

SB

190

<TARGET><BILL>SB 190</BILL><SUBJECT>SB
190</SUBJECT><COMM>SSTA30</COMM></TARGET>

SENATE BILL NO. 190

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTIETH LEGISLATURE - SECOND SESSION

BY SENATOR BEGICH

Introduced: 2/19/18

Referred: State Affairs, Finance

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to the retrofitting of certain public facilities and community facilities;
2 relating to the performance of energy audits on schools and community facilities; and
3 relating to the duties of the Alaska Energy Authority and the Alaska Housing Finance
4 Corporation."

5 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

6 * **Section 1.** The uncodified law of the State of Alaska is amended by adding a new section
7 to read:

8 LEGISLATIVE INTENT. It is the goal of this legislation that the state, by 2025, enter
9 into energy service performance contracts valued at \$100,000,000 to retrofit public facilities,
10 public buildings, and public school buildings in a manner that will result in a net savings in
11 energy costs to the state (within 15 years after completion of the retrofits). It is the intent of the
12 legislature that those entities be able to capitalize on the abundant cost-saving potential
13 afforded by energy efficiency upgrades, while avoiding an upfront cost to the state, that will
14 ultimately result in reduced costs to building owners, the state, and the power cost
15 equalization program established under AS 42.45.100 - 42.45.150.

1 * **Sec. 2.** AS 18.56 is amended by adding a new section to article 6 to read:

2 **Sec. 18.56.865. Energy audits of community facilities.** If requested by the
3 Alaska Energy Authority, the corporation shall coordinate with the Alaska Energy
4 Authority to perform energy audits of community facilities under AS 44.83.088.

5 * **Sec. 3.** AS 42.45.110 is amended by adding a new subsection to read:

6 (j) The owner or operator of a community facility of over 5,000 square feet for
7 which a utility is entitled to receive power cost equalization under (b) of this section
8 for sales of power to that community facility may allow the Alaska Energy Authority,
9 the Alaska Housing Finance Corporation, or the Department of Transportation and
10 Public Facilities to

11 (1) perform an energy audit of the community facility under
12 AS 44.42.065(a);

13 (2) retrofit the community facility under AS 44.42.067(a).

14 * **Sec. 4.** AS 44.42.065(a) is amended to read:

15 (a) The department shall, at least once every seven years, perform an energy
16 audit of each public building and public school building. *cost?*

17 * **Sec. 5.** AS 44.42.065(c) is amended to read:

18 (c) In this section,

19 **(1)** "energy audit" means a determination of

20 [(1)] the energy

21 **(A)** consumption characteristics of a building, including the
22 size, type, and rate of energy consumption of major energy-consuming systems
23 of the building and the climate characterizing the region where the building is
24 located; and

25 **(B)** [(2) A DETERMINATION OF THE ENERGY]
26 conservation and cost savings likely to result from appropriate energy-
27 conserving maintenance and operating procedures and modifications, including
28 the purchase and installation of energy-related fixtures;

29 **(2)** "public school" has the meaning given in AS 14.25.220, but
30 does not include a charter school as defined in AS 14.03.290.

31 * **Sec. 6.** AS 44.42.065 is amended by adding a new subsection to read:

1 (d) The department shall, if requested by the Alaska Energy Authority,
 2 coordinate with the Alaska Energy Authority to perform energy audits of community
 3 facilities under AS 44.83.088.

4 * **Sec. 7.** AS 44.42.067(a) is amended to read:

5 (a) Not later than January 1, 2025 [JANUARY 1, 2020], the department shall
 6 work with other state agencies to retrofit at least 25 percent of all public facilities,
 7 starting with those it determines are the least energy efficient, if the department
 8 determines that retrofitting the public facilities will result in a net savings in energy
 9 costs to the state within 15 years after completion of the retrofits for a public facility
 10 and if funding for the retrofits is available.

11 * **Sec. 8.** AS 44.42.067(e) is amended to read:

12 (e) In this section, "public facility" means a facility owned and controlled by
 13 the state for governmental, educational, [GOVERNMENT] or public use that is
 14 5,000 [10,000] square feet or more and is not a legislative building or court building.

15 * **Sec. 9.** AS 44.83 is amended by adding a new section to read:

16 **Sec. 44.83.088. Energy audits.** (a) The authority shall coordinate with the
 17 Department of Transportation and Public Facilities and the Alaska Housing Finance
 18 Corporation, if appropriate, at least once every seven years, to perform an energy audit
 19 on each community facility for which a utility receives power cost equalization under
 20 AS 42.45.110(b). The requirement under this section may be waived for a community
 21 facility that refuses an energy audit.

22 (b) The authority shall include in each energy audit required by (a) of this
 23 section recommendations for the corrective measures described in AS 44.42.065(b).

24 (c) The authority shall work with an owner or operator of a community facility
 25 for which a utility receives power cost equalization under AS 42.45.110(b) to identify
 26 state, federal, or other grant or loan programs, or to coordinate energy service
 27 performance contracts, to fund energy audits or retrofits.

28 (d) In this section, "energy audit" has the meaning given in AS 44.42.065(c).

SB 190 ENERGY EFFICIENCY OF PUBLIC BUILDINGS

Senator Tom Begich

What does this bill do?

The intent of this legislation is to by 2025 enter into energy service performance contracts valued at \$1 million to retrofit public facilities, public buildings, and public school buildings, by using a model that allows for those costs to be paid back by energy savings.

The bill amends AS 44.42.065 the Alaska Sustainable Energy Act to allow the Alaska Housing Finance Corporation, Alaska Energy Authority, or the Department of Transportation to perform audits to community facilities more than 5,000 square feet that receive Power Cost Equalization funds that request an energy audit and retrofit. (Sec. 3-5)

Sec. 9 amends AS 44.83 to require all PCE-eligible public facilities to receive an energy audit every seven years unless it is refused.

Potential Issues:

This bill expands the definition of public facilities and requires an energy audit on each of those buildings once every seven years. This is going to cost a lot of money. DOT estimates that approximately 430 buildings per year will need to receive energy audits.

Legislative History

The Alaska Sustainable Energy Act was passed in 2010 and this bill attempts to building on this by requiring energy audits for smaller and more rural facilities.

Fiscal Impact:

There are two major costs. First are the energy audits and then there is the actual retrofit. The audits would be an ongoing cost. DOT estimates this at \$2,771.6 the first year and then \$2,741.6 in the out years. Retrofitting would make use of a financing model called Energy Service contracting companies to pay for the upfront costs which would then be paid back by energy savings. However, it would still incur capital costs.

QUESTIONS:

- Has your office discussed any of this with Senator Hoffman's office? I would imagine by including buildings smaller than 10,000 square feet that receive PCE funds, this would affect his district substantially.
- How many buildings do you think this would affect?
- So where does the risk or up-front capital cost stay?
- In your funding model, the costs to be paid back by energy savings—is that with interest and at what percentage?
- I noted that you left charter schools out of the definitions of schools that could apply for energy audits and retrofits, any particular reason why?
- I noted in the DOT fiscal note that there were 4 positions added in order to carry out this bill. Positions specifically tasked with retrofits. Are there currently positions at DOT that deal exclusively from retrofits from the Alaska sustainable Energy Act?

