



Table of Contents

Arctic Slope Regional Corporation Dashboard	II
Arctic Slope Regional Corporation Summary	III-XI
Community	III
Overcrowding	III
Energy	IV
Affordability.....	IX
Community, Regional, and Statewide Housing Characteristics.....	XI
How to Interpret the Profile: Data Sources, Definitions & Clarifications	A-H
Arctic Slope Regional Corporation Profile	1-4

Arctic Slope Regional Corporation Dashboard¹

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Arctic Slope Regional Corporation ANCSA region is 9,723, an increase of 32% from 2000.

Housing Units: There are currently 2,517 housing units in the Arctic Slope Regional Corporation ANCSA region. Of these, 1,966 are occupied, 160 vacant units are for sale or rent, and the remaining 391 are seasonal or otherwise vacant units (Profile Figure R6).

Energy: The average home in the Arctic Slope Regional Corporation ANCSA region is 1,134 square feet and uses 175,000 BTUs of energy per square foot annually. This is 28% 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 Arctic Slope Regional Corporation ANCSA region is \$3,200, which is approximately 1.1 times more than the cost in Anchorage, and 1.5 times more than the national average (Profile Figure R13).

Energy Programs: Approximately 12% of the occupied housing in the Arctic Slope Regional Corporation 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 1970s are currently rated at 2-star-plus compared to a current average rating of 4-star-plus 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 at 50 pascals. In contrast, homes built in the 1980s are 1.2 times leakier than those built since 2000 (Profile Figure R7).

Ventilation: An estimated 684 occupied housing units (or 35%) in the Arctic Slope Regional Corporation 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: More than 21% of occupied units are estimated to be either overcrowded (14%) or severely overcrowded (8%). This is roughly 7 times the national average and makes the Arctic Slope Regional Corporation region the fourth most overcrowded ANCSA region in the state.

Affordability: According to American Community Survey (ACS) data, approximately 13% of households in the Arctic Slope Regional Corporation area 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 4% of census median area income for occupied housing.

