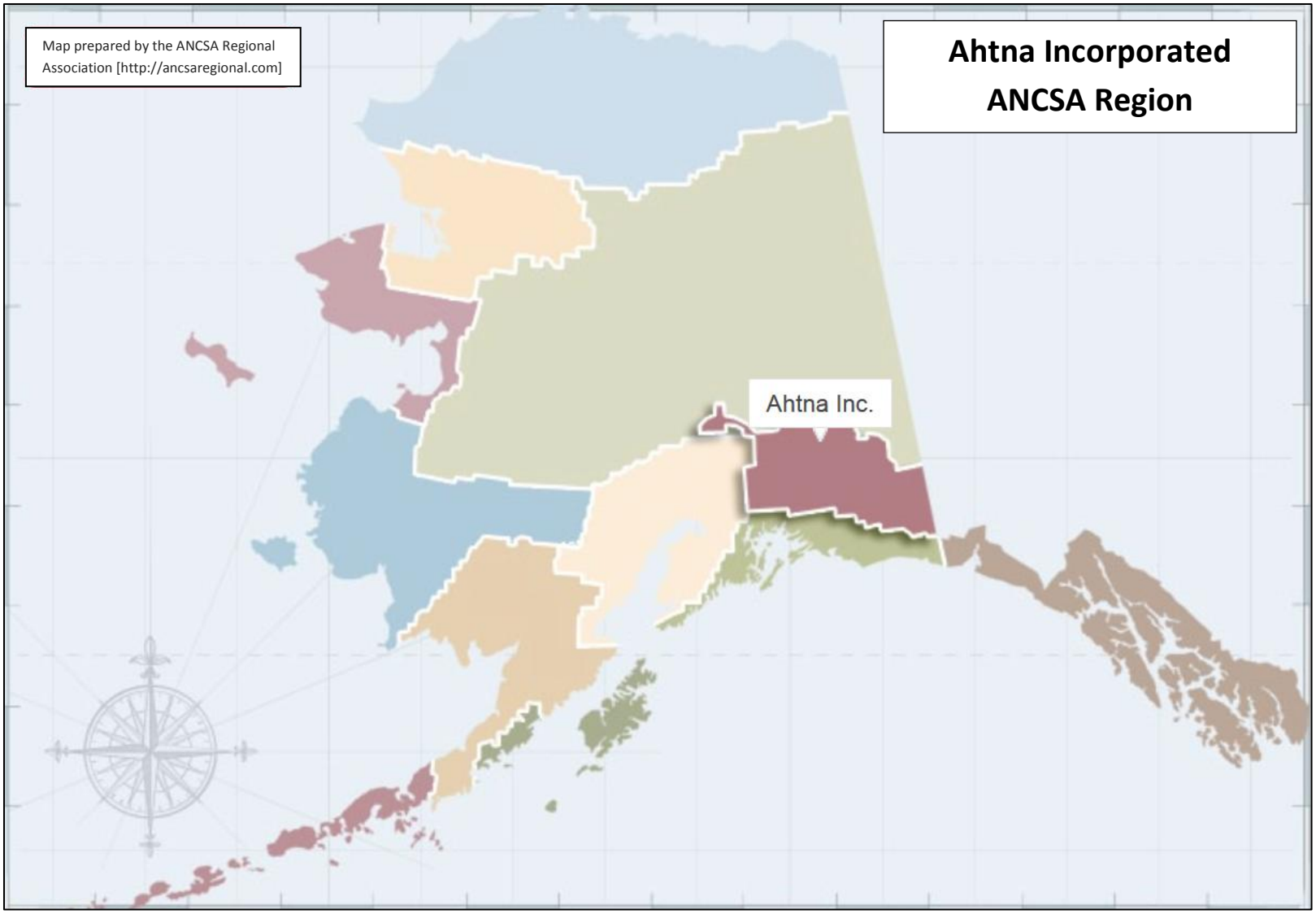
Map prepared by the ANCSA Regional Association [http://ancsaregional.com]
Ahtna Incorporated
ANCSA Region
Ahtna Inc.

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Ahtna, Incorporated Profile 1-4

Ahtna, Incorporated Dashboard[1]

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Ahtna, Inc. ANCSA region is 3,477,a decrease of 6% from 2000.

Housing Units: There are currently 3,544 housing units in the Ahtna, Inc ANCSA region. Of these, 1,361 are occupied, 182 vacant units are for sale or rent, and the remaining 2,001 are seasonal or otherwise vacant units (Profile Figure R6).

Energy: The average home in the Ahtna, Inc ANCSA region is 1,664 square feet and uses 164,000 BTUs of energy per square foot annually, 19% more than the statewide average of 137,000 BTUs per square foot per year.

Energy Costs: Using AKWarm estimates, average annual energy cost for homes in the Ahtna, Inc ANCSA region is $7,880, which is approximately 2.8 times more than the cost in Anchorage, and 3.7 times more than the national average (Profile Figure R13).

Energy Programs: Approximately 10% of the occupied housing in the Ahtna, Inc ANCSA region have completed either the Home Energy Rebate or Weatherization program, or have received BEES certification since 2008, compared to 21% statewide (Profile Figure R12).

Housing Quality: Within current housing stock, newer homes have better energy performance. On average, homes built in the 1960s are currently rated at 2-stars, compared to a current average rating of 3-stars for homes built after 2000.

Air-tightness: Within current housing stock, newer homes are tighter. On average, homes built in the last decade meet the 2009 BEES standard of 7 air-changes per hour at 50 pascals (ACH50). In contrast, homes built in the 1960s are 2.4 times leakier than those built since 2000 (Profile Figure R7).

Ventilation: An estimated 828 occupied housing units (or 61%) in the Ahtna, Inc ANCSA region are relatively air-tight and lack a continuous ventilation system. These houses are at higher risk of moisture- and indoor air quality-related issues (Profile Figures R9-R10).

Overcrowding: Nine percent of occupied units are estimated to be either overcrowded (3%) or severely overcrowded (6%). This is roughly 3 times the national average, and makes the Ahtna, Inc region the sixth most overcrowded ANCSA region in the state.

Affordability: According to American Community Survey (ACS) data, approximately 20% of households in the Ahtna, Inc region spend 30% or more of total income on reported housing costs, including rent, water and sewer utilities, and energy costs. Using AKWarm estimates, the average annual energy costs constitute approximately 15% of census median area income for occupied housing.

[1] Figures referenced in the Dashboard are located in the ANCSA Region profile.

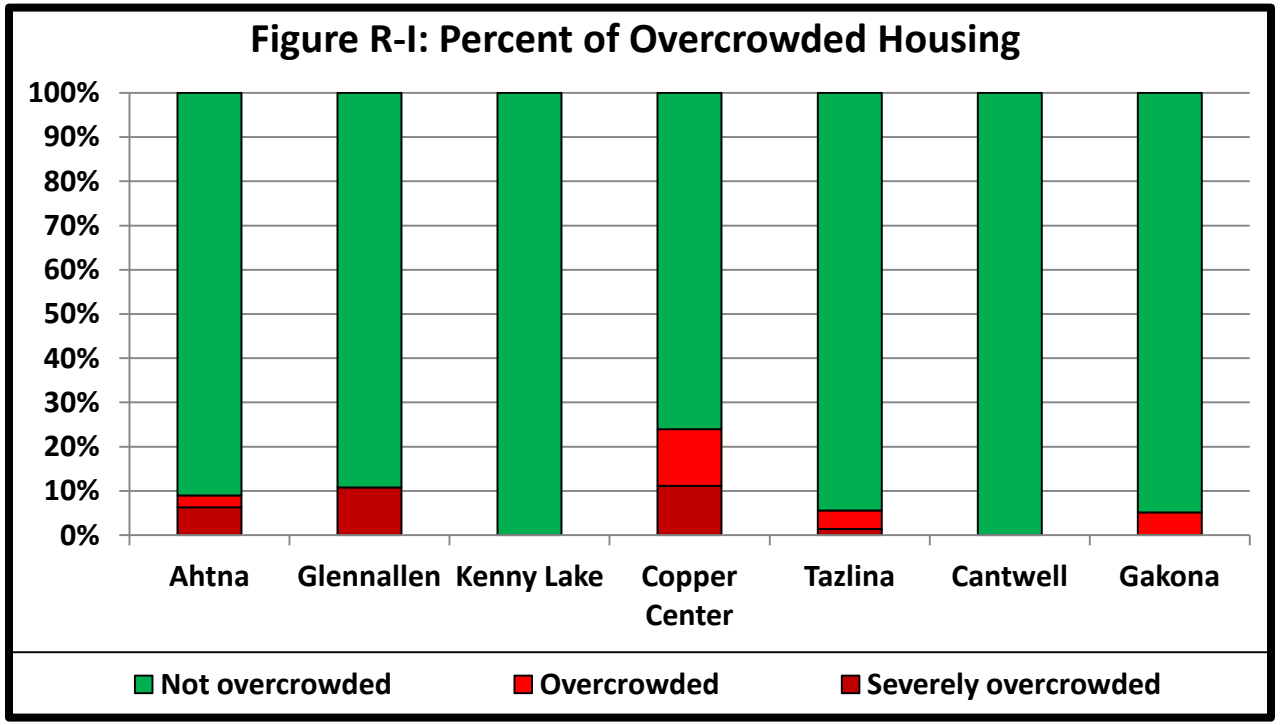
Ahtna, Incorporated Summary

Community

The Ahtna, Incorporated ANCSA region mainly encompasses the upper Copper River region of Alaska, with an extension into area around Cantwell. It is bordered by Canada to the east, and the Chugach ANCSA region to the south. The average home size in the region ranges from 1,259 square feet in the community of Cantwell to 2,063 square feet in the community of Copper Center.