Federal Govt Energy Service
Private money to invest in Public

ALASKA STATE LEGISLATURE

HEALTH & SOCIAL SERVICES
COMMITTEE

EDUCATION COMMITTEE



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STATE CAPITOL
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SENATOR Tom Begich SENATE DISTRICT J

Senate Bill 190 Sponsor Statement

"An Act relating to the retrofitting of certain public facilities and community facilities; relating to the performance of energy audits on schools and community facilities; and relating to the duties of the Alaska Energy Authority and the Alaska Housing Finance Corporation."

The State of Alaska is responsible for \$650 million in energy costs associated with close to 5,000 facilities. In 2010, the Alaska Sustainable Energy Act set forth a goal of energy efficiency retrofits for 25% of State of Alaska buildings over 10,000 square feet by 2020. That goal was achieved by 2014. Senate Bill 190 extends that program to schools and large community centers which are eligible for Power Cost Equalization. This creates incentives for buildings which receive State support for energy bills to perform retrofits, saving the State, school districts and communities money.

Senate Bill 190 also proposes financing efficiency retrofits by incentivizing a successful private financing model called Energy Service Performance Contracting, with minimal costs to the State. Energy contracting companies pay for the upfront costs associated with the energy efficiency retrofits, then are paid back using the guaranteed cost savings. SB 190 sets a goal for the State, and certain public buildings, to enter into \$100 million worth of performance-contracts by 2025 to pay for energy retrofits set forth in the bill.

I respectfully request your support for SB 190.

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SENATE DISTRICT J

Senate Bill 190 Sectional Analysis

"An Act relating to the retrofitting of certain public facilities and community facilities; relating to the performance of energy audits on schools and community facilities; and relating to the duties of the Alaska Energy Authority and the Alaska Housing Finance Corporation."

Section 1: Outlines the legislative intent that the energy audits and retrofits outlined in this legislation be financed using a service performance contracting mechanism wherein upfront construction costs are paid for by a third party, either using Alaska Housing Finance Corporation's energy efficiency loan programs or by a contracting company, with those costs paid back using guaranteed energy savings from those retrofits.

Section 2: Adds to statutes regarding the Alaska Housing Finance Corporation to coordinate with the Alaska Energy Authority when performing energy audits for community buildings eligible for Power Cost Equalization over 5,000 square feet.

Section 3: Gives the Alaska Energy Authority, the Alaska Housing Finance Corporation, and the Department of Transportation the authority to perform energy audits on community facilities eligible to receive Power Cost Equalization above 5,000 square feet. These are the three state entities with expertise or funding streams dedicated to performing energy audits or energy retrofits.

Section 4: Requires that public schools receive energy audits on the same schedule as other public buildings as required by the Alaska Sustainable Energy Act, which passed in to law in 2010.

Section 5: Defines those public school, excluding charter schools, eligible for energy retrofits.

Section 6: Outlines coordination between the Alaska Energy Authority and the Alaska Department of Transportation and Public Facilities to perform audits of PCE-eligible community facilities.

Section 7: Since this legislation extends the universe of public buildings requiring energy audits, the deadline date for those audits is pushed back to 2025.

Section 8: Expands the buildings included as "public facilities" to include educational buildings like schools and reduces the minimum size for buildings to be considered for retrofits down to 5,000 square feet.

Section 9: Adds to the section of Alaska Statute governing the Alaska Energy Authority a section which requires all PCE-eligible public facilities to receive an energy audit every seven years, unless the facility managers refuse the energy audit. AEA will work with the Department of Transportation and Public Facilities to identify public and private funding sources and perform the audits.

Christine Marasigan

From: Sen. Kevin Meyer
Sent: Tuesday, April 10, 2018 9:44 AM
To: 'sgruhn@bbfm.com'
Subject: SB 190

Hello Scott,

Thank you for taking the time to provide your input on legislation that is important to you. The Senate State Affairs Committee will hear SB 190 this afternoon at 3:30pm. I chair the committee and I strongly suggest you call in and testify in favor of the bill. You can go to the Anchorage LIO or the Anchorage call in number is 563-9085. Your email will be added to the support materials for the bill.

Sincerely,
Kevin

From: Scott Gruhn <sgruhn@bbfm.com>
Sent: Monday, April 9, 2018 1:39 PM
To: Sen. Kevin Meyer <Sen.Kevin.Meyer@akleg.gov>
Subject: Please Support SB190

Dear Senator Meyer,

It's very important that you provide all manner of support for Senate Bill 190. Briefly:

1. It will save the State of Alaska money, as it will reduce significantly the amount we pay for energy;
2. It will spur local job growth;
3. It also enables other buildings to reduce their energy use at no up-front cost, as the contractors are paid over time through the savings on the utility bills;
4. It will improve Alaska's environment and reduce carbon emissions.

There's something in there for everyone to like, and all at minimal up front cost to the State of Alaska.

Thank you in advance for this crucial support of yours for this important bill.

--

Scott Gruhn, PE, SE | Principal



Please update your records with our new address:
845 K Street | Anchorage, Alaska 99501

Ph: (907)274-2236 | Direct: (907)270-2245 | Web: www.bbfm.com |  



**Introduction to ESPC
(Energy Saving Performance Contracting)**

Alaska Senate

State Affairs Committee

April 10, 2018



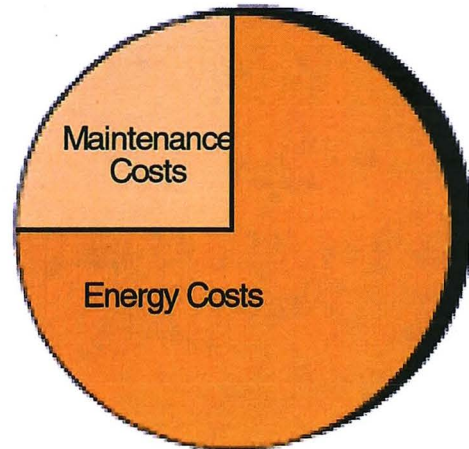
How Does ESPC Work?

- Re-purposes money spent on wasted energy and maintenance into payment stream for energy efficiency improvements
- ESCO identifies energy conservation measures
- ESCO designs, engineers and constructs measures
- ESCO guarantees savings
- ESCO pays any savings shortfalls

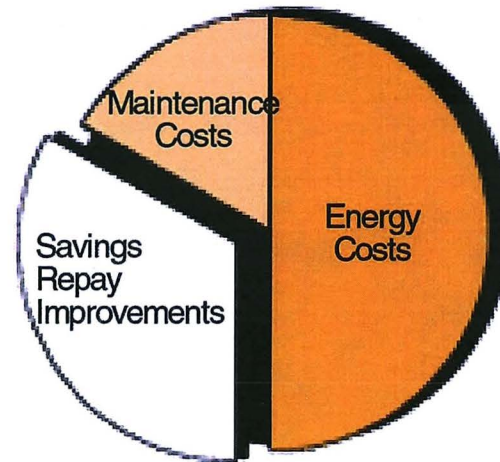
How Does ESPC Work?



