SB 220 ALASKA SUSTAINABLE ENERGY ACT



DEPARTMENT OF TRANSPORTATION & PUBLIC

AND



2011 PROGRESS REPORT

Submitted January 2012

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 coordinating with the Alaska Housing Finance Corporation (AHFC), The Office of Management and Budget (OMB), and all State Agencies on the input of utility and building information into the Alaska Retrofit Information System (ARIS), an internet based platform. ARIS will be used by all State Agencies to collect and store energy consumption and cost data in order to determine facility energy usage and prioritization.

The DOT&PF has contracted with three Energy Service Companies (ESCOs) in a three-year term agreement to execute energy efficiency projects.

Initial funding of approximately \$10M for energy efficiency retrofit projects comes from federal grant funding through the American Recovery and Reinvestment Act (ARRA). All of those funds have been committed to projects through the ESCO term agreement. The ARRA funds expire March 31, 2012 and current DOT&PF efforts are prioritized toward completion of these ARRA funded projects before the funding expiration deadline. The ARRA funded projects include 28 facilities and the projected annual energy savings is over \$315,000.

The DOT&PF is also encouraging the funding of the future energy retrofit projects through the Alaska Energy Efficiency Revolving Loan Fund Program administered by the Alaska Housing Finance Corporation.

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1.0 INTRODUCTION

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 2011 and prior.

Utility Information for FY09 and FY10 for most buildings over 10,000 SF has been obtained from individual State Agencies by the DOT&PF. This information is being used to generate Energy Use Indexes (EUI) for the prioritization facility energy efficiency retrofit projects.

In 2010, DOT&PF was the recipient of a \$10 million grant of ARRA funds through AHFC. That funding was split up between all State Agencies that own or maintain public facilities. This year, DOT&PF used the Energy Performance Term Agreement to advertise and construct five (5) projects that include 28 public facilities and 12 State Agencies. The projects included the requirement to produce an Investment Grade Energy Audits and Energy Service Proposals for implementation of energy efficiency improvements.

With the success of the ARRA funded projects, State Agencies have expressed interest in performing more projects that will save their facilities energy. The DOT&PF is making agencies aware of the Alaska Energy Efficiency Revolving Loan Fund program through AHFC. Six agencies have expressed interest in using the Loan Fund to finance their projects, while others will be using deferred maintenance funds.

Subsequent sections of this report will provide details about the term agreement with three Energy Services companies, work being performed with ARRA grant funds, current and past construction projects focusing on energy efficiency, the ARIS program that is being used to collect utility data, Energy Use Indices, and the DOT&PF's coordination with other agencies.

2.0 PROGRESS OF ENERGY EFFICIENCY RETROFIT PROJECTS

2.1 ENERGY SERVICES COMPANIES TERM AGREEMENTS

A Request for Proposal (RFP) for a term agreement with up to three Energy Service Companies (ESCOs) was advertised in October 2010 and selection of qualified ESCOs was made in January 2011. The three ESCOs selected are: Ameresco Federal Solutions, Inc., Honeywell International, Inc., and Siemens Industry, Inc. Contracts were executed in March 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 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.

2.2 ACTIVE AND COMPLETED PROJECTS (2011)

2.2.1. AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) FUNDED PROJECTS

In October 2010, the DOT&PF received a \$10 million in ARRA grant funding from the Alaska Housing Finance Corporation (AHFC) for energy efficiency improvements in State facilities. Current DOT&PF efforts are prioritized toward completion of these ARRA funded projects before the funding expiration deadline of March 31, 2012.

Sub-allocation of ARRA funding amongst State Agencies was done by the Office of Management and Budget (OMB), based upon square footage of agency owned buildings. The ARRA funded projects involve work in 28 State facilities with construction of energy efficiency improvements taking place in 25 of those facilities. Selection of facilities was based on energy usage, conditions of facility systems, and geographic considerations. Some facilities included are under the 10,000 sq. ft. threshold.

In March 2011 through July 2011, five Requests for Proposals (RFPs) were issued through the ESCO term agreement, resulting in twelve individual contracts (one contract per State Agency) to execute and accomplish this work.

Beyond the five RFPs through the ESCO term agreement, the Department of Health and Social Services (DHSS) is using ARRA funds for the Johnson Youth Center renovation and ground source heat pump installation under a separate construction contract.

The current overall projected monetized annual energy savings for the ARRA funded projects is over \$315,000 per year. Projected annual energy savings of the project are¹:

- 59,979 Therms of natural gas
- 1,210,500 kWh of electricity
- 19,360 Gallons of Fuel oil
- Over 1,600 tons of carbon dioxide (CO2)

The facilities included in the ARRA funded projects and their associated project information is summarized in the following Table 1.