Overcrowding

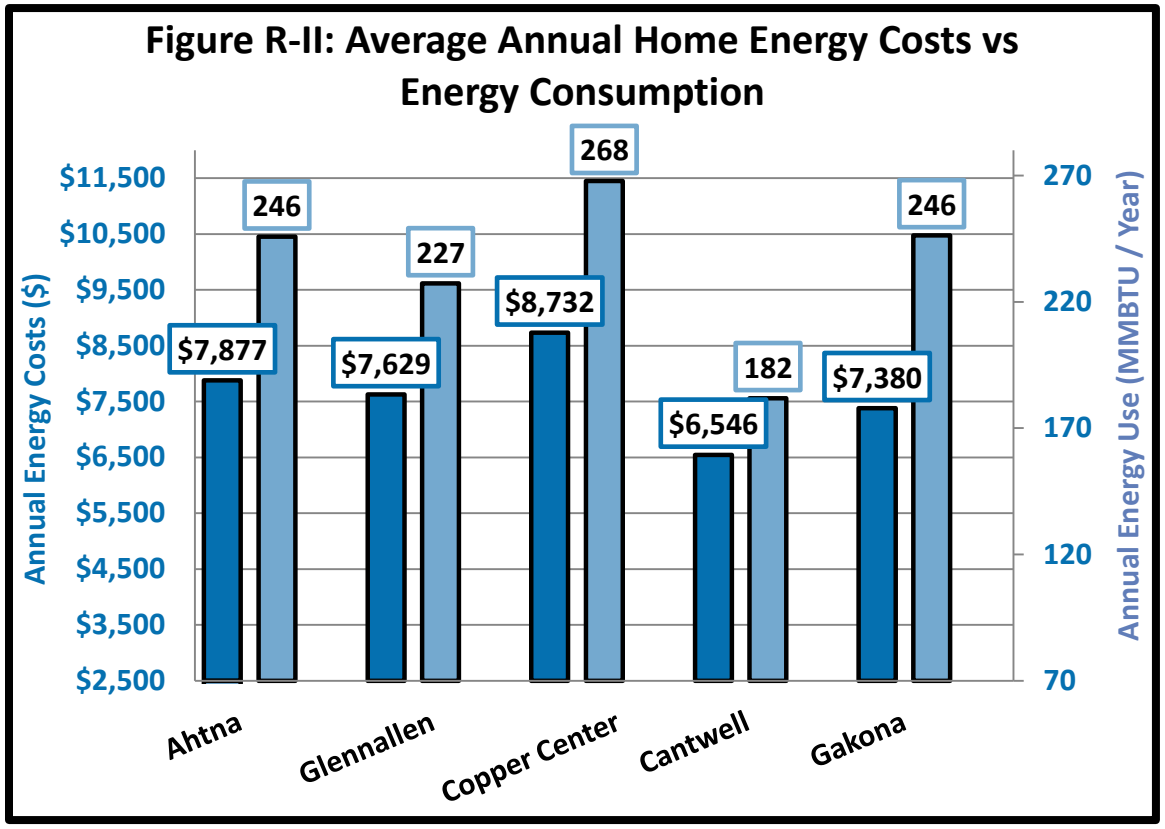
The Ahtna, Inc. region is the sixth most overcrowded area in the state with 9% of occupied units with more than one person per room. Overcrowding rates vary widely among the region's communities, from an estimated 0% overcrowding in Kenny Lake to an estimated high of 100% overcrowding in Nelchina. Considering only the six most populous communities (Figure R-I), overcrowding rates vary from an estimated 0% in Kenny Lake and Cantwell to 24% In Copper Center.



Approximately 5% of the housing in the Ahtna region is vacant and available for sale or rent. Availability varies by community, from a low of approximately no available housing in Chistochina to a high of 54% in Nelchina available for sale or rent.

Energy[2]

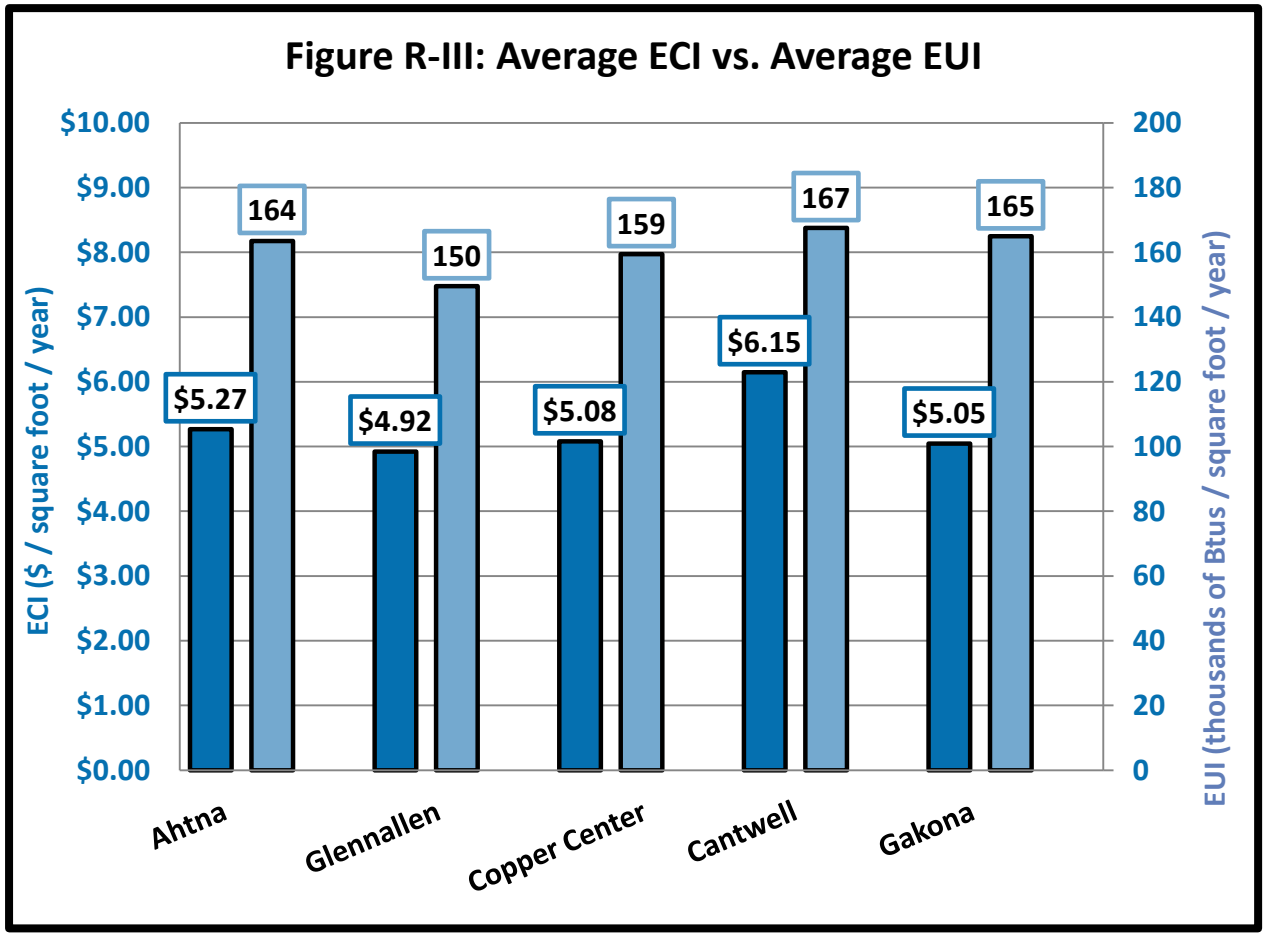
Regionally, the average annual energy cost per household is $7,877, which is the fourth most costly ANCSA region in the state. The regional energy use and costs compared to that of communities within the region[3] (Figure R-II). The highest annual energy costs of $8,732 per year are found in Copper Center, which also has the highest average energy use in the region. The community of Cantwell has the lowest average annual energy costs in the region, $6,546. Cantwell also has the lowest annual energy use in the region, which may be due in part to the relatively small size of homes in Cantwell compared to houses in other communities. Cantwell homes average more than 700 square feet smaller than those found in Copper Center.



[2] Regional data appearing in this section are based on communities with sufficient levels of ARIS data, meaning not all communities were included in the analysis.

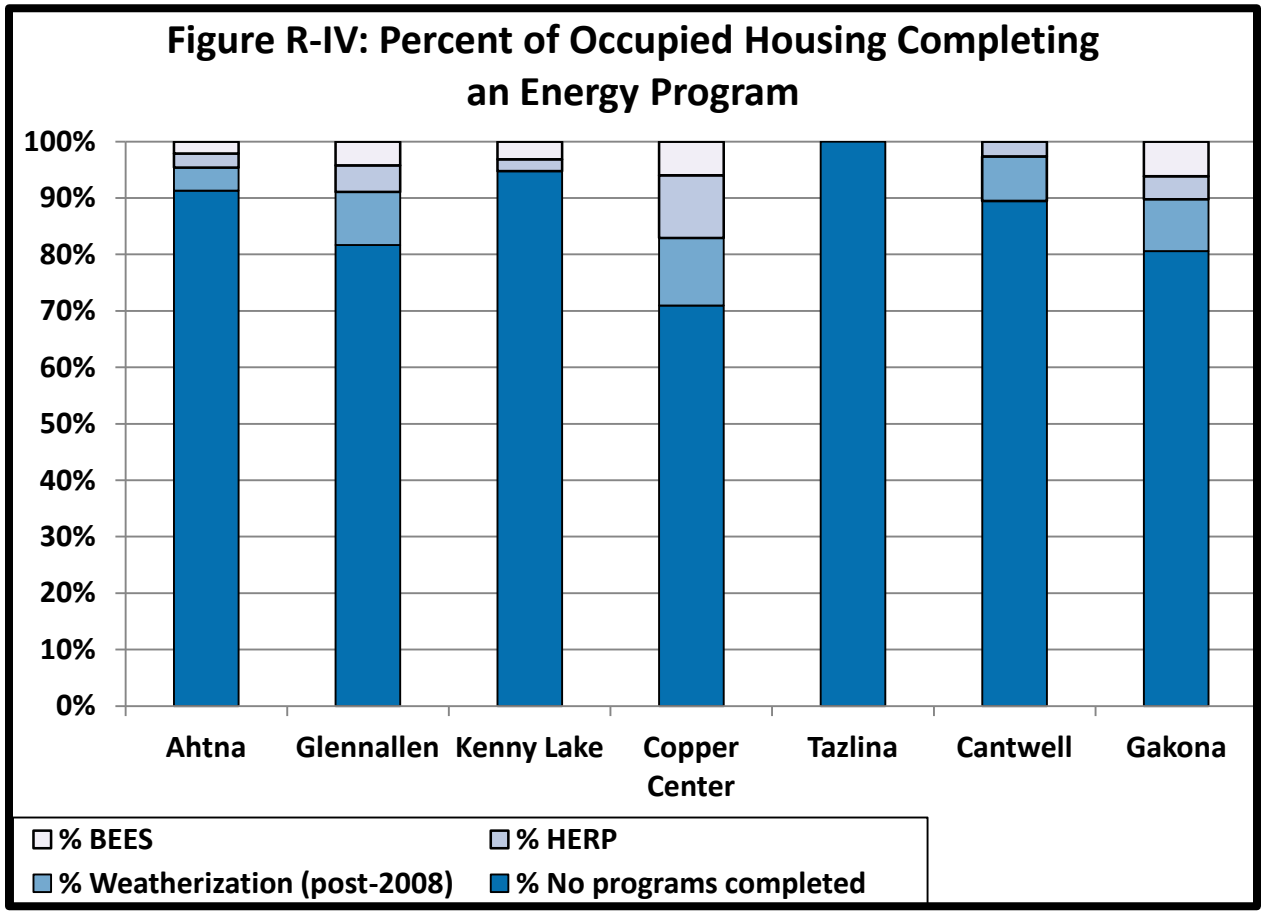
[3] Only communities with sufficient data for reporting are included in Figure R-II.