Before Improvements



After Improvements



ESPC Project Services

- Preliminary Audit or Project Scoping
- Investment Grade Audit
- Engineering Design
- Project Finance Education
- Construction Management
- Commissioning
- Monitoring and Verification (M&V)
- Operations & Maintenance (optional)

Typical ESPC Measures

- Lighting
- Heating Ventilation & Air Conditioning (HVAC)
- Energy Management Systems
- Motors and Variable Speed Drives
- Building Envelope Measures
- Water Conservation Measures

Advanced ESPC Measures

- + Renewables – solar, wind and biomass
- + Distributed Generation or CHP
- + Demand Response
- + Water metering
- + Street and traffic lighting
- + Building sustainability

What Makes ESPC Different?

- Alternative to traditional “spec-and-bid” public construction
- Developed because traditional process does not meet the needs of public facilities
- Projects are best value
 - Lowest life cycle cost, not lowest first cost

What Makes ESPC Different?

- One company delivers all services
- ESCOs and building owners are partners
- ESCO takes design and construction risk
- Project costs paid from savings
- Project savings guaranteed by ESCO

Policy Mandates – Stop Waste
Need for Capital Improvements in Public Facilities
Need for Construction Jobs

WHAT DRIVES ESPC?

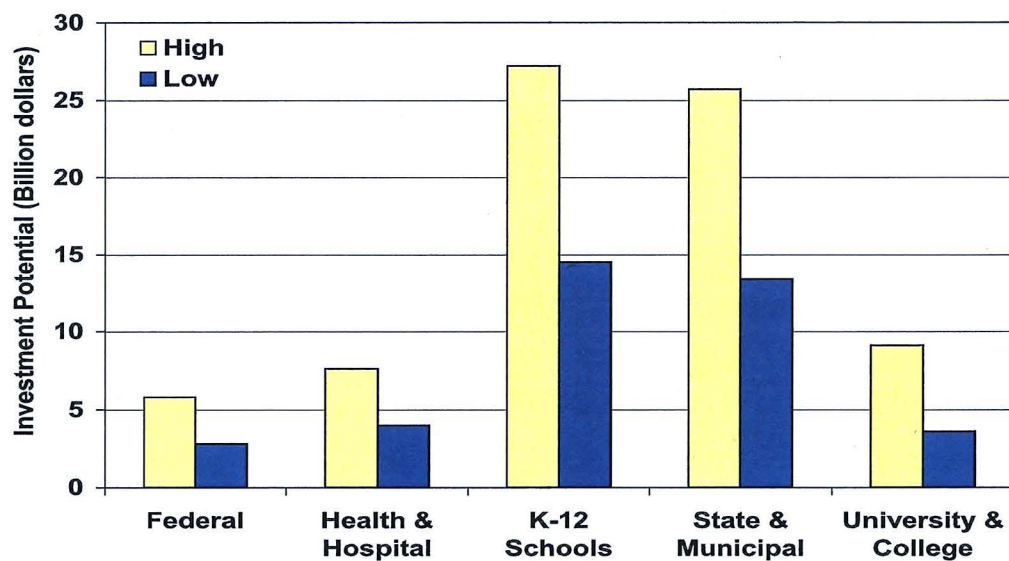
Government Mandates

- Stop government waste
- Federal mandates for 20+ years
- State mandates for 15+ years
- Local government pledges
- Broad bipartisan support
- Technical support from US DOE

Public Buildings Need Improvements

- Billions of deferred capital improvement and maintenance
 - \$250 billion for public school buildings
- Part of the national infrastructure problem
- ESPC converts wasted energy dollars to payment stream for improvements

Public Buildings EE Investment Needs



ESPC = Jobs with No New Taxes

- \$1M project \approx 9.5 direct/indirect jobs
 - 2 jobs at the ESCO company
 - 4 jobs at local subcontractors
 - 3.5 jobs at equipment manufacturers
- \$1M project \approx 12 “multiplier” jobs
- \$1M project \approx 21.5 jobs
- SB 190 \approx 2,150 jobs
- Additional jobs or job upgrades in long-term O&M

Energy Efficiency Spotlight

A shining example of how Hawaii is working to reach its goal of a 30% reduction in energy consumption by 2030.



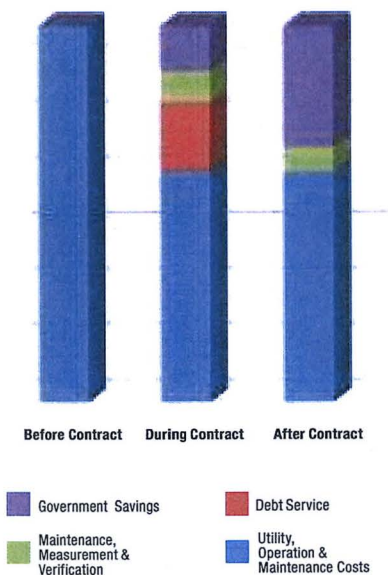
STATE OF HAWAII GUARANTEED ENERGY PERFORMANCE CONTRACTING

State and County agencies face increasing energy costs and the need to replace or upgrade aging, inefficient, and obsolete energy- and water-consuming systems. Capital improvement and operating budgets have typically been inadequate to fund the needed upgrades.

Energy Performance Contracting (EPC) is an innovative approach to implementing energy and water efficiency projects using guaranteed energy savings to pay for the projects.

How Energy Performance Contracting Works

Value of Performance Contracting



1. Future utility cost savings pay for the contract.
2. Savings are guaranteed by the Energy Service Company (ESCO) and can secure 3rd party financing. This means that there are no upfront capital costs for typical EPC projects.
3. Typical Energy Conservation Measures are the replacement of lighting; ventilating and air conditioning equipment; updated energy management control systems, water efficiency equipment.
4. Risks are reduced. If the savings guarantee is not met in a given year, the ESCO must pay the agency the difference between the guaranteed amount and the actual verified amount.

All performance contracts by any state agency are:

- Administered following state procurement laws.
- Reviewed and approved by the Office of the Attorney General.
- Reviewed and approved by the Department of Budget and Finance.
- Managed by departmental managers and administrators versed in the details of the project specific to their areas of expertise and experienced in contract management, finance, and administration.

Performance Contracting supports state policy:

- HRS 269-96, sets Efficiency Portfolio Standards, goal of 30% clean energy by 2030, to maximize energy-efficiency in new and existing buildings.
- HRS 196-21, directs state agencies to maximize alternative financing contracting mechanisms.
- HRS 36-41, directs all agencies to evaluate and identify for implementation retrofitting through performance contracting.