DOTPF PJ #	Contractor	State Agency	City	Facility	GSF	Projected Annual Energy Savings \$ ²
83083-A	Siemens	DOC	Juneau	Lemon Creek Correctional Laundry	9,066	\$9,024
			Ketchikan	Ketchikan Correctional	18,092	\$12,766
		DEED	Sitka	MEHS Bldg 1331 Gym	53,826	\$4,873
				Sheldon Jackson Museum	6,500	\$3,447
		DOTPF-SR	Juneau	7-Mile Facility	53,700	\$35,128
				AMHS Maintenance Bldg	5,000	\$2,682
			Sitka	Sitka State & City Office	28,138	\$4,584
			Ketchikan	Ketchikan State Court & Office	36,218	\$8,371

83080-B	Ameresco	DOTPF-CR Anchorag		Communications Bldg	12,432	\$15,143
			Palmer	Palmer Maintenance Bldg	12,600	\$25,839
		DOL-AVTEC	Seward	First Lake Facility	20,000	\$32,576
				Student Services Center	30,926	3
				Applied Technology Bldg	30,279	2
		DNR	Palmer	Forestry Admin Bldg	15,678	\$3,234
		Forestry Warehouse		Forestry Warehouse	18,000	\$4,561
				Forestry Hanger	15,000	\$7,442
		DFG	Cordova	Admin Bldg	3,920	\$5,877
				Bunkhouse	3,876	\$3,493
83080-C	Siemens	DOTPF-NR	Fairbanks	Peger Road HQ	21,900	\$53,899
		DPS	Coldfoot	Cold Foot Hanger	4,053	\$4,894

¹ Projected energy savings data provided from Investment Grade Energy Audits for each respective ESCO.

 ² Projected energy dollar savings data provided from Investment Grade Energy Audits for each respective ESCO.
 ³ Investment Grade Energy Audit was completed; however implementation/construction not being done with ARRA funds.

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			Fairbanks	AST Fairbanks Bldg		35,352	2
		DMVA	JBER	Anchorage Armory		210,283	\$32,219
				Combined Support Maint.	Bldg	70,000	2
83080-D	Siemens	DOA	Anchorage	Atwood Bldg		338,000	\$22,742
			Juneau	Community Bldg		22,400	\$7,832
83080-E	Ameresco	DHSS	Anchorage	McLaughlin Youth Center		60,705	In-progress
				Assets Bldg		24,310	In-progress
	Cornerstone		Juneau	Johnson Youth Center Ren	ovations	13,363 ⁴	\$15 <i>,</i> 183 ⁵
				& Ground Source Heat Pur	np		
Table	1: Current AR	RA funded pro	ojects		TOTAL		\$315,809

 ⁴ Building square footage is pre-renovation.
 ⁵ Johnson Youth Center Project design team estimate of energy savings.

2.2.2 COMPLETED ENERGY EFFICIENCY PROJECTS (FY06 – FY11)

Completed energy retrofit projects include two energy performance contracts performed across multiple facilities (described in the January 2011 report to the Legislature) as well as other individual State Agency energy efficiency retrofit projects.

ENERGY PERFORMANCE CONTRACT PROJECTS

The DOT&PF has completed construction of two phases of energy performance contracts at state facilities. Phase I, including DOT&PF and DOA facilities, completed its last year of Measurement and Verification services (M&V) in 2010. Phase II included DOC facilities.

The DOC facilities and the reported annual monetary energy savings for the second year of M&V services are shown in the following Table 2.

Agency	Facility	Location	Project Scopes and Status:
DOC	Anchorage Correctional Center	Anchorage	
	Hiland Mt. / Meadow Creek	Eagle River	Energy performance contract services
	Correctional Center		with guaranteed energy savings were
	Spring Creek Correctional Center	Seward	performed by Siemens.
	Wildwood Correctional Center	Kenai	
	Fairbanks Correctional Center	Fairbanks	Construction was completed in 2010.
	Lemon Creek Correctional Center	Juneau	
	Anvil Mt. Correctional Center	Nome	Currently, Siemens is monitoring the
	Yukon Kuskokwim Correctional	Bethel	facility improvement measures that
	Center		were put in place during the
	Reported Annual Energy Savings	3,556,556 kWh	construction work. This is the second
		38,173 Therms	year of performance evaluations and
		66,294 Gal Fuel	the energy savings this year exceeded
		Oil	what was guaranteed.
	Reported Annual Avoided Cost	\$948,628	1

Table 2: Energy Performance Contract – Phase II – Updated Energy Savings Reported from FY2010

INDIVIDUAL FACILITY ENERGY RETROFIT PROJECTS

State Agencies have also recently completed individual energy retrofit projects at the facilities shown in Table 3 below:

Agency	Facility	Location	Project Scopes and Statuses:
DHSS	Fairbanks Youth Facility	Fairbanks	Energy efficiency lighting upgrade completed in 2010, including replacement of existing fluorescent lighting with energy efficient fluorescent lighting throughout the facility. 32.6% reduction in usage. Payback 8 yrs.
DOC	Fairbanks Correctional Center	Fairbanks	Energy Efficient Boiler Upgrade including steam to hydronic conversion and fuel oil to natural gas conversion. Reduction in heating energy consumption. Completed in 2011.
DOA	Alaska Office Building	Juneau	Installation of new hallway light fixtures and emergency lights.