The Ahtna region has the fifth highest energy use per square foot[4] of any ANCSA region in the state. Figure R-III shows the energy use and cost per square foot for communities in the region.[5] There is relatively little variation in average ECI and EUI between communities in the region, suggesting that total annual energy use and cost differences are more a function of building size than efficiency in the Ahtna, region. Cantwell has the highest average EUI and ECI in the region at 167 kBTU/ft^2 and $6.15/ft^2. The lowest average EUI and ECI are both found in Glennallen with an average EUI of 150 kBTU/ft^2 and an average ECI of $4.92. The average home heating index for Ahtna communities ranges from 8.2 to 9.4 BTUs/ft^2/HDD. Glennallen has the lowest home heating index (8.2) and the community of Gakona has the highest home heating index (9.4).



[4] Energy use per square foot is also known as Energy Use Intensity, or EUI and is given in kBTUs per square foot, per year.
[5] Energy cost per square foot is also known as the Energy Cost Index, or ECI and is given in dollars per square foot, per year.

Understanding the variations between communities participating in energy efficiency programs is essential to targeting work and resource allocation in the region. Approximately 9% of housing units in the Ahtna region have completed either the Weatherization or Home Energy Rebate program, or achieved BEES certification since 2008. This is the third lowest participation rate among ANCSA regions. Figure R-IV shows the regional participation levels for the three programs. The greatest participation at the community level is found in Copper Center where 31% of homes have completed an AHFC energy program. The lowest participation occurred in Tazlina where it is estimated that no homes completed one of the programs. Of the three primary AHFC residential energy efficiency programs, Weatherization has had the highest participation in the region with approximately 4% of housing units completing a Weatherization retrofit, more than 2% completing a Home Energy Rebate program retrofit, and approximately 2% of homes being certified to meet BEES.



The majority of the energy used for space heating in Ahtna comes from fuel oil or wood. Figure R-V shows that, fuel oil provides approximately 64% of the total space heating energy in the region while wood use accounts for most of the remaining energy (33%). Both Glennallen and Copper Center have energy use profiles close to the regional average.

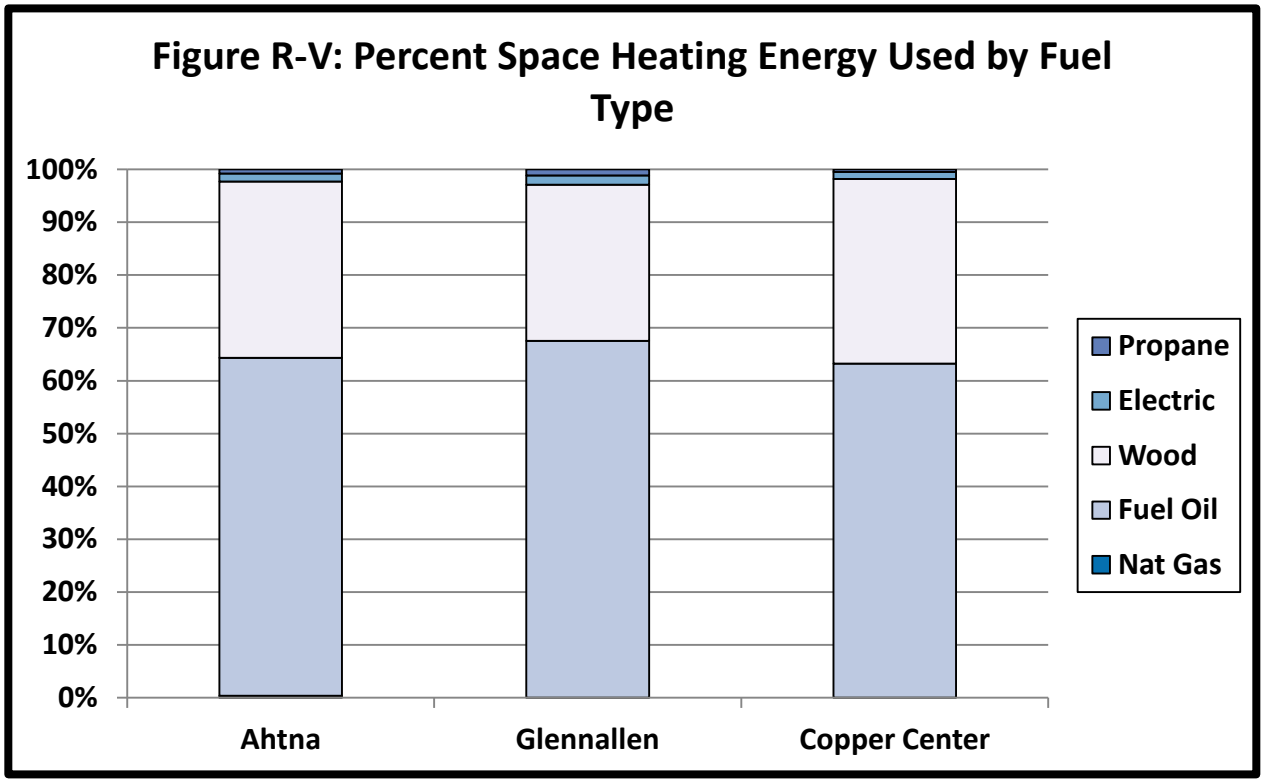
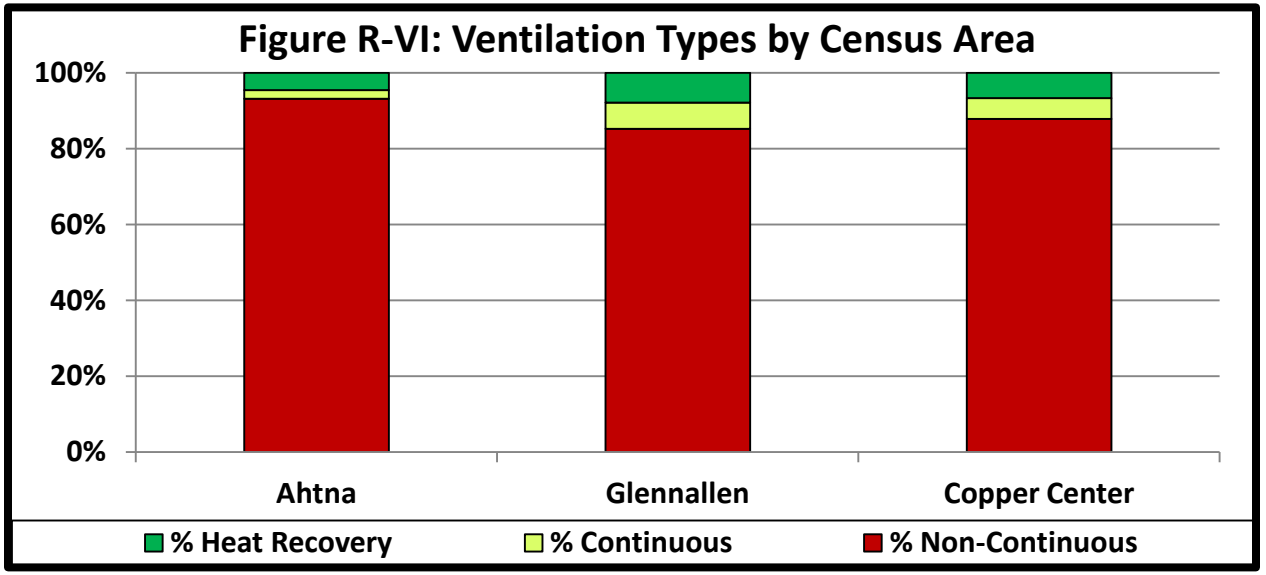
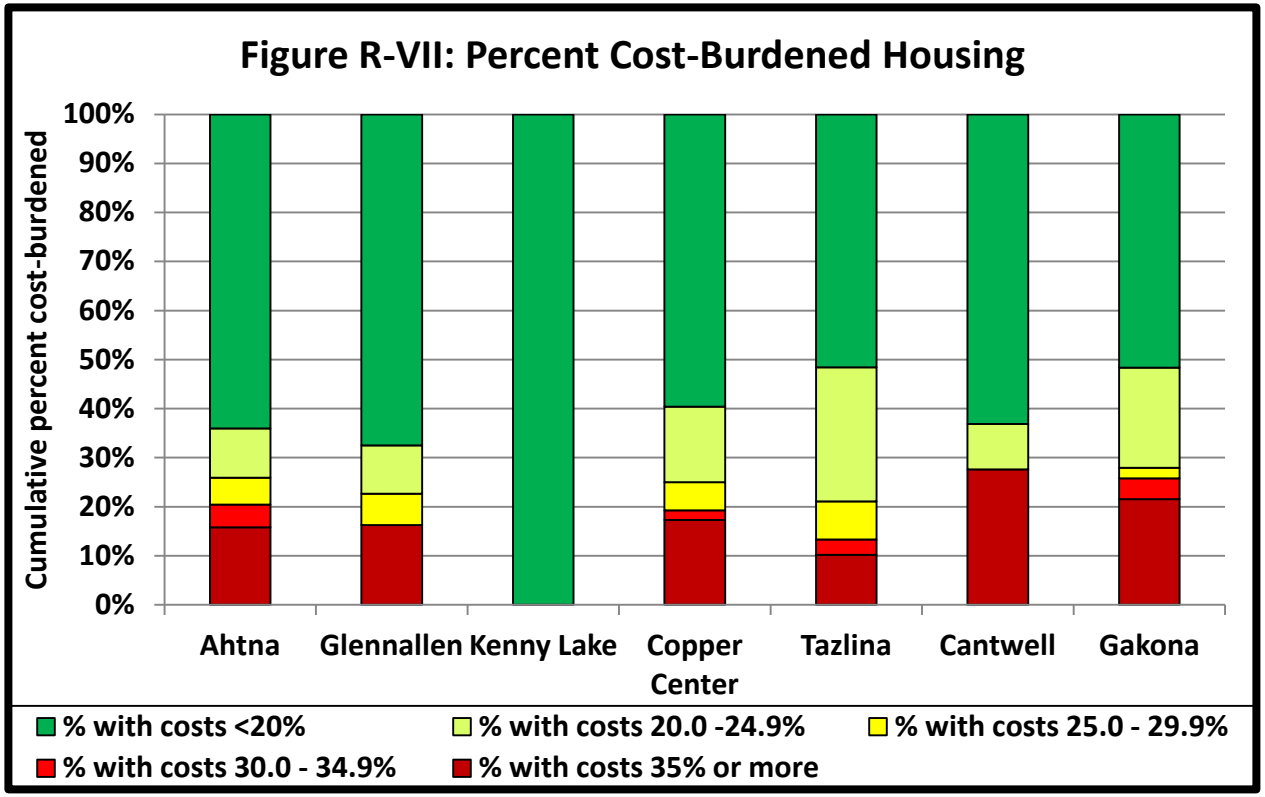