The Business Case for an EPC

- Pays for itself. Savings must be guaranteed by the ESCO
- Uses a single procurement. Standard practice is to purchase design, installation, and maintenance services separately.
- Faster implementation of energy savings measures. Usually two or less years, versus standard five plus years.
- Provides financial leverage. Comprehensive approach maximizes savings opportunities; minimizes project management. Quick payback measures leverage inclusion of expensive measures.
- Reduces Operation & Maintenance (O&M) costs.
- Improves building occupant comfort. Improves thermal comfort, ventilation rate and indoor air quality, and light levels, resulting in fewer complaints and improved health and productivity.
- Provides training for O&M staff. Training helps maintain the persistence of energy savings.
- Funds Energy Performance Contract (EPC) manager. The ESCO contract can be structured to include an independent EPC manager or consultant to oversee the ESCO.
- No up-front funds needed. All costs associated with the energy efficiency improvements are paid for with utility cost and O&M savings.
- Creates jobs. ESCOs commonly retain local subcontractors to work on a performance contract.
- Reduces air pollution. Reducing utility consumption of fossil fuels, electricity, and water, significantly reduces air pollution and preserves scarce resources.

STATE AND COUNTY ENERGY PERFORMANCE CONTRACTS

Agency	Year(s)	Contract Amount	Estimated Savings Over Life of Contract
UH-Hilo	1996-2012	\$6,402,695	\$14,630,066
County of Hawaii	1997-2026	\$2,215,546	\$8,157,880
County of Kauai	1998-2012	\$525,965	\$1,205,990
C&C of Honolulu	2001-2025	\$11,900,205	\$36,066,761
Hawaii Health Systems Corporation	2002-2022	\$21,936,997	\$55,766,364
Judiciary	2003-2012	\$1,474,406	\$9,785,036
Department of Accounting and General Services Phase I	2009-2029	\$36,873,266	\$72,580,767
Department of Public Safety	2010-2030	\$25,511,264	\$57,211,112
University of Hawaii Community Colleges	2012-2032	\$34,207,392	\$37,000,000
C&C Honolulu Kailua Wastewater Treatment Plant	2013-2033	\$6,054,178	\$13,693,910
Department of Accounting and General Services Phase II	2013-2033	\$17,400,000	\$28,000,000
Department of Transportation	2013-2035	\$244,804,877	\$730,027,690
Honolulu Board of Water Supply	2016-2036	\$33,125,398	\$56,173,154
TOTAL		\$442,432,189	\$1,120,298,730

National recognition for Hawaii's performance contracting: For five consecutive years, awarded the Energy Services Coalition's (ESC) *Race to the Top* as the national leader per capital in performance contracting projects. In 2016, ESC also recognized the State of Hawaii as an Energy Stewardship Champion for outstanding accomplishments leveraging performance contracting to achieve infrastructure modernization, environmental stewardship, and economic development. ESC is a national nonprofit organization of experts working together to increase energy efficiency and building upgrades through energy performance contracting.

Economic impacts from the energy savings (not including the equipment installation/construction) since 1996 include:

- \$17.5M in state tax revenues, measured in 2016 dollars
 - \$490.3M in income to households, measured in 2016 dollars
 - An average of 260 jobs generated/supported each year between 1996 and 2036
- (Source: DBEDT, Research and Economic Analysis Division)

The above impact is the net of the following:

1. Increase in government spending on non-energy categories
2. The decrease in electricity sales of utilities

Note: Impact of construction/equipment installation is not included in this calculation since data on financing the projects are not available at this time.

For more information about performance contracting, visit energy.hawaii.gov/energy-performance-contracting



energy.hawaii.gov   



Energy Savings Performance Projects Completed Through DOT&PF Statewide Public Facilities

Project No.	Agency	Project Name	Year Completed	Facility	City	City Block & S.R.	Total Bldg Sq. Ft.	Total Number Bldgs Completed	Project Scope	Elc kW	Elc (kWh)	Peak Energy Savings (kW)	Water (Gal)	WDM (Gal)	WDR (Gal)	Peak Project Cost (\$)	Peak Total Energy Savings (\$)	Elc Payback (Year)	Contract Method	Contractor	Notes
2	DOT&PF	AVTEC Facilities	2012	AVTEC (FBI) Lab Facility	1	1	20,000	1	Lighting Upgrades, Lighting Control Upgrades, High Eff. Boiler Replacement, Lighting Controls, DDC System Upgrades, Instantaneous Hot Water Upgrades, DDC Upgrades, Instantaneous Hot Water Meter	384	119,793	2,391	2,391		\$ 1,904	\$ 29,172	11.5	Energy Savings Performance Contract	Ameresco	Energy & cost data from Amersco 2012 MAV Report	
2	DOT&PF	DMAS Condo Facilities	2012	Condo Administration Bldg	1	1	3,800	1	High Eff. Boiler Replacement, Lighting Controls, DDC System Upgrades, Instantaneous Hot Water Upgrades, DDC Upgrades, Instantaneous Hot Water Meter	45	11,447	684	684		\$ 254	\$ 8,471	14.7	Energy Savings Performance Contract	Ameresco	Energy & cost data from Amersco 2012 MAV Report	
2	DOT&PF	DMR Facilities	2012	Forestry Palmer Warehouse Bldg	1	1	18,000	1	High Eff. Boiler Replacement, Lighting Controls, DDC System Upgrades, Instantaneous Hot Water Upgrades, DDC Upgrades, Instantaneous Hot Water Meter	84	18,712	1,440	1,440		\$ 1,022	\$ 12,797	24.1	Energy Savings Performance Contract	Ameresco	Energy & cost data from Amersco 2012 MAV Report	
3	DOT&PF	DOT&PF-Perimeter Region	2012	Perimeter Road Heli Bldg	1	1	21,000	1	Hydronic Heating System, High Eff. Motors, DDC Upgrades, Window Replacement	599,317	(10,938)				\$ (3,108)	\$ 58,500	21.2	Energy Savings Performance Contract	Siemens	Energy & cost data from Siemens 2012 MAV Report	
3	DOT&PF	DOT&PF-SR	2012	Coldfoot Hanger	1	1	4,053	1	Lighting Upgrades, Heating System Upgrade, Building Envelope Upgrades	5,040	1,181	1,181			\$	\$ 7,452	44.1	Energy Savings Performance Contract	Siemens	Energy & cost data from Siemens 2012 MAV Report	
3	DOT&PF	DMVA	2012	Anchorage Armory	1	1	210,283	1	High Eff. Boiler Upgrade	33,359					\$	\$ 27,068	24.7	Energy Savings Performance Contract	Siemens	Energy & cost savings data from Siemens 2012 MAV Report	
4	DOT&PF	DOA	2012	Anchorage Bldg	1	1	318,000	1	DDC Upgrades, Steam Effect Correction	3,333					\$	\$ 10,810	87.9	Energy Savings Performance Contract	Siemens	Energy & cost savings data from Siemens 2012 MAV Report	
5	DOT&PF	DMSS	2012	Anchorage Bldg	1	1	24,310	1	High Efficiency Boiler Upgrade	2,844					\$	\$ 8,610	35.1	Energy Savings Performance Contract	Ameresco	Energy & cost savings data from Amersco engineering data	
6	DOT&PF	DOT&PF-CR	2012	DOT&PF-CR Aviation Bldg	1	1	67,000	1	High Efficiency Boiler Upgrade, DDC Panel Upgrades, Air-Off Temp Improvements	70,714					\$	\$ 2,700	63.8	Energy Savings Performance Contract	Siemens	Energy & cost savings data from Siemens 2012 MAV Report	
N/A	DOT&PF	DOT&PF-CR	2009	Anchorage Correctional Center	1	1		1	Comprehensive												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
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N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1		1	High Efficiency Boiler Upgrade												
N/A	DOT&PF	DOT&PF-CR	2009	Alaska Department of Corrections	1	1															