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system.	DOT	Montana Creek Station	Montana Creek	Installation of waste heat reclamation
	201			system.

DOT	Nome State Office Building	Nome	Installation of supplemental hydronic heat loop, which focuses heat to the extremities of the building without overheating the core.
DOT	Jim River Shop	Jim River	Energy efficient lighting upgrade
DOT	Central Station	Central	Upgraded heating system to
			boiler/hydronic system.
DOT	Nenana Station	Nenana	Upgrades heating system to
			boiler/hydronic system
DOT	Tazlina Station	Tazlina	Upgraded electrical service
DOT	Ernestine Station	Ernestine	Upgraded electrical service
DOT	Thompson Pass Station Old Shop	Thompson Pass	Energy efficient boiler upgrade.
DOT	Eagle Station Shop	Eagle	New roof with upgraded insulation
DOT	Peger SEF Shop	Fairbanks	New roof with upgraded insulation
DOT	Nelchina Station Shop	Nelchina	New roof increasing R-value

Table 3: Energy Retrofit Projects

3.0 ENERGY CONSUMPTION AND COST DATA COLLECTION

The Office of Management and Budget (OMB) has coordinated with the AHFC and the DOT&PF in the development of a standard methodology and software platform to collect energy consumption and expense data for state facilities. The Alaska Retrofit Information System (ARIS) was beta tested for most of the year, was released in Fall 2011, and made available for use by State Agencies in October 2011.

3.1 METHODOLOGIES OF UTILITY DATA COLLECTION

OMB has directed that each State Agency designate personnel to input facility energy consumption and cost information into ARIS. To date, eight State Agencies have designated users for the system and those users have been assigned usernames and passwords. Agencies are beginning to input utility information into ARIS.

In the future, ARIS will be able to generate reports that will be used to see the energy usage for individual facilities, for individual agencies, and for the State as a whole. As of now, they are working on that programming.

3.2 CURRENT CONSUMPTION AND COST

With the focus on getting ARIS online and accessible to all State Agencies, DOT&PF did not collect utility data from other agencies for FY11. Individual agencies will be responsible for entering the utility consumption and cost data for their respective facilities into the ARIS system.

The DOT&PF anticipates being able to use ARIS to give a report and analysis of energy consumption and cost in 2012, using the ARIS program.

3.3 ENERGY USE INDEXES (EUIS)

To determine current energy use of state facilities (over 10,000 square feet), the Energy Use Index (EUI) is generated, which assists 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 4 shows typical units for measuring the energy consumption.

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

Table 4: Typical Energy Units

3.4 PROJECT PRIORITIZATION

The current method of determining project prioritization is to establish baseline EUIs using the most recent years of utility data, and to sort the facilities beginning by the least energy efficient. It is expected that the ARIS program will be able to assist in generating EUIs.

Priority will be given to facilities that are least energy efficient. However 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 COORDINATION WITH OTHER AGENCIES

The DOT&PF has continued to work 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.

The DOT&PF is coordinating with AFHC and all state agencies in the efforts to input State facility data and utility information into the ARIS site and to coordinate the energy retrofit projects at those facilities.

AHFC has created and administering the Alaska Energy Efficiency Revolving Loan (AEERL) Fund Program. State agencies may 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.

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 public, commercial and residential facilities throughout the state to determine the State's total energy usage. The DOT&PF will assist in that effort by supplying the consumption data that the State Agencies collect for state-owned facilities.

