Garage	Anchorage	Parking Garage	68,400	179,290	612	\$ 15,193	-	-	\$ -	\$ 15,193	612	8.9	
DOTPF-CR	Palmer Maintenance /SEF	Palmer	Service / Shop	12,600	197,241	673	\$ 25,973	28,608	2,861	\$ 27,539	\$ 53,512	3,534	280.5	
DOTPF-CR	Soldotna Maintenance/SEF	Soldotna	Service / Shop	24,885	274,360	936	\$ 47,978	22,002	2,200	\$ 21,460	\$ 69,438	3,137	126.0	
DOTPF-CR	Soldotna Sand Storage	Soldotna	Storage	18,175	21,800	74	\$ 6,017	10,826	1,083	\$ 9,881	\$ 15,898	1,157	63.7	
DOTPF-CR	Kenai Combined Facility	Kenai	Office	26,232	256,140	874	\$ 45,188	44,413	4,441	\$ 42,767	\$ 87,955	5,316	202.6	
DOTPF-CR	Kodiak Regional Office	Kodiak	Office	10,440	129,360	442	\$ 19,949	8,807	881	\$ 22,885	\$ 42,834	1,322	126.6	
DOTPF-CR	Kodiak Combined Facility (State Court/Office)	Kodiak	Office	13,400	96,720	330	\$ 15,004	8,615	862	\$ 22,496	\$ 37,500	1,192	88.9	
* DOTPF-CR	Adak Maintenance / SEF	Adak	Service / Shop	17,000		-		21,237	2,124	\$ 54,145	\$ 54,145	2,124	124.9	Missing some months of utility data
					-	-		-	-					
DOL	AVTEC First Lake Facility Admin Bldg	Seward	Office	20,000	291,900	996	\$ 69,978	13,936	1,394	\$ 23,030	\$ 93,008	2,390	119.5	
DOL	AVTEC Student Service Center (5 Bldgs)	Seward		86,078	872,600	2,978	\$ 135,429	72,852	7,285	\$ 134,052	\$ 269,481	10,263	119.2	
DOL	AVTEC Auto / Hvy Equipment Shop	Seward	Service/Shop	30,278	198,240	677	\$ 36,596	12,473	1,247	\$ 22,367	\$ 58,963	1,924	63.5	
					-	-		-	-			-		
SUBTOTALS				2,039,515	25,502,324	87,039	\$ 2,922,377	1,296,207	129,621	\$ 1,798,736	\$ 4,721,113	216,660		

Appendix A

DEPT	BUILDING NAME	LOCATION	BLDG TYPE	BLDG SQ. FT.	FY 2010 ANNUAL ENERGY DATA										NOTES / COMMENTS
					2010 ANNUAL ELEC ENERGY (kWh)	2010 ELEC ENERGY (MMBtus)	2010 ELECTRICAL COSTS	2010 HEATING ENERGY (THERMS)	2010 HEATING ENERGY (MMBtus)	2010 HEATING COSTS	2010 ENERGY COST	2010 ENERGY COST \$ / SQ. FT. PER SQ. FT.	2010 TOTAL BLDG ENERGY (MMBTUS)	2010 ENERGY USE INTENSITY (KBTUs / Sq.Ft.)	
DOA	Atwood Bldg	Anchorage	Office	338,000	5,767,170	19,683	\$ 610,484	113,141	11,314	\$ 113,420	\$ 723,904	\$ 2.14	30,997	91.7	
DOA	Linny Pacillo Prking Garage (Atwood Bldg)	Anchorage	Parking Garage	220,000	1,062,720	3,627	\$ 100,441	35,103	3,510	\$ 62,446	\$ 162,887	\$ 0.48	7,137	32.4	
DOA	Palmer State Office Bldg	Palmer	Office	79,193	869,680	2,968	\$ 102,174	62,926	6,293	\$ 67,543	\$ 169,717	\$ 0.50	9,261	116.9	
DOA	Fairbanks Regional Office Bldg	Fairbanks	Office	92,942	973,040	3,321	\$ 162,092	26,128	2,613	\$ 25,057	\$ 187,149	\$ 0.55	5,934	63.8	
* DOA	State Office Bldg	Juneau	Office	287,850	7,388,300	25,216	\$ 702,688	176,337	17,634	\$ 305,980	\$ 1,008,668	\$ 2.98	42,850	148.9	
DOA	Community Bldg	Juneau	Office	22,400	171,200	584	\$ 13,994	8,101	810	\$ 27,580	\$ 41,574	\$ 0.12	1,394	62.3	
DOA	Public Safety Bldg	Juneau	Office	19,200	331,400	1,131	\$ 23,168	18,914	1,891	\$ 35,009	\$ 58,177	\$ 0.17	3,022	157.4	
DOA	Dimond Courthouse Bldg	Juneau	Office	77,000	1,219,920	4,164	\$ 97,003	125,838	12,584	\$ 214,181	\$ 311,184	\$ 0.92	16,747	217.5	
DOA	Douglas Island Bldg	Douglas	Office	41,980	469,760	1,603	\$ 34,703	21,338	2,134	\$ 41,370	\$ 76,073	\$ 0.23	3,737	89.0	
DOA	Museum	Juneau		29,420	417,628	1,425	\$ 28,028	34,663	3,466	\$ 57,557	\$ 85,585	\$ 0.25	4,892	166.3	