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

Arctic Slope Regional Corporation Summary

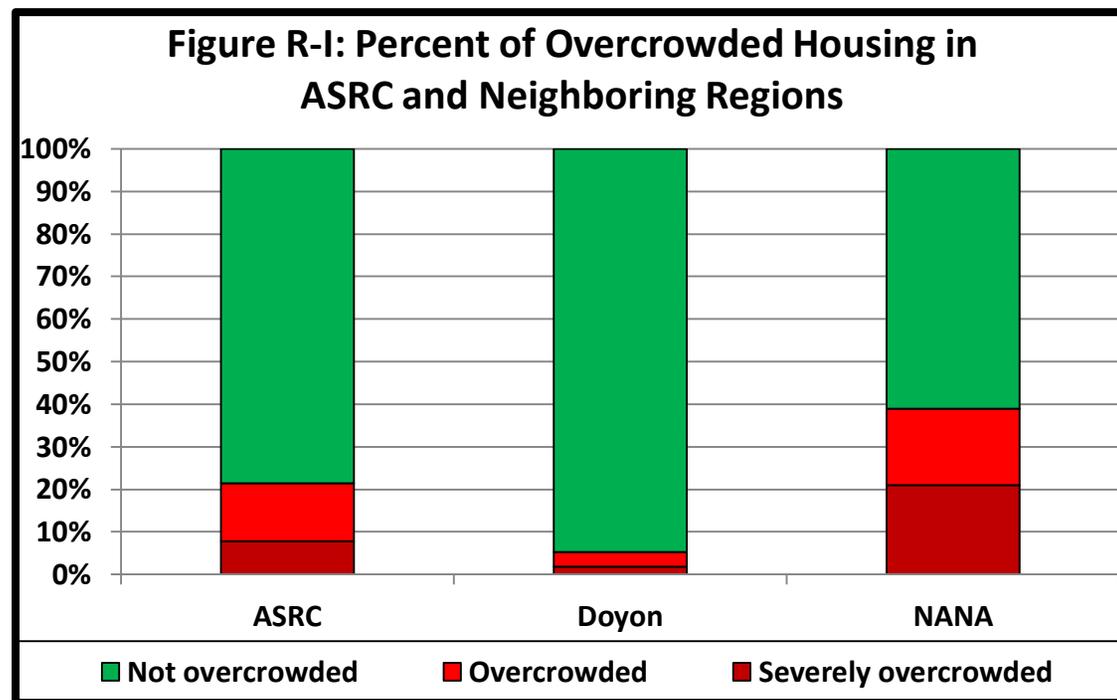
Community

The Arctic Slope Regional Corporation (ASRC) ANCSA region is the northernmost region in Alaska and stretches east to west from the Canadian border to the Chukchi Sea along the northern coast of Alaska. The northern part of the region borders the Beaufort Sea, and the southern part of the region runs along the Brooks Range. Homes in the region are the third smallest in the state, with an average size of 1,134 square feet. The smallest homes are found in Point Lay, where home size averages 1,013 square feet. The largest homes, at 1,211 square feet, are found in Anaktuvuk Pass.

Overcrowding

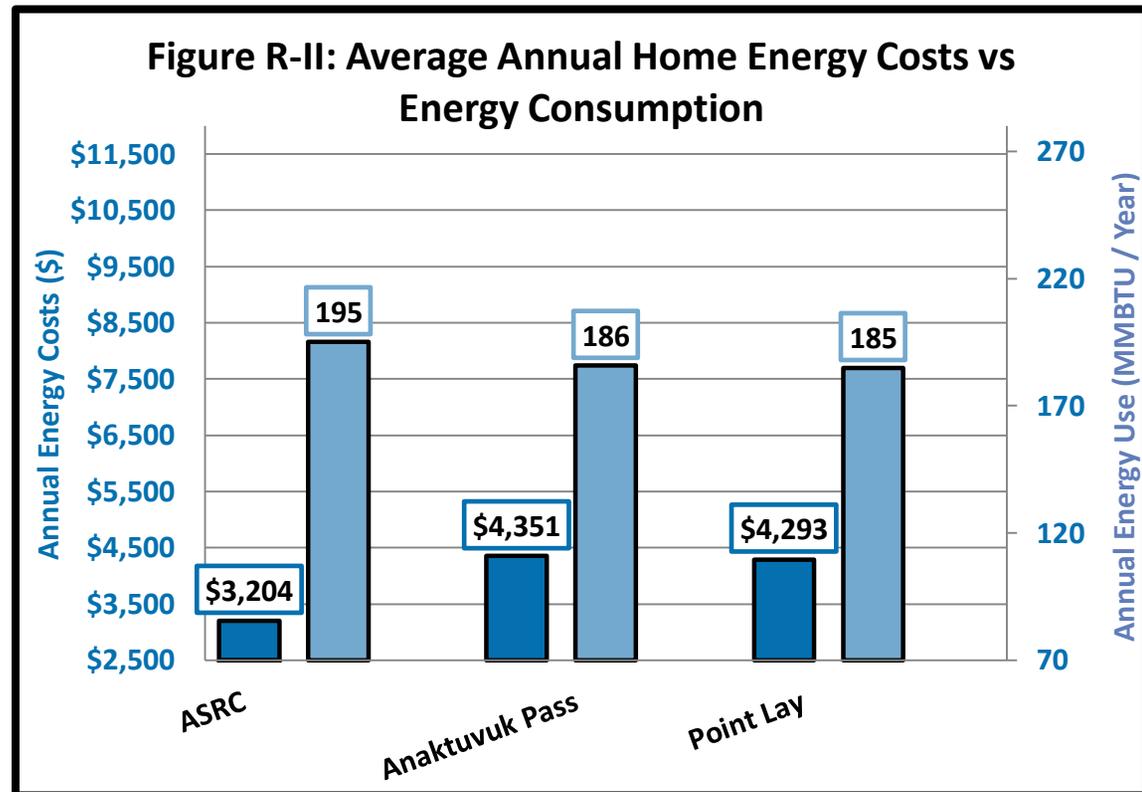
The ASRC region is the fourth most overcrowded region in Alaska with more than 21% of occupied units classified as either overcrowded (14%) or severely overcrowded (8%). This is significantly greater overcrowding than in the adjacent Doyon region (5%) to the south (Figure R-1), but less overcrowding than in the nearby NANA region (39%). Overcrowding in the Arctic Slope Regional Corporation's communities varies from a low of 13% in Barrow to a high of 43% in Nuiqsut. The six most populous communities have this same range of overcrowding, from 13% to 43%.