Cumulative Annual Energy Cost Savings from Energy Savings Performance Projects

Applicable Escalation Factors

Energy => 3.50%
 Operations & Maintenance => 2.00%

AGENCY / PROJECT	TYPE	Year							
		2010	2011	2012	2013	2014	2015	2016	
DOA/DOTPF (SOA Phase 1)	Energy	\$ 557,763	\$ 577,284.71	\$ 597,489.67	\$ 618,402	\$ 640,046	\$ 662,447	\$ 685,633	
	Operations	\$ 13,034	\$ 13,294.68	\$ 13,560.57	\$ 13,832	\$ 14,108	\$ 14,391	\$ 14,678	\$ 700,312 Subtotal
DOC (SOA Phase 2)	Energy			\$ 966,253	\$ 1,000,072	\$ 1,035,074	\$ 1,071,302	\$ 1,108,798	
	Operations			\$ 2,491	\$ 2,541	\$ 2,592	\$ 2,643	\$ 2,696	\$ 1,111,494 Subtotal
DOT&PF-SE	Energy			\$46,135.00	\$ 47,750	\$ 49,421	\$ 51,151	\$ 52,941	
	Operations			\$1,768.00	\$ 1,803	\$ 1,839	\$ 1,876	\$ 1,914	\$54,854.71 Subtotal
DOC	Energy			\$22,913.00	\$ 23,715	\$ 24,545	\$ 25,404	\$ 26,293	
	Operations			\$ -	\$ -	\$ -	\$ -	\$ -	\$26,293.19 Subtotal
DEED - MEHS	Energy			\$8,122.00	\$ 8,406	\$ 8,700	\$ 9,005	\$ 9,320	
	Operations			\$1,802.00	\$ 1,838	\$ 1,875	\$ 1,912	\$ 1,951	\$11,270.72 Subtotal
DF&G	Energy			\$9,135.00	\$ 9,455	\$ 9,786	\$ 10,128	\$ 10,483	
	Operations			\$336.00	\$ 343	\$ 350	\$ 357	\$ 364	\$10,846.32 Subtotal
DOL-AVTEC	Energy			\$27,268.00	\$ 28,222	\$ 29,210	\$ 30,233	\$ 31,291	
	Operations			\$1,904.00	\$ 1,942	\$ 1,981	\$ 2,021	\$ 2,061	\$33,351.61 Subtotal
DOT-CR	Energy			\$54,679.00	\$ 56,593	\$ 58,574	\$ 60,624	\$ 62,745	
	Operations			\$710.00	\$ 724	\$ 739	\$ 753	\$ 769	\$63,513.94 Subtotal
DNR	Energy			\$12,016.00	\$ 12,437	\$ 12,872	\$ 13,322	\$ 13,789	
	Operations			\$781.00	\$ 797	\$ 813	\$ 829	\$ 845	\$14,634.02 Subtotal
DMVA	Energy			\$27,066.00	\$ 28,013	\$ 28,994	\$ 30,009	\$ 31,059	
	Operations			\$ -	\$ -	\$ -	\$ -	\$ -	\$31,058.86 Subtotal
DPS	Energy			\$7,412.00	\$ 7,671	\$ 7,940	\$ 8,218	\$ 8,505	
	Operations			\$184.00	\$ 188	\$ 191	\$ 195	\$ 199	\$8,704.61 Subtotal
DOT-NR	Energy			\$58,580.00	\$ 60,630	\$ 62,752	\$ 64,949	\$ 67,222	

STATES ENERGY SERVICE PERFORMANCE CONTRACTING POLICIES

STATE	EE GOAL	PERFORMANCE CONTRACTING POLICY
Federal	GHG emission reduction target	PM required \$2 Billion in Performance Contracting by 2013. Current contracts exceed \$4 billion and will save \$9 billion.
HI	Energy audit requirement and benchmarking; EE upgrades every 5 yrs	Legislation set state energy efficiency goal and requires agencies to maximize their use of alternative financing mechanisms. Current contracts will save the State \$1.2 billion.
NH	Reduce state-owned building fuel use by 50% by 2030	Developed tool kit and exploring non-legislative avenues to streamline and increase capacity for ESPC administration.
MN	Reduce state-owned energy consumption by 90% from 2005 levels by 2025	EO established the Guaranteed Energy Savings Program which provides technical, contracting, and financial support to state and local government agencies as well as school districts. ESPCs will save the State \$87 million in the next 20 years.
VA	Reduced public building energy consumption by 15% by 2017	HB-1967 legalizes and encourages ESPC, and EO creates a streamlining process for state agencies to enter into performance contracts
MT	State-owned building standards	ESPC in state energy policy, legislature included ESPCs as a mechanism to finance upgrades for local government and school districts
NM	State-funded building standards and improving efficiency by 25% by 2020.	Goal of \$50 million worth of performance contracts by 2016. Launched the New Mexico Energy Service Coalition, a public-private partnership to support performance contracting.
UT	Benchmarking & EE goal for state-owned buildings	Following 2006's EO requiring energy efficiency goals for all public buildings, ESPC contracting increased dramatically. Energy Office maintains a list of approved contractors and facilitates projects.
WA	Publicly-funded building standards	HB-2247 required schools and agencies to conduct energy audits and implement energy efficiency projects paid for by savings. In the last 5 years, they have implemented \$288 million in public building upgrades.
AL	EO resulted in 52% reduction in energy use for public buildings	As part of the DOE's ESPC Accelerator Program, the State has achieved its goal of entering into \$5 million in performance contracts.
CO	EE targets for all public buildings	All state agencies must complete Energy Service Contracting feasibility study every 5 years to determine viability
GA	EE targets	State manual for contracting and pre-qualified vendors
KS	Energy audits & EE targets	State manual for contracting and pre-qualified vendors, #2 in contracting after Hawaii.
KY	Building Standards	Statute incentivizes use of ESPC, with \$1 billion worth of contracts since legislation passed in 1996.
MA	Benchmarking, standards, and EE targets	EO requires all state buildings over 100,000 square feet enter ESPCs. ESPC goal of \$350 million between 2013 and 2016 was achieved—reduced energy use by 25% and saved the State \$20 million/year.
NC	Building standards, and EE targets	Statute encourages the use of performance contracting to achieve targets.
NV	Benchmarking & EE goal	State encourages use of performance contracting for state agencies as well as school districts. State Energy Office provides a tool kit for local municipalities.