APPENDIX

ARRA Project Spreadsheet Summary ARIS AHFC Tutorial

83080: STATE ARRA FUNDED ENERGY EFFICIENCY PROJECTS

UPDATED: 1	1/18/2011
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Project No.	Building	CO2 Reduction	Projected Total Energy Savings	Project Cost	Simple Payback	Paid Invoices /	Pending	Total	Percent	Contract		IGA		Implementation Contract	Anticipated Substantional Completion	Anticipated Final Completion	
i iojectivo.	Serieing	(Tons)	(\$)	(\$)	(Years)	Expenses	Invoices	Expenses	Spent	Method	Contractor	Complete	Current Phase	Executed	Date	Date	Notes
														Date			
83080-A	7-Mile Facility	103.1	\$ 35,128	\$ 470,217	13					PC	Siemens	Complete	Implementation	9/28/2011	1/5/2012		Design and Construction in progress
	AMHS Maint Bldg	16	\$ 2,682	\$ 61,894	23										1/26/2012	3/16/2012	
	Sitka State & City Office	36.8	\$ 4,584	\$ 168,372	37										12/29/2011	-, -, -	
	Ketchikan State Court & Office	36	\$ 8,371	\$ 505,755	60			A							2/2/2012		
		SUB-AGREEM	ENT: 83080-A DOTPF SR	\$ 1,275,319	<-Contract Value	\$ 175,516		\$ 175,516	14%								
83080-4	Ketchikan Correctional Center	58.6	\$ 12.766	\$ 286 356	22				1	PC	Siemens	Complete	Implementation	9/28/2011	12/15/2011		Design and Construction in progress
05000 //	Lemon Creek Correctional Laundry	41.8	\$ 9.024	\$ 2.227.212	247					10	Siemens	complete	implementation	5/20/2011	3/22/2012	3/15/2012	besign and construction in progress
	SUB-AGRE	EMENT: 83080-A D	OC (ARRA Portion Only)	\$ 1,195,369	<-Contract Value	\$ 405,913		\$ 405,913	34%						-, , -		
			·····														
83080-A	MEHS Gymnasium Bldg	38.3	\$ 4,873	\$ 188,192	38.61933101					PC	Siemens	Complete	Implementation	9/28/2011	12/30/2011	3/15/2012	Design and Construction in progress
	Sitka SJ Muesum	24.9	\$ 3,447	\$ 126,339	36.65187119										1/27/2012	5/15/2012	
		SUB-AGRE	EEMENT: 83080-A DEED	\$ 334,950	<-Contract Value	\$ 68,019		\$ 68,019	20%								
83080 B	Delman Vakiele Maintenenes Cher	177.4	¢ 25.820	ć 740 F09	20					DC	A	Final Draft					Final ICAR FCD Deviewed and Detware date American
83080-B	Communications RIdg	1/7.4	\$ 25,839 \$ 15.142	\$ 749,598 \$ 417,700	29					PC	Ameresco	Final Drait	IGAGESP				Awaiting final IGA from Amorosco
	communications blug	SUB-AGREEME	ENT: 83080-B DOTEC C	\$ 1 275 292	This is the anticipate	ed Sub-Aareem	ent Amount	Ś	0%								
		JOD AGREEME		↓ 1,273,252	This is the unticipate		cheranoune	Ŷ	0,0								
83080-B	First Lake Facility		\$ 32,576	\$ 337,208	10					PC	Ameresco	Complete	Implementation	11/7/2011	2/8/2011	2/15/2012	Design and Construction in progress
		SUB-AGREEMEN	T: 83080-B AVTEC	\$ 334,950	<-Contract Value		\$ 70,836	\$ 70,836	21%		-		-		·		
83080-B	Cordova Administration Bldg		\$ 5,877	\$ 216,427	37					PC	Ameresco	Complete	Implementation	10/17/2011	11/3/2011	2/15/2012	Construction in Progress
	Cordova Bunkhouse		\$ 3,493	\$ 116,260	33										12/5/2012		
		SUB-AGRE	EEMENT: 83080-B DF&G	\$ 323,441	<-Contract Value		\$ 187,103	\$ 187,103	58%								
83080-B	Forestry Palmer Admin Bldg	21.9	\$ 3,234	\$ 95,514	30					PC	Ameresco	Complete	IGA&ESP	11/16/2011	12/29/2011		Design and Construction in progress
	Forestry Palmer Warehouse Bldg	22.2	\$ 4,561	\$ 75,784	17										1/11/2012	2/15/2012	
	Forestry Palmer Hanger	50.3	\$ 7,442	\$ 148,094	20										1/10/2012		
		SUB-AGR	REEMENT: 83080-B DNR	\$ 334,950	<-Contract Value		\$ 32,413	\$ 32,413	10%								
83080-C	Peger Road HO Bldg	242.2	\$ 53,899	\$ 1 263 791	23					PC	Siemens	Complete	Implementation	11/14/2011	2/29/2012	3/31/2012	Contract Execution in Progress
		SUB-AGREEME	ENT: 83080-C DOTPF NR	\$ 1,274,413	<-Contract Value		\$ 367,951	\$ 367,951	29%				P		_, _=, _===	-,,	
				· · · ·			. ,	. ,									
83080-C	Coldfoot Hanger	16.4	\$ 4,894	\$ 322,099	66					PC	Siemens	Complete	Implementation	11/14/2011	2/29/2012	3/31/2012	Contract Execution in Progress
		SUB-AGI	REEMENT: 83080-C DPS	\$ 333,535	<-Contract Value			\$-	0%								
		-	-	-							-	-	_				
83080-C	Anchorage Armory	0	\$ 32,219	\$ 570,490	18					PC	Siemens	Complete	Implementation	11/14/2011	2/29/2012	3/31/2012	Contract Execution in Progress
	CSMS Bldg		\$ -	\$ 8,907	0			4									
		SUB-AGREE	EMENT: 83080-C DMVA	\$ 669,123	<-Contract Value		Ş 253,882	\$ 253,882	38%								
92090 D	Atwood Bldg	155	¢ 22.742	¢ 786.020	25					PC	Siomons	05%	ICA8ESD				95% ICA received and in review
83080-0	Community Bldg	53.3	\$ 7.832	\$ 192 533	25					FC	Siemens	3378	IGAGLSF				Juneau Community Bldg Lighting Ungrades to be State Funded
	SUB-AGREE	MENT: 83080-D D	OA (ARRA Portion Only)	\$ 956,370	This is the anticipate	ed Sub-Agreeme	ent Amount	\$ -	0%								
							,										
83080-E	Assets Bldg									D/B	Ameresco	N/A	Implementation	10/12/2011			Design and Construction in progress
	McLaughlin Youth Center																
		SUB-AGRE	EEMENT: 83080-D DHSS	\$ 331,270	<-Contract Value		\$ 56,184	\$ 56,184	17%								
Separate Contract	Johnson Youth Center		\$ 15.183	Ś 820.000	54		\$ 100.000	\$ 100.000		CM/GC	Cornerstone	N/A	Construction			3/31/2012	Construction in Progress.
							,			,		.,				., . ,	