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DOTPF-NR	Cantwell Garage	Cantwell	Service/Shop	9,180	129,000	440	\$ 23,060	11,558	1,156	\$ 21,799	\$ 44,859	\$ 0.13	1,596	173.9	
DOTPF-NR	Large Vehicle Warm Storage	Fairbanks	Service/Shop	18,000	-	-	\$ -	7,813	781	\$ 14,402	\$ 14,402	\$ 0.04	781	43.4	
DOTPF-NR	Warm Storage	Nome	Service/Shop	12,140	68,500	234	\$ 23,455	9,063	906	\$ 29,393	\$ 52,848	\$ 0.16	1,140	93.9	
DOTPF-NR	Combined Facility	Tok		10,934		-		6,594	659	\$ 12,350	\$ 12,350	\$ 0.04	659	60.3	Missing Sept. 2009 electrical data
DOTPF-NR	Maintenance Facility	Tok	Service/Shop	9,600		-		18,074	1,807	\$ 34,010	\$ 34,010	\$ 0.10	1,807	188.3	Missing Sept. 2009 electrical data
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DOTPF-CR	Annex Bldg	Anchorage	Office	24,240	190,520	650	\$ 21,904	7,150	715	\$ 6,766	\$ 28,670	\$ 0.08	1,365	56.3	
* DOTPF-CR	Anchorage Hwy Maintenance Shop	Anchorage	Service / Shop	24,000	245,429	838	\$ 31,296	37,525	3,753	\$ 35,246	\$ 66,542	\$ 0.20	4,590	191.3	
* DOTPF-CR	Anchorage Maintenance Shop / SEF	Anchorage	Service / Shop	21,350	288,960	986	\$ 34,270		-	\$ 34,270	\$ 34,270	\$ 0.10	986	46.2	Natural Gas shared between facilities
DOTPF-CR	Communication Bldg	Anchorage		12,432	442,680	1,511	\$ 47,188	10,778	1,078	\$ 10,210	\$ 57,398	\$ 0.17	2,589	208.2	
DOTPF-CR	Boney Courthouse	Anchorage	Office	169,293	1,755,420	5,991	\$ 181,137	71,844	7,184	\$ 64,854	\$ 245,991	\$ 0.73	13,176	77.8	
DOTPF-CR	Boney Parking Garage	Anchorage	Parking Garage	68,400	181,102	618	\$ 17,981	-	-	\$ -	\$ 17,981	\$ 0.05	618	9.0	
DOTPF-CR	Palmer Maintenance /SEF	Palmer	Service / Shop	12,600	187,270	639	\$ 20,292	28,111	2,811	\$ 26,173	\$ 46,465	\$ 0.14	3,450	273.8	
DOTPF-CR	Soldotna Maintenance/SEF	Soldotna	Service / Shop	24,885	263,920	901	\$ 39,762	25,769	2,577	\$ 23,825	\$ 63,587	\$ 0.19	3,478	139.7	
DOTPF-CR	Soldotna Sand Storage	Soldotna	Storage	18,175	21,200	72	\$ 3,901	11,566	1,157	\$ 10,812	\$ 14,713	\$ 0.04	1,229	67.6	
DOTPF-CR	Kenai Combined Facility	Kenai	Office	26,232	266,490	910	\$ 39,951	26,788	2,679	\$ 13,319	\$ 53,270	\$ 0.16	3,588	136.8	
DOTPF-CR	Kodiak Regional Office	Kodiak	Office	10,440	132,460	452	\$ 19,851	8,142	814	\$ 20,604	\$ 40,455	\$ 0.12	1,266	121.3	
DOTPF-CR	Kodiak Combined Facility (State Court/Office)	Kodiak	Office	13,400	95,640	326	\$ 14,367	8,179	818	\$ 20,746	\$ 35,113	\$ 0.10	1,144	85.4	
* DOTPF-CR	Adak Maintenance / SEF	Adak	Service / Shop	17,000		-		21,237	2,124	\$ 54,145	\$ 54,145	\$ 0.16	2,124	124.9	Missing some months of utility data
					-	-			-		\$ -		-		
DOL	AVTEC First Lake Facility Admin Bldg	Seward	Office	20,000	289,800	989	\$ 70,397	13,134	1,313	\$ 25,665	\$ 96,062	\$ 0.28	2,302	115.1	
DOL	AVTEC Student Service Center (5 Bldgs)	Seward		86,078	892,200	3,045	\$ 129,258	65,183	6,518	\$ 131,202	\$ 260,460	\$ 0.77	9,563	111.1	
DOL	AVTEC Auto / Hvy Equipment Shop	Seward	Service/Shop	30,278	172,560	589	\$ 32,056	14,711	1,471	\$ 20,122	\$ 52,178	\$ 0.15	2,060	68.0	
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SUBTOTALS				2,039,515	24,311,633	82,976	\$ 2,633,196	1,026,944	102,694	\$ 1,531,661	\$ 4,164,857	\$ 12	185,670	91.0	