Fiscal Note

State of Alaska
2018 Legislative Session

Bill Version: SB 190
Fiscal Note Number: _____
() Publish Date: _____

Identifier: SB190-DOT-HAF-4-10-18
Title: ENERGY EFFICIENCY OF PUBLIC BUILDINGS
Sponsor: BEGICH
Requester: Senate State Affairs

Department: Department of Transportation and Public Facilities
Appropriation: Highways, Aviation and Facilities
Allocation: Facilities Services
OMB Component Number: 3195

Expenditures/Revenues

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2019 Appropriation Requested	Included in Governor's FY2019 Request	Out-Year Cost Estimates				
			FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
OPERATING EXPENDITURES	459.6	0.0	2,741.6	2,741.6	2,741.6	2,741.6	2,741.6
Personal Services	459.6		459.6	459.6	459.6	459.6	459.6
Travel	120.0		120.0	120.0	120.0	120.0	120.0
Services	2,162.0		2,162.0	2,162.0	2,162.0	2,162.0	2,162.0
Commodities	30.0						
Capital Outlay							
Grants & Benefits							
Miscellaneous							
Total Operating	2,771.6	0.0	2,741.6	2,741.6	2,741.6	2,741.6	2,741.6

Fund Source (Operating Only)

1004 Gen Fund (UGF)	621.6		591.6	591.6	591.6	591.6	591.6
1007 I/A Rcpts (Other)	2,150.0		2,150.0	2,150.0	2,150.0	2,150.0	2,150.0
Total	2,771.6	0.0	2,741.6	2,741.6	2,741.6	2,741.6	2,741.6

Positions

Full-time	4.0		4.0	4.0	4.0	4.0	4.0
Part-time							
Temporary							

Change in Revenues

None							
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Estimated SUPPLEMENTAL (FY2018) cost: 0.0 (separate supplemental appropriation required)
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY2019) cost: 0.0 (separate capital appropriation required)
(discuss reasons and fund source(s) in analysis section)

ASSOCIATED REGULATIONS

Does the bill direct, or will the bill result in, regulation changes adopted by your agency? No
If yes, by what date are the regulations to be adopted, amended or repealed?

Why this fiscal note differs from previous version/comments:

Original version.

Prepared By: <u>Mike Lesmann</u>	Phone: <u>(907)465-4772</u>
Division: <u>Commissioner's Office</u>	Date: <u>04/10/2018 10:45 AM</u>
Approved By: <u>Amanda Holland</u>	Date: <u>04/10/18</u>
Agency: <u>DOT&PF</u>	

FISCAL NOTE ANALYSIS

STATE OF ALASKA
2018 LEGISLATIVE SESSION

BILL NO. SB 190

Analysis

This proposal increases the requirement for the department to carry out energy efficiency retrofits to 25% of all public facilities by reducing the building size criteria from 10,000 square feet to 5,000 square feet. It expands the definition of public facilities to include governmental, education and public use buildings, 5,000 square feet or more, that are owned and controlled by the state. Additionally, it increases the requirement for DOT&PF to perform energy audits on each public building and public school building at least once every seven years.

Description of work required by this proposal

Energy Audits (Section 4): The department estimates approximately 430 buildings per year will need to receive energy audits in order for all public buildings to receive audits every seven years. It is estimated that approximately \$2,150.0 (\$5.0 per building) per year will be needed to conduct the energy audits. It is assumed these audits will be financed through the Alaska Housing Finance Corporation's Alaska Energy Efficiency Revolving Loan Program. Consultants will be utilized for the majority of the energy audit work.

Energy Efficiency Retrofits (Sections 1, 7, 8): The department estimates approximately 15 public facilities per year, as defined in the bill, will need energy efficiency retrofits in order to meet the goal of having 25% of public facilities completed by 2025. Approximately \$15M per year will need to be awarded in Energy Savings Performance Contracts to meet the goal of achieving \$100M in retrofits by 2025. Funding for these contracts is contingent upon legislative capital budget appropriations.

Assumptions used in this fiscal analysis

Energy Audits:

3,000 Public Buildings: approximately 2,500 executive branch and University and approximately 500 schools
Energy Audits: \$5.0 per building x 430 buildings = **\$2,150.0 (on-going)**

Energy Efficiency Retrofits:

Travel: 60 site visits per year x \$2.0 per trip = **\$120.0 (on-going)**
1st year Commodity costs: \$7.5 x 4 positions = **\$30.0 (one-time)**
On-going Core Services: \$3.0 x 4 positions = **\$12.0 (on-going)**

Four additional positions are required to achieve the above goals.

Two Engineering/Architect II positions (Range 23)

- \$127.9 x 2 = **\$255.8 (on-going)**

These positions would initiate, manage and oversee the energy efficiency retrofits at the public buildings as well as manage the energy savings performance contracts.

Two Engineering/Assistant II positions (Range 19)

- \$101.9 x 2 = **\$203.8 (on-going)**

These positions would provide on-site construction management for the individual energy efficiency retrofits as well as management of the annual energy audit efforts.

Total year one: \$2,771.6

Total on-going: \$2,741.6

Christine Marasigan

From: Bolling, Elizabeth (GOV) <Elizabeth.Bolling@Alaska.GOV>
Sent: Monday, April 09, 2018 8:16 AM
To: Christine Marasigan
Subject: RE: fiscal notes

Hi Christine,

The fiscal note for 190 needs a little more work. We did receive two drafts this Saturday, but I sent them back because the analysis didn't have enough information about the reasons for the costs. DOT is working hard on making a more comprehensive analysis. I expect this note to be uploaded this afternoon ☺

Respectfully,

Elizabeth Bolling, MPA
Assistant Legislative Director
Office of the Governor
O: 907.465.4582
C: 907.419.3558

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From: Christine Marasigan [mailto:Christine.Marasigan@akleg.gov]
Sent: Friday, April 06, 2018 5:22 PM
To: Bolling, Elizabeth (GOV) <Elizabeth.Bolling@Alaska.GOV>
Subject: fiscal notes

Hi!

I appreciate the updated fiscal notes, I am concerned about SB 190 which will be heard first on Tuesday.