CONTRACT TOTALS	1,199	\$	315,809	\$	9,458,983	\$	649,448	\$ 1,068,368	\$ 1,71	7,816
-										
DOT&PF CONTRACTS/TRAVEL/ADMIN				\$	86,500				\$ 1	3,183
DOT&PF ICAP:				\$	353,601				\$	-
TOTAL COMMITTED:				\$	9,899,084					
TOTAL PROGRAM FUNDED:				\$	9,958,000					
CURRENT UNCOMMITTED:				\$	58,916					
(For potential additional Contract sums, ICAP, AKWarm entry	y from ESCOs, Proj	ect Hidden Co	nditions, Et	c.)						
					-					
TOTAL CURRENT EXPENSES:										
(Including invoices paid and received invoices pending paym	ent)								\$ 1,73	0,999

PC:	Energy Performance Contract
D/B:	Design Build
CM/CG:	Construction Manager / General Contractor
ICAP:	Indirect Cost Allocation
IGA&ESP:	Investment Grade Audit & Energy Services Proposa



ARIS Commercial User Tutorial

Alaska Retrofit Information System (ARIS)

The following tutorial has been put together for State Users who will be responsible for entering and tracking State Facility Energy Usage.

Table of Contents:

Section 1: General Over View	2
Log in	2
Commercial Home	2
Commercial REAL Form	3
Upload	5
Change Password	5
Log Out	5
Section 2: How to Enter a New Building	6
Section 3: Search and Editing Existing Building Files	11

Section 1 General Over View

This section will provide a general overview of ARIS Web. **Clarification: All Images relate to the text directly above them**

a) Log In: Go to: <u>https://www.akrebate.com/Login.aspx</u> and enter your user name and password.

Alaska Housing FINANCE CORPORATION	/eb
UserName: Password: Login	Login
	Admin Contact Information ** webmaster@akrebate.com

b) Commercial Home: This will automatically bring you to the Commercial home page (Screen Shot below). So enter a building or edit a previously entered building, click in the "REAL Form" tab.

Alaska Housing	ARIS W	/eb			
	Commercial Home	REAL Form	Upload	Change Password	Logout
Welcome to ARIS Web.		T			

c) Commercial REAL Form: This form will appear below with several other boxes. Form may take a few moments to load. The bottom portion of this page is the actual REAL Form.

Alaska							
HOUSING PRIVANCE CORPORATION Commercial Home	Web REAL Form Upload	Change Pas	ssword Logout				5.1
Commercial Real Form							
Facility Owner:	<u> </u>	Owner	Building Name	Date	Building Usage	Owner Type	
Building		Alaska					
Ruildine Usaea		School	Boardroom Building	5/5/2011	Education - K - 12	Attendance Area	
Eacility is owned		District					
All	~~	Alaska					
Duilding Information Chergy Usage						Create Maria	
- Building Information				Generat	e Akwarm Pile	Create New Save	
Facility Owner:					Date:]	
Building Name/Identifier:				Facili	ty Street:		
Community Population:				Fac	ility City:		
Building Usage:			~	Fa	cility Zip:		
Facility is owned by:			~				
First Name	7		Middle Name				
Last Name:			E-mail				
	_			Add Pr	tone Number		-
Mailing Address 1:							
Mailing Address 2:							
State: AK 🗸							
City:	7		Zip				
C Building Specs	_						
Building Square			Vear Built				
Footage:			Tear Duitt.				
Building Type:	¥						
- Major Renovations							_
					L	Add Renovation	
Date	Ken	lovation					
C Operations							
5 16							~
<							>

On the REAL Form page, there are several other components to note:

The Apply Filter Box – This box allows you to search for and open previously entered buildings. Allowing you to filter buildings by:

- Facility Owner
- Building Name/Identifier
- Building Usage

Alaska Housing RELACE CONVOLUTION	Veb					5.1
Commercial Home	REAL Form Upload	Change Passw	ord Logout			
Commercial Real Form						
Facility Owner:	<u> </u>	Owner B	uilding Name	Date	Building Usage	OwnerType 🚔
Building Name/Identifier: Building Usage: All	E	Alaska Gateway School District	oardroom Building	5/5/2011	Education - K - 12	Regional Education Attendance Area
All	<u>~</u> <u>~</u>	Alaska				✓
		<u>,</u>				
C Building Information			(Generate	e Akwarm File	Create New Save
Facility Owner:					Date:	

A List of previously entered buildings – This list will show buildings that have previously been entered into ARIS. Depending on your permissions, you may see buildings that have been entered by other State entities. Buildings will show up in columns by:

- Owner
- Building Name
- Date (This date is the date the file was created)
- Building Usage
- Owner Type

Alaska Housing RARIS Web					5.1
Commercial Home REAL Form Uplo	ad Change Pa	ssword Logout			
Commercial Real Form					
Facility Owner:	Owner	Building Name	Date	Building Usage	Owner Type 🔒
Building Name/Identifier: Building Usage: All	Alaska Gateway School District	Boardroom Building	5/5/2011	Education - K - 12	Regional Education Attendance Area
All	Alaska				×
Publics Toformation Economic lines					
belong anomation chargy bage			Generat	e Akwarm File	Create New Save
Facility Owner:				Date:	

d) Upload

If you have been entering all of your data into the ARIS Excel form, you can upload the files here.



e) Change Password

To change your password, you will be prompted for your old password and then asked to enter your new password twice.

Alaska Housing FINANCE CORPORATION	/eb				5.1
Commercial Home	REAL Form	Upload	Change Password	Logout	
Old Password:	ange Passwo	ord			
New Password: Repeat Password:					
	hange Passwor	d			

f) Log Out

To log out, click the log out tab and you will be logged out of the system and redirect you to the log in page shown above. The system automatically logs you out after a period of inactivity, so be sure to save your entries before you start a new project.

Section 2 How to Enter a New Building

This next section will walk you though how to enter in a new building. When entering a new building, the boxes above the "Building Information" and "Fuel Usage" tabs can be ignored.

Step 1: Start with a bank REAL Form

If information appears from an existing building search, this can be cleared by clicking the "REAL Form" tab to refresh the page, or by clicking the "Create New."

Alaska Housing						
Commercial Home	Change Password Log	out				5
mmercial Real Form						
:ility Owner:	Owner	Building Name	Date	Building Usage	Owner Type	
Iding Name/Identifier:	Alaska Gateway School District	Boardroom Building	5/5/2011	Education - K - 12	Regional Education Attendance Area	
ility is owned by: All	Alaska Gateway School District	District Wide Storage	5/5/2011	Education - K - 12	Regional Education Attendance Area	
oppy rinter	Alaska Gateway	Dot Lake School	5/5/2011	Education - K - 12	Regional Education	*
reating New Building Building Information Facility Owner: Building Name/Identifier: Community Population: Building Usage: Facility is owned by: Contact First Name: Last Name:	<u>v</u>	Middle Name: E-mail:	Facility Facilit Facili Add Phon	Cenerate Www.m.File Date: Date	Creste New Save	
Mailing Address 1: Mailing Address 2: State: AK M City: Building Specs Building Square Footage:		Zip: Vear Built:				
Building Type:					Add Renovation	
Date	Renovation					

Step 2: Entering Building Information

Enter general building information into the blank fields provided. Please note the following:

- For future searching purposes, it will be important to enter correct building names and uses. Use drop down menus where provided.
- Under Major renovations and operations, you will need to hit the "Add" button to add fields if you have numerous renovations or days with varying operational hours/occupants.
- For purposes of this tutorial, we will be using the Kenny Lake K-12 Facility as an example building. *Confidential data and information have been hidden in these examples.*

Alaska Housing FRUNCE CORPORATION ARIS Web					5.
Commercial Home REAL Form Upload	Change Password	Logout			
Commercial Real Form					
Facility Owner: copper river	Owner	Building Name	Date	Building Usage	Owner Type
Building Name/Identifier:	Copper River School	Chistochina	2/2/2011	Education - K -	Regional Education Attendance
Building Usage: All	Copper River School			12 Education - K -	Area Regional Education Attendance
Apply Filter	District	Copper Center	2/2/2011	12	Area
	Copper River School	District Office	2/2/2011	Office	Regional Education Attendance
Building Information Energy Usage			_		
C Building Information				Generate Akwarm	File Create New Save
Facility Owner: Building Name/Identifier: Kenny Lake K-12 Community Population: 410 Building Usage: Education - K - 12 Facility is owned by: Regional Education Attendance	Area 🗸		Facility Facil Fac	Date: 2/2/2011 / Street: HC 80 Bi ity City: Copper C ility Zip: 99573	OX 224
Contact First Name: Loreen		Middle Name:			
Last Name: Kramer		E-mail: k	ramer@crs	d.k12.ak.us	
Phone =: 0078223234 Mailing Address 1: [PO Box 108 Mailing Address 2:		Type: U	Add Pho	ne Number)
State: AK 💌 City: Glenallen		Zip: 99	588		
Building Specs					
Building Square 34170 Footage:		Year Built: 2000			
Building Type: Mixed					
Date B	enovation				Add Renovation
Operations Add Operating Day Day Operating Time Monday-Friday 8:00-5:00 132 Delete					

Step 3: Enter in Fuel Usage Information.