Figure R-VI gives the types of ventilation found in housing units in the Ahtna region. Overall, the region has the second lowest percentage (7%) of housing units with installed continuous mechanical ventilation, either with or without heat recovery. The percentage of homes with continuous mechanical ventilation varies by community. Copper Center and Glennallen have a higher percentage of homes with mechanical ventilation than the regional average. Of communities with sufficient energy data for reporting individually, Glennallen has the highest percentage of installed continuous mechanical ventilation in the region (15%) with Copper Center close behind at 13%.



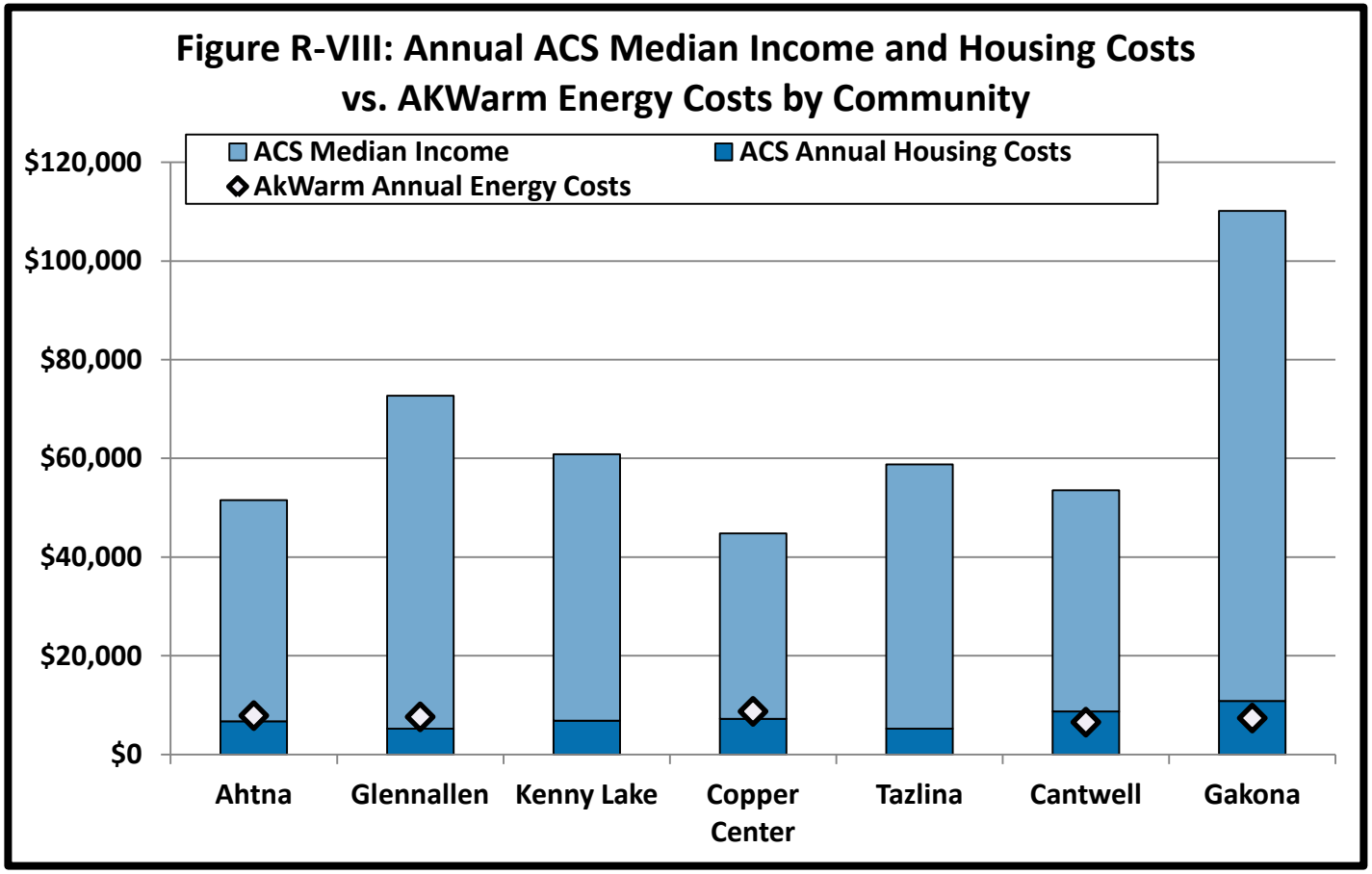
Affordability

According to ACS estimates, approximately 21% of housing units in the Ahtna ANCSA region are considered cost-burdened, spending 30% or more of total household income on housing costs.[6] Affordability varies widely, from a low of approximately zero cost-burdened households in Kenny Lake to a high of 100% of households in Paxson. Figure R-VII shows the percent of cost-burdened households for the Ahtna region and its most populous communities. Among the six most, populous communities in the region Kenny Lake has the least amount of estimated cost-burdened households at 0%, while Cantwell has the highest at 28%.



[6] CCHRC's analysis of ACS energy costs indicate that there are systematic underestimations for rural Alaska which suggests that ACS-based cost burdened housing estimates are low. See Appendix A, "Analysis of American Community Survey Energy Cost Estimates" for more details.

Figure R-VIII gives the median incomes for Ahtna's most populous communities, along with housing and energy costs.[6] Regional average household income is approximately $44,855. Across all communities in the region, median income levels range from $16,964 in Chitina to $143,125 in McCarthy. Considering the region's six most populous communities, the median income levels range from $44,792 in Copper Center to $110,167 in Gakona.



Community, Regional, and Statewide Housing Characteristics

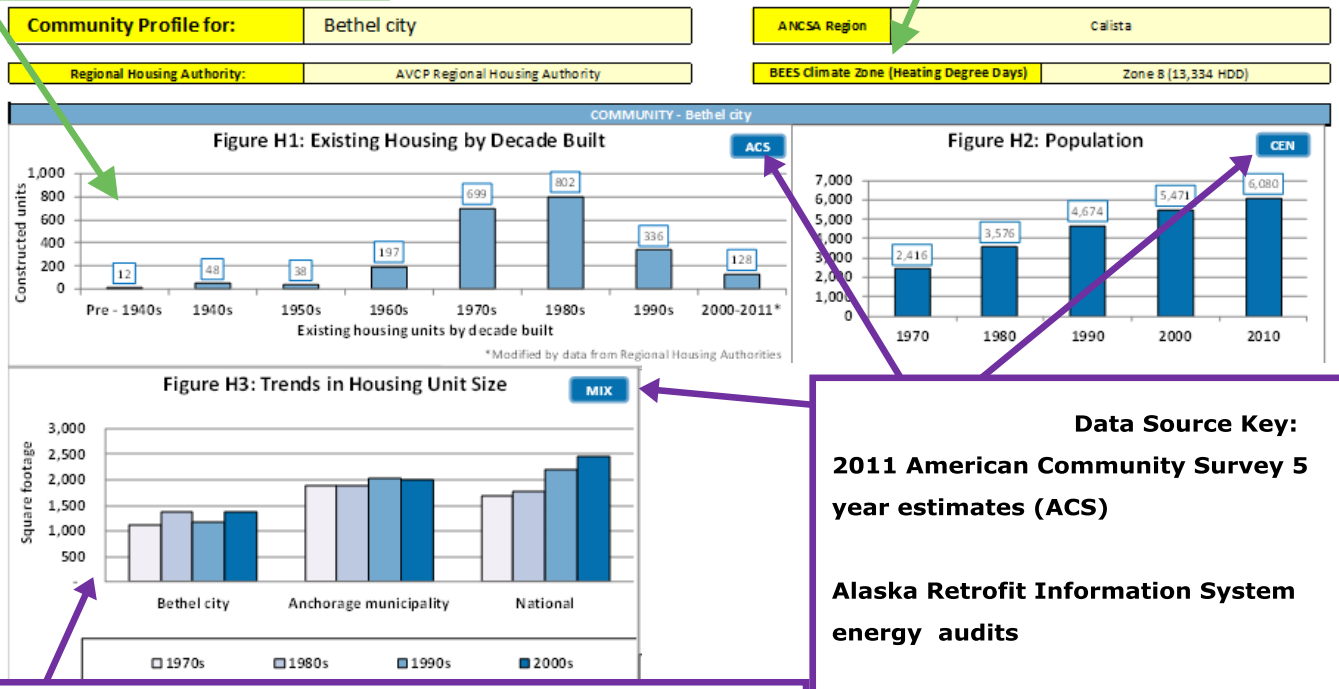
This ANCSA region summary only includes the highlights of housing characteristics at the ANCSA regional level. A detailed data profile with charts and tables for this region follows. The 2014 Alaska Housing Assessment provides a significant amount of data and analysis at statewide, ANCSA region, census area, and community levels. This assessment provides a statewide analysis of housing characteristics, how they compare to national numbers, and the estimated housing needs. Within the 2014 Alaska Housing Assessment, written summaries are available for each individual ANCSA region and census area, and data profiles are available for each community and census area characterizing the housing stock from the perspective of community, overcrowding, energy and affordability. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a detailed discussion of estimating housing need and comparison of methods to previous Housing Assessments, see Appendix B, "Statewide Need Assessment" of the 2014 Alaska Housing Assessment.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