Thanks,
Christine

Christine R. Marasigan, Legislative Aide
Office of Senator Kevin Meyer
Senate Rules Committee Chair
Alaska State Capitol
Juneau, AK 99801
907.465.4945

State of Alaska Department of Education & Early Development - School Finance
 School District Operating Fund Energy (heating, fuel, electric) Expenditures
 Prepared 2/22/2017

School District	Actual FY02 Energy \$	Actual FY03 Energy \$	Actual FY04 Energy \$	Actual FY05 Energy \$	Actual FY06 Energy \$	Actual FY07 Energy \$
Alaska Gateway	\$ 521,130	\$ 491,233	\$ 589,133	\$ 651,687	\$ 707,763	\$ 867,666
Aleutian Region	62,362	-	62,800	29,204	46,413	86,274
Aleutians East Borough	382,426	355,777	403,001	437,660	541,015	559,959
Anchorage	7,766,242	7,270,198	8,961,730	9,372,030	11,165,877	12,303,717
Annette Island	-	162,239	155,529	175,676	182,516	191,113
Bering Strait	728,068	704,380	2,134,488	2,152,863	3,005,405	3,384,042
Bristol Bay Borough	227,927	216,434	241,251	212,270	230,581	274,456
Chatham	-	181,119	212,906	229,724	265,837	302,481
Chugach	59,501	25,264	41,076	45,073	90,930	107,456
Copper River	319,897	322,032	221,669	390,944	509,818	522,672
Cordova	-	-	249,560	293,971	331,430	398,065
Craig	155,542	144,419	154,443	163,978	189,950	208,251
Delta/Greely	167,087	164,565	286,459	242,699	451,954	478,235
Denali Borough	207,231	188,937	225,205	315,025	404,530	434,355
Dillingham	291,266	293,995	293,688	370,035	412,651	453,905
Fairbanks N. Star Borough	2,917,770	2,938,201	3,148,448	3,738,135	4,603,356	4,841,662
Galena	459,290	436,911	402,988	468,915	990,026	708,204
Haines Borough	170,600	166,491	183,628	224,813	264,427	276,813
Hoonah	130,345	198,599	215,603	258,918	328,770	331,834
Hydaburg	-	37,482	72,815	100,726	15,676	16,067
Iditarod Area	520,811	462,530	425,883	443,990	535,569	633,243
Juneau Borough	789,239	845,041	882,126	942,545	1,030,558	1,263,619
Kake	137,314	132,732	121,848	147,412	191,190	229,319
Kashunamiut (1)	28,352	-	88,912	153,765	315,844	261,332
Kenai Peninsula Borough	3,358,504	3,321,866	3,063,674	3,501,901	4,313,842	4,461,621
Ketchikan Gateway Borough	540,901	575,265	590,287	649,590	812,073	965,989
Klawock	35,650	35,239	100,226	104,703	123,441	111,588
Kodiak Island Borough	1,150,204	1,080,762	1,129,634	1,346,996	1,655,091	1,762,874
Kuspuk	422,951	407,022	341,546	389,522	234,387	234,370
Lake & Peninsula Borough	-	716,971	734,376	744,215	869,425	1,058,782
Lower Kuskokwim	167,147	2,266,196	2,363,880	2,483,987	2,997,275	3,504,318
Lower Yukon	542,823	559,335	1,583,704	1,480,687	1,249,076	2,138,577
Mat-Su Borough	2,257,541	2,072,943	2,215,834	2,548,024	2,926,442	3,515,672
Nenana	149,522	138,015	146,908	188,747	262,585	258,639
Nome	501,671	477,032	511,182	543,146	767,474	967,611
North Slope Borough	174,115	201,390	2,007,121	2,123,944	2,658,473	2,682,839
Northwest Arctic Borough	2,480,755	2,514,029	2,745,453	2,809,940	3,382,486	4,077,785
Pelican	32,168	24,360	36,610	44,296	38,510	23,030
Petersburg	338,977	361,638	370,532	415,053	434,133	479,630
Pribilof	124,584	125,875	99,788	118,629	168,080	180,870
Saint Mary's	-	-	104,675	101,082	165,512	188,115
Sitka Borough	133,231	389,237	426,371	485,987	661,064	705,707
Skagway	74,990	70,538	51,973	57,276	76,116	91,441
Southeast Island	130,019	152,870	157,093	211,363	215,644	252,034
Southwest Region	286,628	670,591	755,311	870,389	1,072,935	1,303,908
Tanana	-	79,801	23,942	97,050	109,603	171,818
Unalaska	17,701	212,357	214,749	268,943	288,929	393,749
Valdez	341,071	-	415,970	427,858	574,780	523,592
Wrangell	61,593	67,497	142,297	153,569	187,726	212,424
Yakutat	134,225	81,933	116,979	118,611	142,714	147,583
Yukon Flats	223,926	253,204	-	602,129	840,902	869,488
Yukon/Koyukuk	646,062	625,564	500,994	586,426	755,295	859,831
Yupiiit (1)	-	-	417,426	471,525	504,298	1,033,876
Total	\$ 30,369,359	\$ 33,220,109	\$ 41,143,724	\$ 45,507,646	\$ 55,300,397	\$ 62,312,501

Note 1: Information for FY2016 is pending the receipt of audited financial statements.

State of Alaska Department of Education & Early Development - School Finance
 School District Operating Fund Energy (heating, fuel, electric) Expenditures
 Prepared 2/22/2017