To enter in the fuel information follow steps a. through f.

a. Go to the "Energy Usage" Tab on the REAL Form.

Alaska Housing	ARIS	Web						5
	Commercial Hon	ne REAL Form Upload	d Change Password	Logout				
Commercial Real Fo	orm							
Facility Owner:	copper river		Owner	Building Name	Date	Building Usage	Owner Type	
Building Name/Identifier: Building Usage:	AI	v	Copper River School District	Chistochina	2/2/2011	Education - K - 12	Regional Education Attendance Area	
Facility is owned by:	Al	•	Copper River School District	Copper Center	2/2/2011	Education - K - 12	Regional Education Attendance Area	
			Copper River School	District Office	2/2/2011	Office	Regional Education Attendance	~
Building Informatio Facility Ow	n vner: Building Name/Identifier: Community Population: Building Usage: Facility is owned by:	Copper River School Di Kenny Lake K-12 410 Education - K - 12 Regional Education Attendance	e Area		Facility Facil Fac	Date: 2/2/2011 y Street: HC 80 B ity City: Copper C ility Zip: 99573	OX 224	
Contact First Name: [Last Name: [Loreen			Middle Name: E-mail: [k	ramer@ors Add Pho	d.k12.ak.us ine Number		
Phone #: Mailing Address 1: Mailing Address 2: State: City:	9078223234 PO Box 108 AK Y Glenallen			Type: U Zip: 9	Jnknown v	Delete		
Building Specs Building Sq Foot Building T	juare 34170 :age: 'ype: Mixed 💌]	Ŷ	ear Built: 2000				

b. Once this tab loads, click the enter Energy Usage

Alaska Housing ARIS Web						
Commercial Home REAL Form U	pload Change	Password Logo	ut			
acility Owner:		Owner	Building Name	Date	Building Usage	Owner Type
uilding Name/Identifier:		Alaska Gateway School District	Boardroom Building	5/5/2011	Education - K - 12	Regional Education Attendance Area
acility is owned by: All		Alaska Gateway School District	District Wide Storage	5/5/2011	Education - K - 12	Regional Education Attendance Area
Apply Filter		Alaska Gateway	Dot Lake School	5/5/2011	Education - K - 12	Regional Education
uiding Information Energy Usage	10 11 :	12 13 14	4 15 16 <i>1</i> 7	Energy Usa 18	ge Generate A 19 20 21	Aonth and Year Save 22 23 24

c. You will be prompted with an "Add energy Usage" Box; select appropriate types and units.

Commercial Real Form						
Facility Owner:		Owner	Building Name	Date	Building Usage	Owner Type
Building Name/Identifier:		Alaska				
Building Usage: All	¥	Gateway	Boardroom Building	5/5/2011	Education - K - 12	Regional Education
Facility is owned by: All	♥	School District	_			Attendance Area
Apply Filter		Alaska				×
		4				
Building Information Energy Usage			Add Energ	gy Usage	Generate Mon	th and Year Save
Month # 1 2 3	4 5 6 7 8 9 10 11	12 13	14 15 16 17	18	19 20 21	22 23 24
	Energy Type:	Electric	Cancel	: kWh 🗸		
ergy Us 1	2345678910	11 12	13 14 15	Add Ene	rgy Usage 7 18 19	Ge 20
	Energy	Type: E E Nat Po Ca De De S B r S S S S S S S S S S S S S S S S S	Add Energy (Usa actric) E tural Gas upane al mand - Electric mand - Slectric mand - Nat Gas sam District Ht t Wtr District Ht t Wtr District Ht t Wtr District Ht t Wtr District Ht t Werd Slectric puel Oil	neigy Uni	t: kWh 🗙	

- **d.** Once the Energy Type and Energy Unit are selected, select "Add." You will then see a grid as shown below. From here you can select "Generate Month and Year." By selecting Generate Month and year, you can choose the appropriate timeline for your data.
 - a. For "Beginning Month," enter a number between 1 and 12.
 - b. For "Beginning Year," enter a 4 digit year.
 - c. Click Generate and the dates will be automatically entered into the sheet below.