This graph show the breakdown of *current* housing stock by the decade in which the housing units were built. It does *not* show trends over time.

The Alaska Building Energy Efficiency Standard (BEES) was established by AHFC for the State of Alaska to promote the construction of energy efficient buildings. The standards for specific building components are divided into four climate zones, from Zone 6 in Southeast AK to Zone 9 on the North Slope.



Data Source Key:

2011 American Community Survey 5 year estimates (ACS) — ACS

Alaska Retrofit Information System energy audits — ARIS

2010 Decennial Census — CEN

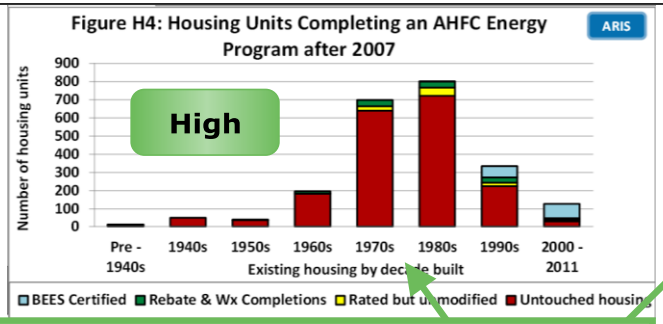
Mixed data source; see individual graphs for details. — MIX

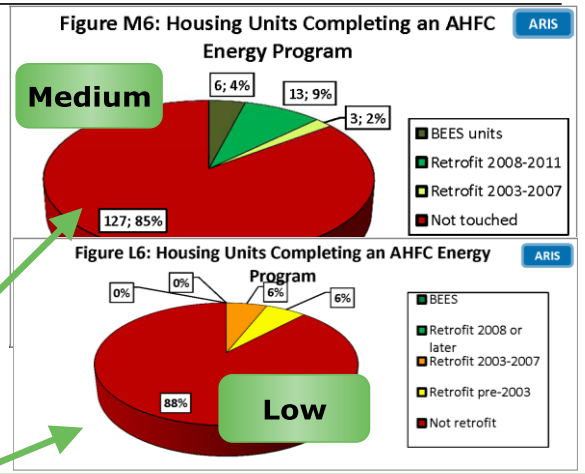
Data Sources: National trends come from the 2009 Residential Energy Consumption Statistics published by the U.S. Energy Information Administration. Anchorage and census area data come from the Alaska Retrofit Information System.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

Energy program activity within communities with high, medium and low amounts of ARIS data available. (See p.7 of "How to Interpret" for detail on data levels).





Communities - AHFC Energy Program Activity

High Data - Reported by decade built for the housing units.

Medium Data - Reported by percent of total housing units touched.

Low Data - Have few or no post-2008 Weatherization/Rebate completions or BEES certifications in the ARIS database.

- **PCE = Power Cost Equalization**
- **Average Annual Energy Cost with PCE: The cost to the household after it has been lowered by the PCE subsidy.**
- **Without PCE: The actual energy cost, including the amount paid by the State for PCE.**

American Community Survey (ACS) Data:

Complete Plumbing: Includes hot & cold running water, a flush toilet, and a bathtub or shower within the home.

Complete Kitchen: Includes a sink with a faucet, a stove/ range, and a refrigerator.

ACS

Houses Lacking Complete Plumbing or Kitchen Facilities	# House-holds	% House-holds
Lack complete plumbing	3	10%
Lack complete kitchen	0	0%

ARIS

Estimated Total Community Space Heating Fuel Use by Type		
Fuel Oil	20,816	(gallons)
Nat Gas	-	(ccf)
Electricity	15,459	(kWh)
Wood	3	(cords)
Propane	-	(gallons)
Coal	-	(tons)

ARIS

Avg Annual Energy Cost with PCE	$5,265
Avg Annual Energy Cost without PCE	$6,643

ARIS

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost ($ / gallon)	$5.16
Electricity with PCE ($/kWh)	$0.03
Electricity cost without PCE ($/kWh)	$0.27

Weatherization Program Retrofits (funding increased in 200	
Date Range	Units
2008-2011	17
2003-2007	-
1990-2002	10

CEN

Housing Stock Estimates	Nu
All Housing	
All Occupied Housing	
A sing	
Vacant Housing for Sale or Rent	

Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

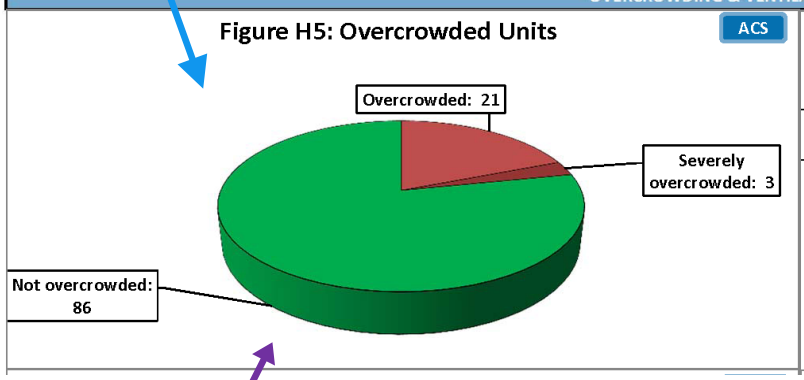
How to Interpret the Profile: Data Sources, Definitions & Clarifications

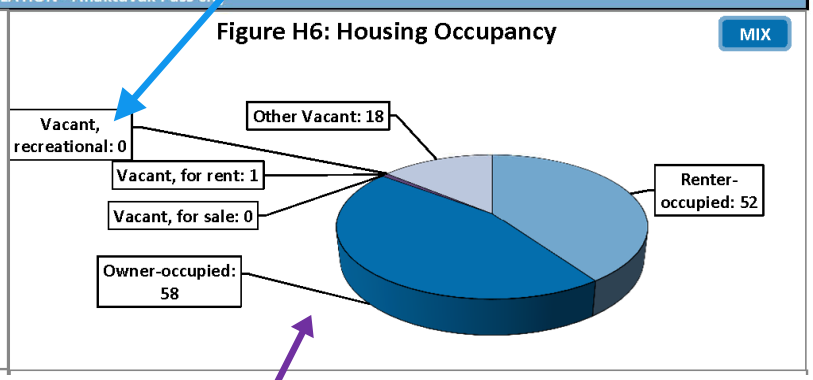
2

Overcrowded: Housing units with more than 1 person per room
Severely Overcrowded: Housing units with more than 1.5 people per room.
"Rooms" include bedrooms, living rooms, dining rooms, kitchens, and other finished, separated spaces, but not including bathrooms, porches, balconies, foyers, halls, or unfinished basements.

Recreational: For seasonal, recreational, or occasional use.

OVERCROWDING & VENTILATION - Anaktuvuk Pass cit





Data Source: 2011 American Community Survey 5-year estimates

Data Sources: The number of owner-occupied, renter-occupied, and total vacant units are taken from the 2011 ACS 5-year estimates. Data for vacancy type, only available from the decennial Census, were derived by taking the decennial census ratios by vacancy type and applying them to the total number of vacant units.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

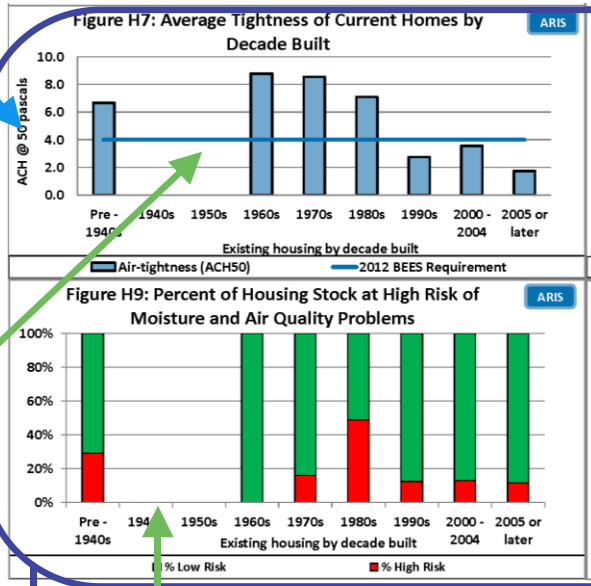
2

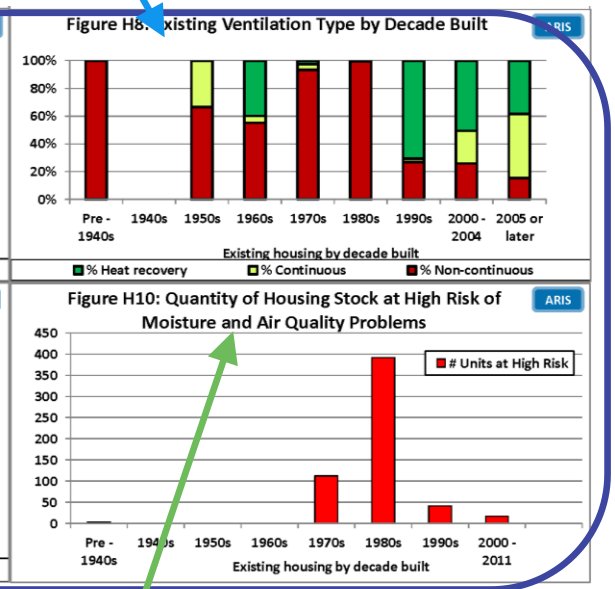
Heat Recovery: Continuous mechanical ventilation with heat recovery operated with automatic controls.