School District	Actual FY08 Energy \$	Actual FY09 Energy \$	Actual FY10 Energy \$	Actual FY11 Energy \$	Actual FY12 Energy \$	Actual FY13 Energy \$
Alaska Gateway	\$ 839,482	\$ 878,575	\$ 816,608	\$ 887,043	\$ 1,064,796	\$ 934,763
Aleutian Region	65,309	57,200	60,199	66,907	40,467	82,967
Aleutians East Borough	768,279	705,093	632,157	692,888	767,544	830,795
Anchorage	12,402,071	14,563,886	13,598,545	13,169,389	13,460,840	12,801,699
Annette Island	209,632	223,241	107,485	209,337	407,819	292,289
Bering Strait	3,574,340	5,182,580	3,671,258	3,456,204	4,253,288	4,377,554
Bristol Bay Borough	315,022	341,626	332,257	373,744	357,604	375,809
Chatham	397,128	413,814	273,622	314,813	346,366	341,825
Chugach	97,638	79,918	87,845	148,062	205,713	204,659
Copper River	627,040	660,588	557,616	613,801	746,733	748,465
Cordova	408,532	332,587	259,203	324,722	315,906	303,559
Craig	231,390	247,802	183,400	226,687	281,086	407,178
Delta/Greely	587,028	653,884	524,951	621,490	673,163	667,594
Denali Borough	469,243	489,087	447,358	462,256	464,192	421,726
Dillingham	473,709	670,288	492,382	405,022	566,991	514,594
Fairbanks N. Star Borough	5,658,279	5,128,925	5,405,220	6,066,151	6,579,953	6,420,421
Galena	1,077,024	925,643	1,151,566	1,128,251	1,255,401	930,285
Haines Borough	301,100	276,743	250,972	249,803	250,860	268,330
Hoonah	332,656	281,368	114,246	287,428	396,669	324,448
Hydaburg	201,721	181,787	180,822	174,418	169,029	205,736
Iditarod Area	603,232	784,926	828,010	579,416	659,715	824,136
Juneau Borough	1,333,745	1,278,617	1,224,780	1,588,077	1,686,385	1,797,195
Kake	210,023	250,129	278,063	277,807	134,284	239,376
Kashunamiut (1)	379,537	438,263	372,192	212,354	355,863	464,397
Kenai Peninsula Borough	4,902,341	5,160,787	4,810,469	5,593,378	5,929,922	5,585,135
Ketchikan Gateway Borough	1,230,265	861,620	970,355	1,149,170	1,034,581	1,009,690
Klawock	145,112	128,549	118,124	130,808	176,296	157,001
Kodiak Island Borough	2,127,994	1,755,110	1,813,968	1,972,911	2,371,536	2,195,472
Kuspuk	597,657	862,874	875,129	757,992	469,621	520,967
Lake & Peninsula Borough	1,190,859	1,413,400	1,193,712	1,269,458	1,315,666	1,111,277
Lower Kuskokwim	3,907,437	5,316,572	4,694,069	4,934,856	5,578,413	5,879,307
Lower Yukon	2,640,515	3,822,947	3,385,394	3,075,839	3,312,491	3,921,694
Mat-Su Borough	3,657,394	4,123,662	3,850,855	3,984,289	4,395,336	4,320,265
Nenana	301,908	327,578	316,327	313,290	368,201	223,738
Nome	1,027,876	1,185,985	1,174,457	1,085,858	1,269,752	1,189,871
North Slope Borough	2,855,140	3,580,908	3,084,423	2,859,691	3,167,390	3,017,204
Northwest Arctic Borough	2,855,004	4,501,413	3,886,786	3,247,009	4,498,281	4,348,844
Pelican	45,912	36,693	45,455	53,255	60,125	40,101
Petersburg	486,112	448,015	445,720	558,119	581,548	605,270
Pribilof	219,057	212,785	240,888	223,119	233,871	354,067
Saint Mary's	197,985	350,390	306,744	237,131	332,930	346,397
Sitka Borough	952,095	783,556	765,557	818,841	885,182	856,565
Skagway	99,232	89,604	79,302	92,899	110,127	115,669
Southeast Island	314,575	282,186	226,005	280,436	304,032	334,049
Southwest Region	1,244,716	1,535,629	1,499,700	1,417,012	1,536,666	1,462,797
Tanana	148,535	235,660	107,510	153,364	92,025	151,251
Unalaska	498,359	457,887	380,780	451,657	540,363	503,079
Valdez	684,633	536,504	557,116	648,352	754,361	840,749
Wrangell	199,495	247,322	175,681	188,481	225,432	252,754
Yakutat	170,810	195,864	173,535	170,454	213,909	203,893
Yukon Flats	916,316	1,180,867	950,896	1,240,863	1,282,388	1,350,625
Yukon/Koyukuk	892,140	1,255,601	970,459	827,052	1,116,299	1,212,252
Yupiiit (1)	725,183	1,175,575	968,629	1,406,567	739,871	1,228,088
Total	\$ 66,797,817	\$ 77,112,113	\$ 69,918,802	\$ 71,678,221	\$ 78,337,282	\$ 78,117,871

Note 1: Information for FY2016 is pending the receipt of audited financial statements.

State of Alaska Department of Education & Early Development - School Finance
 School District Operating Fund Energy (heating, fuel, electric) Expenditures
 Prepared 2/22/2017

School District	Actual FY14 Energy \$	Actual FY15 Energy \$	Actual FY16 Energy \$	Budget FY17 Energy \$
Alaska Gateway	\$ 871,151	\$ 940,056	\$ 695,546	\$ 893,240
Aleutian Region	54,190	74,553	62,963	58,000
Aleutians East Borough	800,668	623,426	475,503	668,352
Anchorage	12,897,124	14,368,207	13,967,937	18,314,500
Annette Island	211,257	305,661	275,175	351,000
Bering Strait	4,075,937	4,935,570	3,797,471	4,300,000
Bristol Bay Borough	362,587	343,733	323,546	350,000
Chatham	291,654	304,291	233,164	262,048
Chugach	169,774	154,665	163,069	185,000
Copper River	590,099	517,376	405,525	642,150
Cordova	279,713	240,962	217,782	278,000
Craig	194,093	179,671	182,115	209,869
Delta/Greely	721,548	614,600	334,110	365,000
Denali Borough	420,526	371,881	293,198	416,100
Dillingham	545,950	469,682	405,740	420,000
Fairbanks N. Star Borough	5,824,467	5,628,797	4,798,677	5,361,498
Galena	863,987	939,892	909,170	1,632,717
Haines Borough	238,756	196,693	182,324	211,500
Hoonah	275,594	242,115	130,025	169,382
Hydaburg	163,055	142,096	135,537	182,465
Iditarod Area	804,333	808,713	619,330	309,418
Juneau Borough	1,781,013	1,351,628	1,092,477	1,501,500
Kake	199,670	190,323	147,746	233,390
Kashunamiut (1)	399,367	361,606		439,500
Kenai Peninsula Borough	5,511,290	5,707,467	5,371,584	5,227,765
Ketchikan Gateway Borough	990,466	842,559	762,092	952,597
Klawock	150,653	127,591	113,543	140,000
Kodiak Island Borough	2,032,624	1,908,365	1,490,239	1,956,504
Kuspuk	363,021	368,229	348,723	655,000
Lake & Peninsula Borough	1,081,144	1,051,940	903,356	920,000
Lower Kuskokwim	5,692,659	5,618,363	4,973,460	5,495,431
Lower Yukon	3,538,541	3,835,003	3,476,319	3,762,371
Mat-Su Borough	4,312,587	5,159,703	5,370,293	5,578,540
Nenana	202,136	229,195	179,855	178,000
Nome	1,154,463	1,273,150	1,087,789	1,387,312
North Slope Borough	3,066,267	3,228,803	2,874,306	3,355,000
Northwest Arctic Borough	4,018,811	4,866,500	4,005,958	4,387,400
Pelican	26,756	15,894	12,935	12,409
Petersburg	537,934	424,270	352,805	460,000
Pribilof	219,068	201,131	160,161	256,000
Saint Mary's	360,136	341,680	325,694	421,000
Sitka Borough	901,633	774,912	607,824	879,205
Skagway	105,616	99,577	81,560	90,000
Southeast Island	323,787	282,203	240,475	333,350
Southwest Region	1,713,090	1,617,001	1,341,024	1,373,116
Tanana	127,490	135,111	182,606	120,000
Unalaska	481,684	410,538	308,055	290,000
Valdez	623,513	766,410	491,039	794,850
Wrangell	237,177	190,094	176,772	205,474
Yakutat	169,646	131,587	70,738	56,500
Yukon Flats	1,163,292	1,470,088	721,945	992,900
Yukon/Koyukuk	1,014,893	895,719	806,816	933,703
Yupitit (1)	1,170,819	1,215,254		749,000
Total	\$ 74,327,709	\$ 77,494,534	\$ 66,686,096	\$ 79,718,056

Note 1: Information for FY2016 is pending the receipt of audited financial statements.