														_						
											Ad	d Energy	/ Usage		Ger	nerate N	Aonth and	d Year		Save
2		3	4	5	6	7	8	9	10	11	12	13	14	15	15	17	18	19	20	21
Ť			1	İ	1	1	1		1		1	1	Ì		İ		1		İ	
		· · · · ·		· · · ·	· ·						-		· · · ·	1			-			
	09	- ¹		Gei	nera	te M	ont	a an		ar Vz	alues			┷┓┋						
Energy Row: Row 1 - Electric Consumption (kWh)																				
Beginning Month: Beginning Year:																				
	09					Ge	enerate		ancel)				1						
														36						
				2 3 4	2 3 4 5	2 3 4 5 6 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I	2 3 4 5 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>2 3 4 5 6 7 8 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I</td> <td>2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>2 3 4 5 6 7 8 9 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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e. Once you have your grid with the month and year filled out, you can begin to enter in the Consumption, Cost, and if relevant, the demand cost. Be sure to hit "Save "when you are done.

Building Information Energy Usag	je						Cob	o.cl	DIS	thet w	ide Sto	rage	0/0/	2011	Educat	ion - K	- 12	Atton	lanca Ar		Ľ
		2	2		-	-				4.0	. (Add	Energy	Usage		Gen	erate M	onth and	Year	<u> </u>	ave
Month #	1 2009	2 2009	3 2009	4 2009	5 2009	6 2009	7 2009	8 2009	9 2009	10 2009	11	12	13	14	15	16	1/	18	19	8 20	10 9 20
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f. To add another Energy type or time period, simple select "Add Energy Usage." And follow steps I-V.

Search and Edit an Existing Building File

In this example we will search for "K-12" facilities owned by "Copper River."

	Commercial Home	REAL Form	Upload	Change Password Logo	out			
Commercial Real Fo	orm			Results wi	ll apear here			
Facility Owner: Building Name/Identifier:	Copper River	1		Owner	Building Name	Date	Building Usage	Owner Type
Building Usage: Facility is owned by:	All		~	Copper River School District	Glenallen K-12	2/2/2011	Education - K - 12	Regional Education Attendance Area
Apply Filter			_	Copper River School District	Kenny Lake K- 12	2/2/2011	Education - K - 12	Regional Education Attendance Area
Building Information Ener	gy Usage			4				
						G	enerate Akwarm Fil	e Create New Save

Step 1: Enter in your search criteria and hit filter. Results appear in right-hand box.

Step 2: Select the building you would like to view.

- We will be selecting "The Kenny Lake K-12."
- Once selected the related building text will turn blue and be underlined and the information available on this building will show up in the building information section of the REAL Form. *Confidential data and information have been hidden in these examples.*
- Under the **Building Information** Tab, you will be able to view and edit all previously entered data, such as Building Information, Contact Information, Building Specs, Major Renovations, and Operations.
- If you made Changes, be sure to hit Save before you navigate away from the page

Contract Diver						A
actuity Owner: Copper River]	Copper River School	Glenallen K-12	2/2/2011	Education - K -	Regional Education Attendance
		District			12	Area
Suilding Usage: All		Copper River School	Kenny Lake K-	2/2/2011	Education - K -	Regional Education Attendance
Activity is owned by:		Discrice	14		12	<u>Alea</u>
Apply Filter		Copper River School District	Slana K-12	2/2/2011	Education - K - 12	Area
Building Information Energy Usage						
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- Building Information						
Facility Owner:	Copper River School Dis				Date: 2/2/2011	
Building Name/Identifie	r: Kenny Lake K-12			Facility	Street: HC 60 B	OX 224
Community Population	1: 410			Facili	ty City: Copper (Denter
Building Usage	Education - K - 12	~		Faci	lity Zip: 99573	
Facility is owned by	Regional Education Attendance	ce Area 😽				
Contact						
First Name: Loreen			Middle Name:			
Last Name: Kramer			E-mail:	lkramer@c	rsd.k12.ak.us	E
				Add Pi	hone Number	
Phone #: 9078223234			Type:	Unknown	V Delete	
Mailing Address 1: PO Box 108						
Mailing Address 2:						
State: 🗛 💌						
City: Glenallen			Zip:	99588		
Building Specs						
Building Square 34170 Footage:		Y	ear Built: 2000			
Building Type: Mixed 👻						
Major Renovations						
						Add Renovation
Date	Re	enovation				
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Step 3: View/Edit Energy Usage data.

Under the **Energy Usage** Tab, you can view and edit entered fuel and electrical usage and costs that have been previously entered. For further information on how to edit, review Section 2, Step 3.

- Under Energy Usage Tab, you will be able to:
 - o Edit previous data entered
 - Add Energy Usage (Add Rows across)
 - Generate Month and year (Apply date ranges to Added Energy Usage)
 - Save added data



For further assistance, contact AHFC Staff:

Rebekah Luhrs	<u>rluhrs@ahfc.us</u>	907-330-8141
Scott Waterman	swaterman@ahfc.us	907-3308195