Continuous: Mechanical ventilation without heat recovery operated with automatic controls.

Non-Continuous ventilation: Includes homes with range and/or bath fans not operated using automatic controls.

ACH50: The results of a blower door test to measure building air leakage. Smaller numbers indicate tighter buildings. Tighter buildings lose less heated air to the outside and thus use less energy for space heating.





The 2012 Building Energy Efficiency Standard (BEES) for air-tightness is for reference only, as it was implemented after the majority of homes in Alaska were built.

Data Source: Alaska Retrofit Information System

Decades with no bar lack sufficient data for reporting. They should not be considered zero quantities.

High Risk of Moisture and Air Quality Problems: Note that moisture or poor indoor air quality have not been physically measured; these houses are considered "at-risk" because they are relatively air tight (less than 0.5 estimated natural air changes per hour) and do not have a continuous ventilation system.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

3

Rating stars and points are based on AHFC's AkWarm energy rating system.

Average annual energy cost: Includes all end uses. Costs are estimated using January 2013 energy prices, and include reductions from the PCE program.

Space Heating, DHW, Appliances: Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

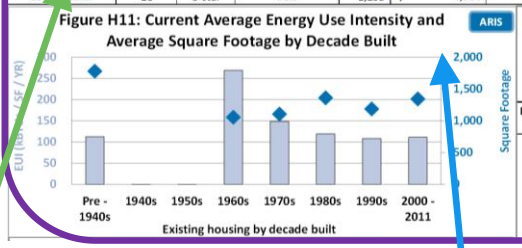
ECI: Energy Cost Index, the amount of money spent on energy per year divided by square footage.

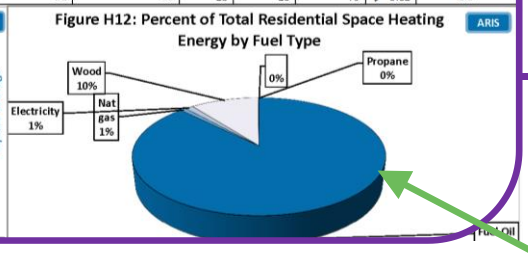
Home Heating Index: The energy used per square foot per year divided by the area's heating degree days.

The number of AkWarm records from each decade built that were used to calculate the averages reported.

Current Fairbanks Housing Energy Characteristics By Decade Built

Current Residential Units by Year Built	Number of Records	Avg Energy Rating	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBTUS/SF)	Avg. ECI ($ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	419	3-star	70.7	1,237	$ 8,065	160	102	27	26	132	$ 6.97	6.5
Pre- 1940	7	3-star	68.3	1,779	$ 11,107	199	145	21	33	113	$ 6.66	6.4
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	15	2-star	52.3	1,056	$ 11,087	287	225	35	27	269	$ 10.60	16.0
1970- 79	71	2-star plus	64.5	1,106	$ 7,961	151	105	21	25	149	$ 8.09	7.8
1980- 89	113	3-star plus	74.7	1,361	$ 8,239	157	100	30	26	119	$ 6.40	5.8
1990- 99	111	4-star	79.9	1,187	$ 6,395	122	57	21	20	108	$ 5.58	4.7
2000- 2004	71	3-star plus	77.5	1,388	$ 8,435	143	80	35	27	118	$ 7.24	5.2
2005- later	28	5-star	91.9	1,233	$ 4,504	92	39	28	25	79	$ 3.82	2.5





Data Source: AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

Average energy characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

Energy Use Intensity (EUI) is the total amount of energy used per year per square foot of floor space.

This is the community's breakdown by fuel type of the energy (BTUs) used for home space heating. It is not the percent of housing using a given fuel in primary space heating devices. Because wood burning devices are inefficient, they may use a significant portion of total energy even if no homes in a community use wood as a primary fuel.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

3

Average building envelope characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

ACH50: The results of a blower door test to measure building leakiness. Smaller numbers indicate tighter buildings.

R-value: the capacity to resist heat flow. The higher the value, the better the insulator.

U-value: the conductance to heat flow. The lower the value, the better the insulator.

Data Sources: AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

Current Bethel city Housing Envelope Characteristics By Decade Built

Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	419	6.4	23	17	7	30	NR	2	0.36	0.27	0.54
Pre- 1940	7	6.7	26	21	NR	30	NR	NR	0.30	NR	0.40
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	15	8.8	16	14	NR	21	NR	NR	0.44	NR	1.65
1970- 79	71	8.5	20	15	NR	29	NR	NR	0.39	NR	0.57
1980- 89	113	7.1	29	17	NR	32	NR	NR	0.30	NR	0.44
1990- 99	111	2.7	56	31	NR	50	NR	NR	0.19	0.12	0.29
2000- 2004	71	3.6	13	21	NR	36	NR	NR	0.27	0.23	0.40
2005 or later	28	1.7	41	22	NR	41	NR	NR	0.20	NR	0.31
BEES 2009 - Climate Zone 8		7.0	38	30	15	38	15	15	0.22	0.22	0.22
BEES 2012 - Climate Zone 8		4.0	48	30	15	38	15	15	0.22	0.22	0.22

The number of AkWarm records from each decade built that were used to calculate the averages reported.

"NR" is used when there are insufficient records to protect the confidentiality of the occupants.

Color Coding--

Green: the average value meets or exceeds the 2012 BEES requirement.

Yellow: value is 75-99% of the 2012 BEES requirement.

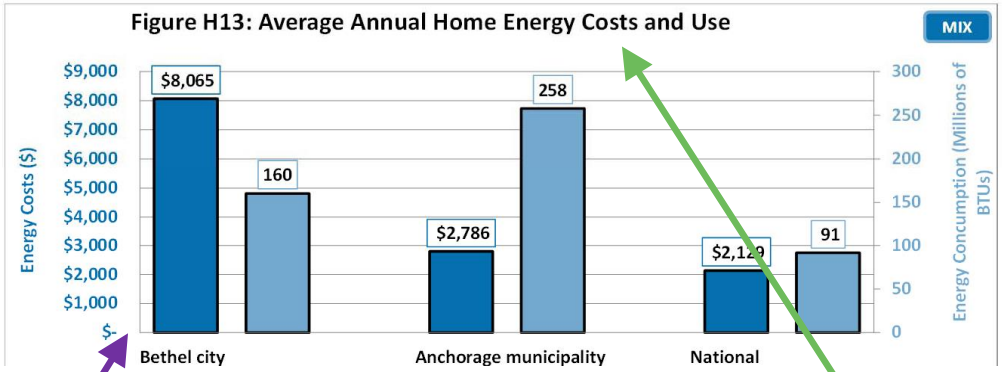
Red: value is less than 75% of the 2012 BEES requirement.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--
***High*: ARIS records exist for housing units built in 7 of the 9 date ranges use in this report, and there are either more than 50 records or records totaling 20 percent or more of the total number of housing units.**
***Medium*: There are three or more ARIS records. Data are presented for an "overall" group if there are "As Is" ARIS records totaling at least 10% of the community's occupied housing units.**
***Low*: There are fewer than three ARIS records for the location.**

Community Template - Data Quantity: High



Housing Information	Avg Household Size (# of people)
All-occupied	3.4
Owner-occupied	3.7
renter-occupied	3.1

Data Source:
2007-2011 American Community Survey

Data Sources: Census Area and Anchorage data come from AFHC's Alaska Retrofit Information System.
National figures come from the U.S. Energy Information Administration's 2009 Residential Energy Consumption Statistics (RECS) for "cold"/"very cold" climate regions.

Average annual home energy costs and usage estimates are for all end uses, including space heating, domestic hot water, lighting and appliances. Costs are estimated using January 2013 energy prices and include reductions from the PCE program.

How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

Data Source: 2007-2011 American Community Survey.

"Value" is determined by responses to the ACS question: "How much do you think this house and lot, apartment, or mobile home (and lot, if owned) would sell for if it were for sale?"

Household income includes all earnings from salaries, stocks, gifts, public assistance, etc.

Data Source: Median income comes from 2007-2011 ACS estimates; energy costs come from AHFC's Alaska Retrofit Information System (ARIS).

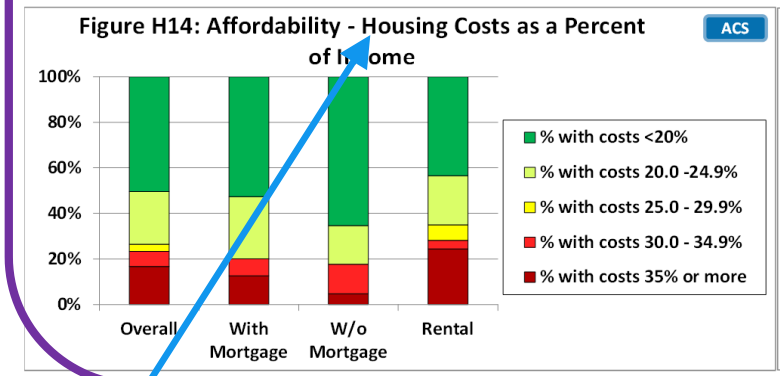
Owner-occupied House with Mortgage, Median Value
$226,800

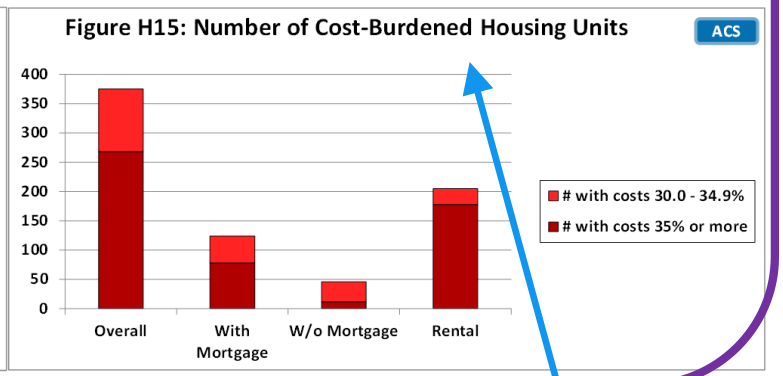
Owner-ocupied House without a Mortgage, Median Value
$119,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 91,302
Renter-occupied	$ 70,170
Owner-occupied	$ 107,908
w/ mortgage	$ 111,167
w/o mortgage	$ 70,400

Median Household Expenses		
	Monthly	Annual
All-occupied	$ 1,369	$ 16,428
Gross rent	$ 1,201	$ 14,412
Owner-occupied	$ 1,610	$ 19,320
Housing units w/ mortgage	$ 1,854	$ 22,248
Housing units w/out a mortgage	$ 680	$ 8,160

Avg % of Median Income Spent on Energy	8.8%





Rental housing costs: Contract rent, fuels, utilities.

Owner housing costs: Mortgage payments, property taxes, insurance, fuels, utilities, condo fees.

Households are considered "cost burdened" if they spend 30% or more of total household income on housing costs. Households spending more than this amount on housing costs may have difficulty affording basic necessities such as food, transportation, and medical care.

ANCSA Region Profile for:	Ahtna Inc

Climate Zone (Heating Degree Day Range)	Zone 7 (9,000 - 12,600 HDD)

COMMUNITY - Ahtna Inc

Figure R1: Existing Housing by Decade Built

ACS

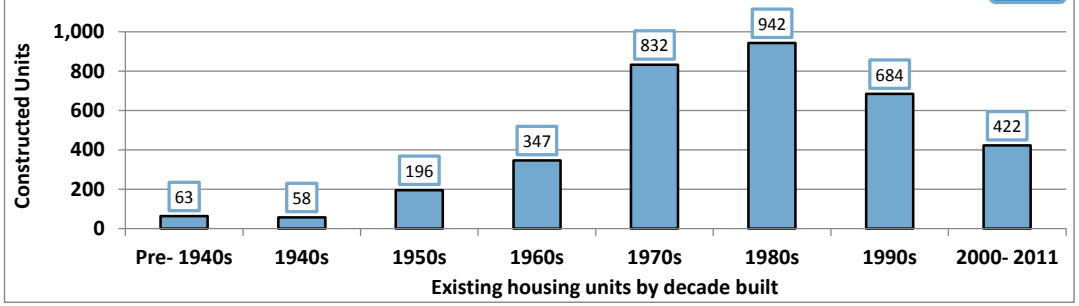


Figure R2: Population

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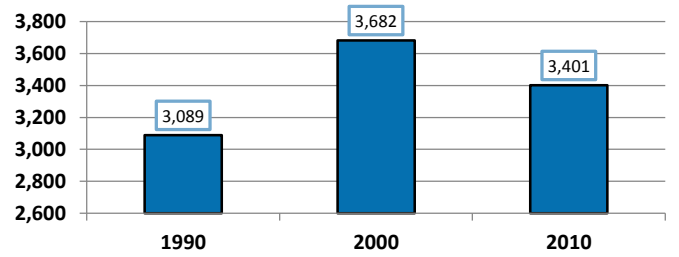


Figure R3: Trends in Housing Unit Size

MIX

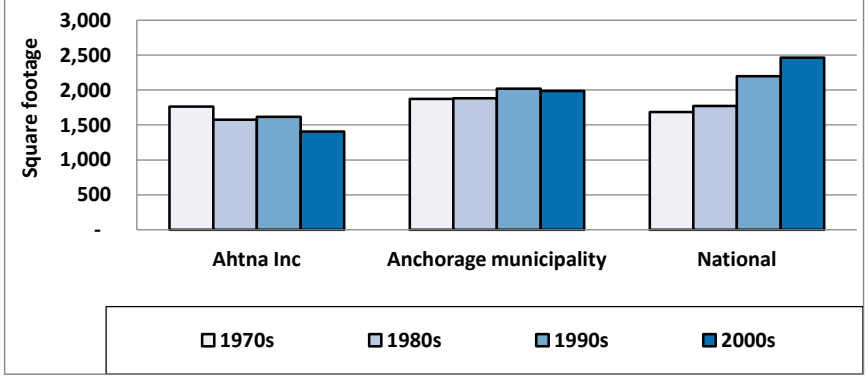
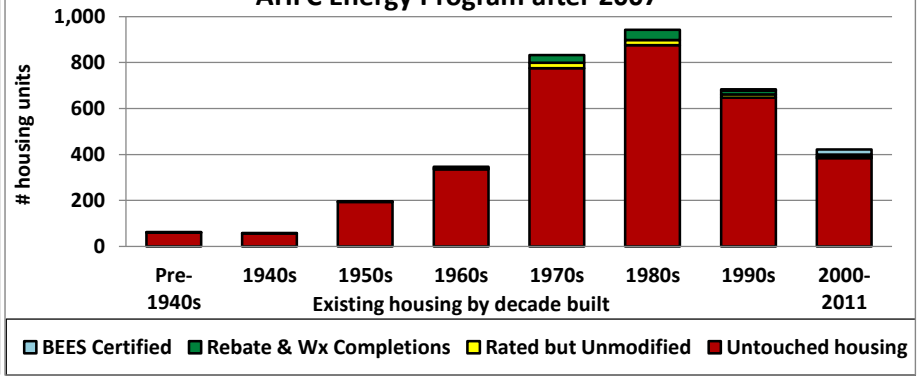


Figure R4: Housing Completing an AHFC Energy Program after 2007

ARIS



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	346	25%
Lack complete kitchen	263	19%

Avg Annual Energy Cost with PCE	$7,877
Avg Annual Energy Cost without PCE	$8,220

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008-2011	78
2003-2007	22
1990-2002	288

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	1,285,764	(gallons)
Natural Gas	-	(ccf)
Electricity	1,157,741	(kWh)
Wood	4,686	(cords)
Propane	23,186	(gallons)
Coal	43	(tons)

Housing Need Indicators	Number of units	% Occupied Housing
Overcrowded	122	9%
Housing cost burdened	256	19%
1 Star Homes	421	31%

Housing Stock Estimates	Number of Units
All Housing	3,544
All Occupied Housing	1,361
All Vacant housing	2,183
Vacant Housing for Sale or Rent	182

OVERCROWDING & VENTILATION - Ahtna Inc

Figure R5: Overcrowded Units

ACS

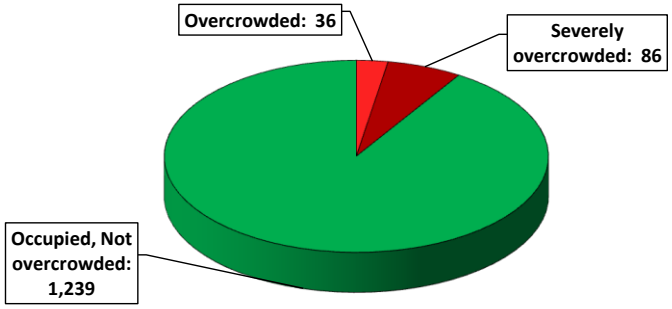


Figure R6: Housing Occupancy

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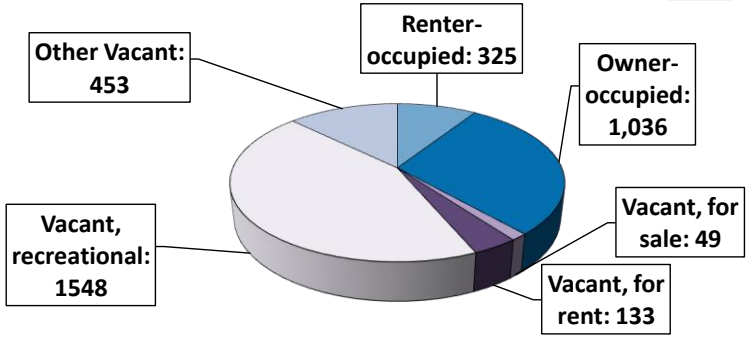


Figure R7: Average Air-Tightness of Current Homes by Decade Built

ARIS

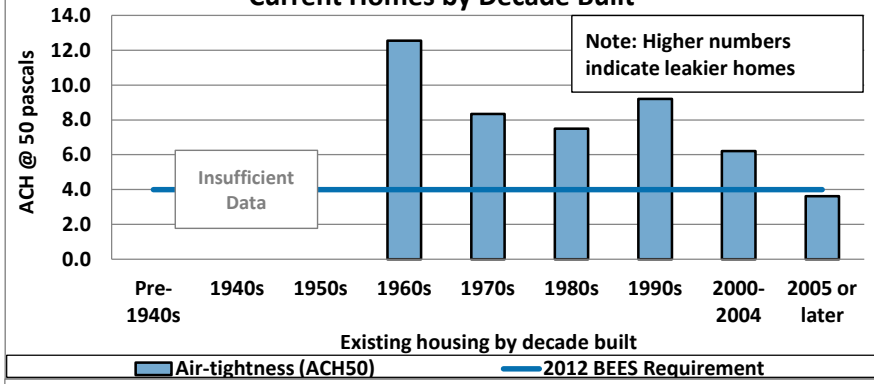


Figure R8: Existing Ventilation Type by Decade Built

ARIS

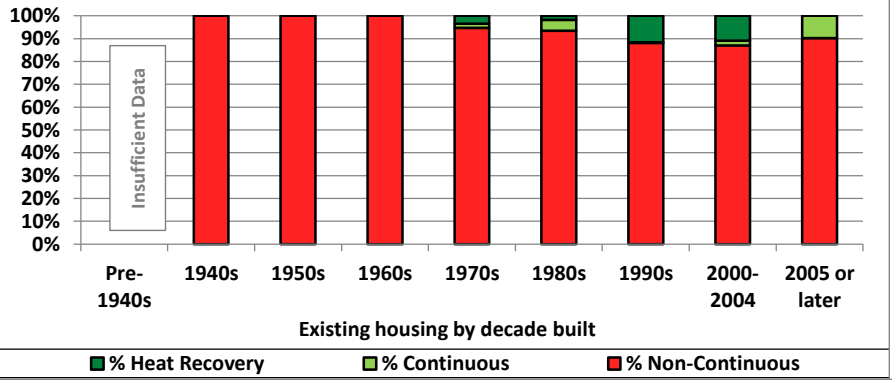


Figure R9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

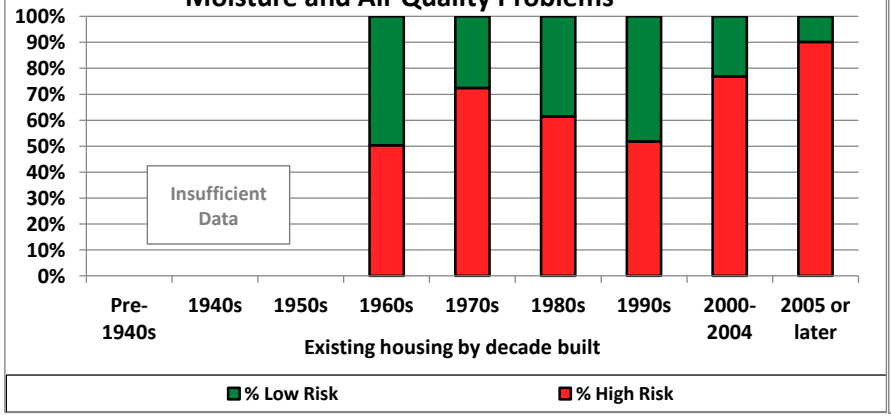
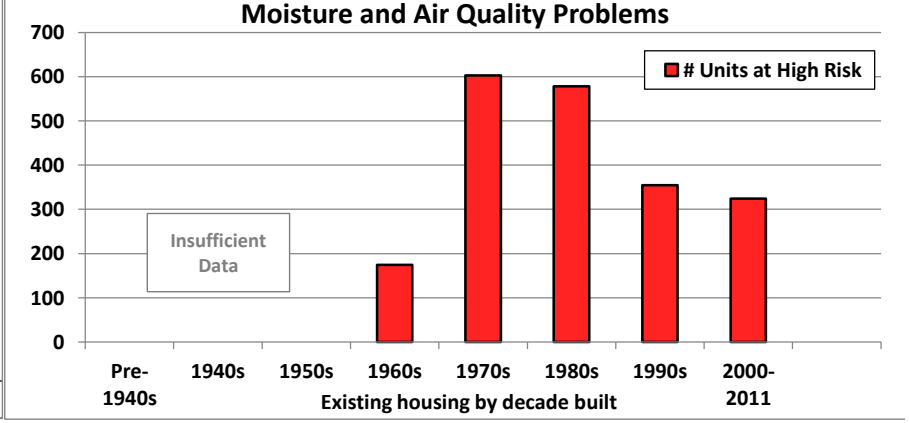


Figure R10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Ahtna Inc												
Current Ahtna Inc Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	# of AkWarm Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Annual Energy / End Use (million Btus)			Avg. EUI (kBTUS /SF)	Avg. ECI	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	252	2-star plus	65.7	1,664	$7,877	246	188	27	31	164	$5.27	9.2
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	14	2-star	53.6	1,904	$10,177	310	257	22	30	199	$6.36	11.9
1970- 79	68	2-star plus	67.9	1,762	$7,923	251	185	32	35	146	$4.99	7.9
1980- 89	80	3-star	68.9	1,576	$7,425	242	188	25	29	167	$5.12	9.5
1990- 99	43	3-star	69.1	1,617	$6,929	236	183	24	27	184	$5.08	10.7
2000- 2004	24	3-star	71.9	1,406	$6,613	156	106	23	27	143	$6.05	7.2
2005 or later	15	3-star plus	74.9	976	$6,263	180	129	26	25	186	$6.64	9.8

Figure R11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

ARIS

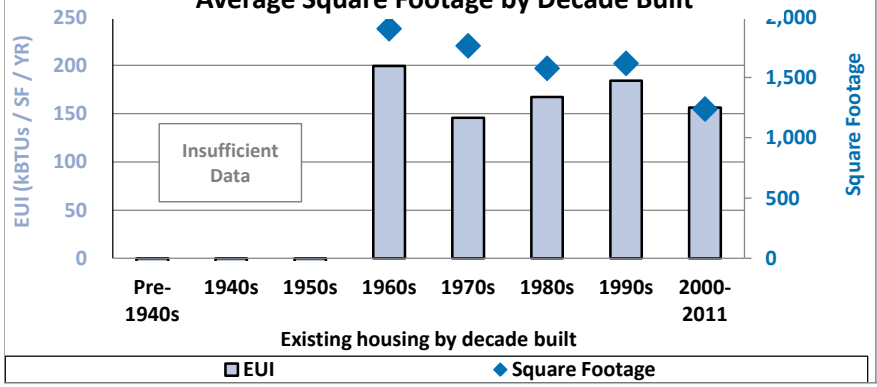
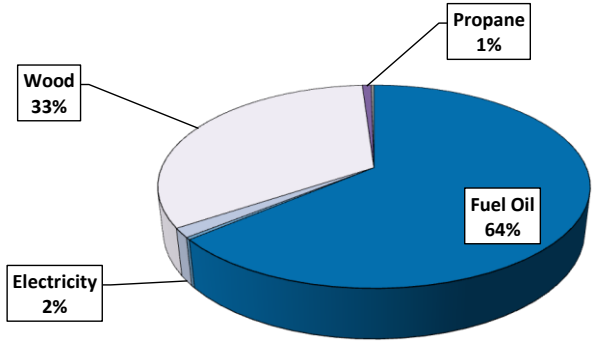


Figure R12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS



Current Ahtna Inc Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	252	8.5	24	14	9	21	3	3	0.38	0.38	0.50
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	14	12.6	14	9	3	20	3	3	0.39	0.39	0.54
1970- 79	68	8.3	27	14	12	19	3	3	0.43	0.43	0.52
1980- 89	80	7.5	27	14	8	21	3	3	0.33	0.33	0.50
1990- 99	43	9.2	18	15	13	20	3	3	0.35	0.35	0.49
2000- 2004	24	6.2	30	14	7	35	4	2	0.43	0.43	0.45
2005 or later	15	3.6	27	12	17	26	3	3	0.35	0.35	0.45

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Ahtna Inc

Figure R13: Average Annual Home Energy Cost and Use

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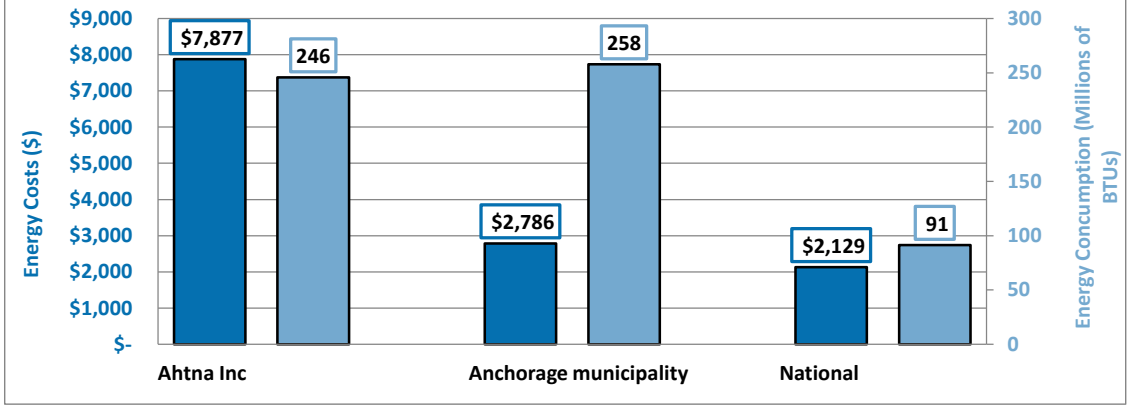

Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.4
Renter-occupied	2.6

Median value of owner-occupied house with mortgage
$185,600

Median value of owner-occupied house without a mortgage
$152,500

Median Household Income	
Housing Units	Annual Household Income
All-occupied	$ 51,563
Renter-occupied	$ 40,875
Owner-occupied	$ 55,000
w/ mortgage	$ 76,458
w/o mortgage	$ 44,293

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 559	$ 6,708
Gross rent	$ 721	$ 8,652
Owner-occupied	$ 443	$ 5,316
Housing units w/ mortgage	$ 1,352	$ 16,224
Housing units w/out a mortgage	$ 252	$ 3,024

Avg % of Median Income Spent on Energy	15.3%

Figure R14: Affordability - Housing Costs as a Percent of Income

ACS

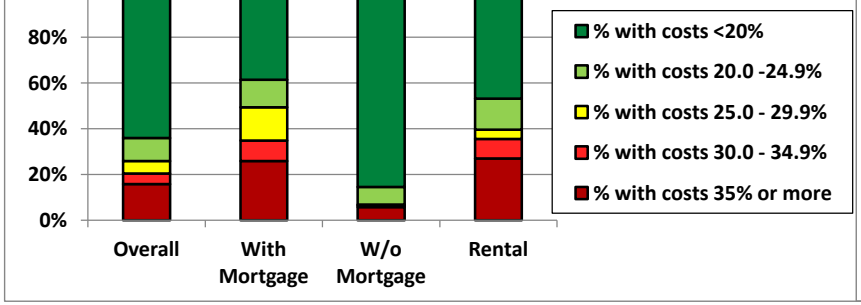

Figure R15: Number of Cost-Burdened Housing Units

ACS