Approximately 6% of housing in the region is vacant and available for sale or rent. Barrow has the most available housing (8%). The least amount of available housing is found in Kaktovik, where an estimated zero homes are for sale or rent.



Energy²

In the Arctic Slope Regional Corporation region the average annual energy cost per housing unit is the second lowest among Alaska's regions with households spending an average of \$3,204 per year. The regional energy use and costs are compared to that of communities within the region³ (Figure R-II). Average energy costs vary slightly, from \$4,293 in Point Lay to \$4,351 in Anaktuvuk Pass. The region's average annual home energy costs are heavily influenced by low natural gas prices in Barrow. However, insufficient AKWarm rating data for Barrow precludes reporting the average costs for that community individually.



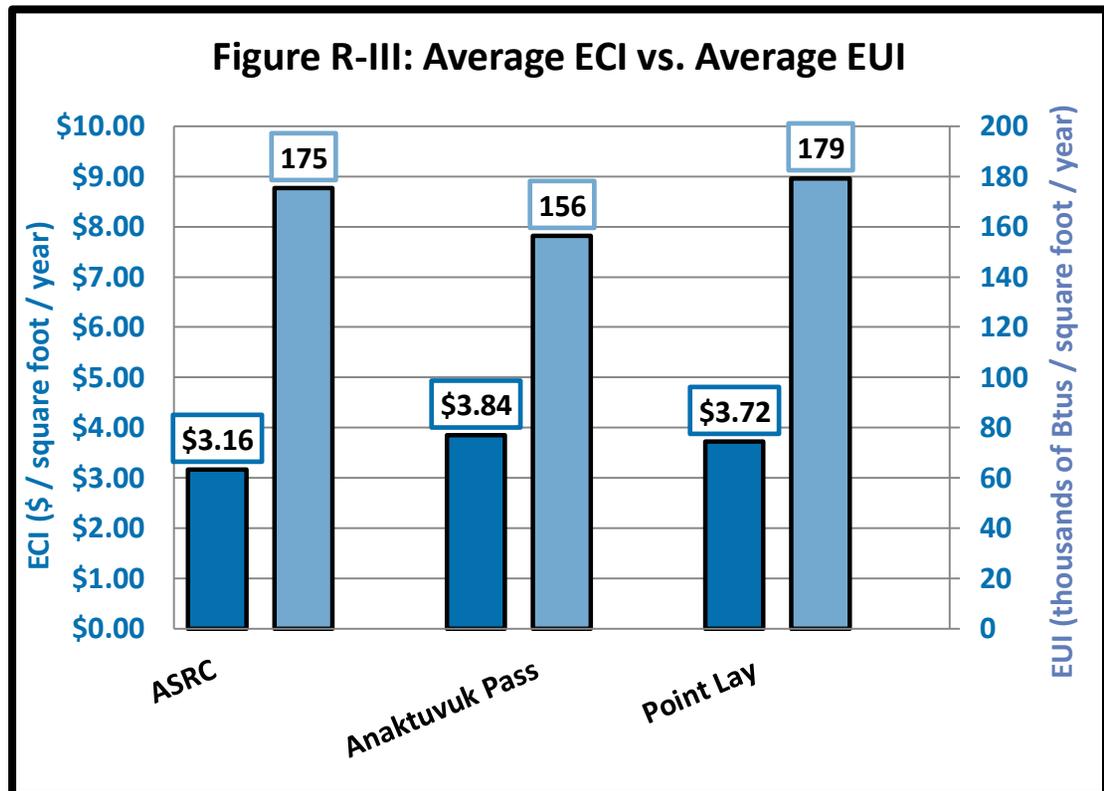
² Regional data appearing in this section are based on communities with sufficient levels of ARIS data, so not all communities were included in the analysis.

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

The ASRC region also has the second lowest energy cost per square foot⁴ in the state, with homes spending an average of \$3.16 per square foot on energy costs per year. While this is lower than much of Alaska it is still 78% higher than the average energy cost in the Cook Inlet Region and over 3 times higher than the nationwide average energy cost per square foot. Figure R-III gives the energy cost per square foot for the ARSC region and two of its communities.

While energy costs per square foot are low, the total annual energy used per square foot⁵ is high for ASRC homes. At approximately 175 kBtu/ft²/yr, the region has the second highest energy use index in the state, in part due to the extreme climate with the highest number of heating degree days of all regions. When the effect of climate is normalized across regions in the state using the home heating index, the ASRC

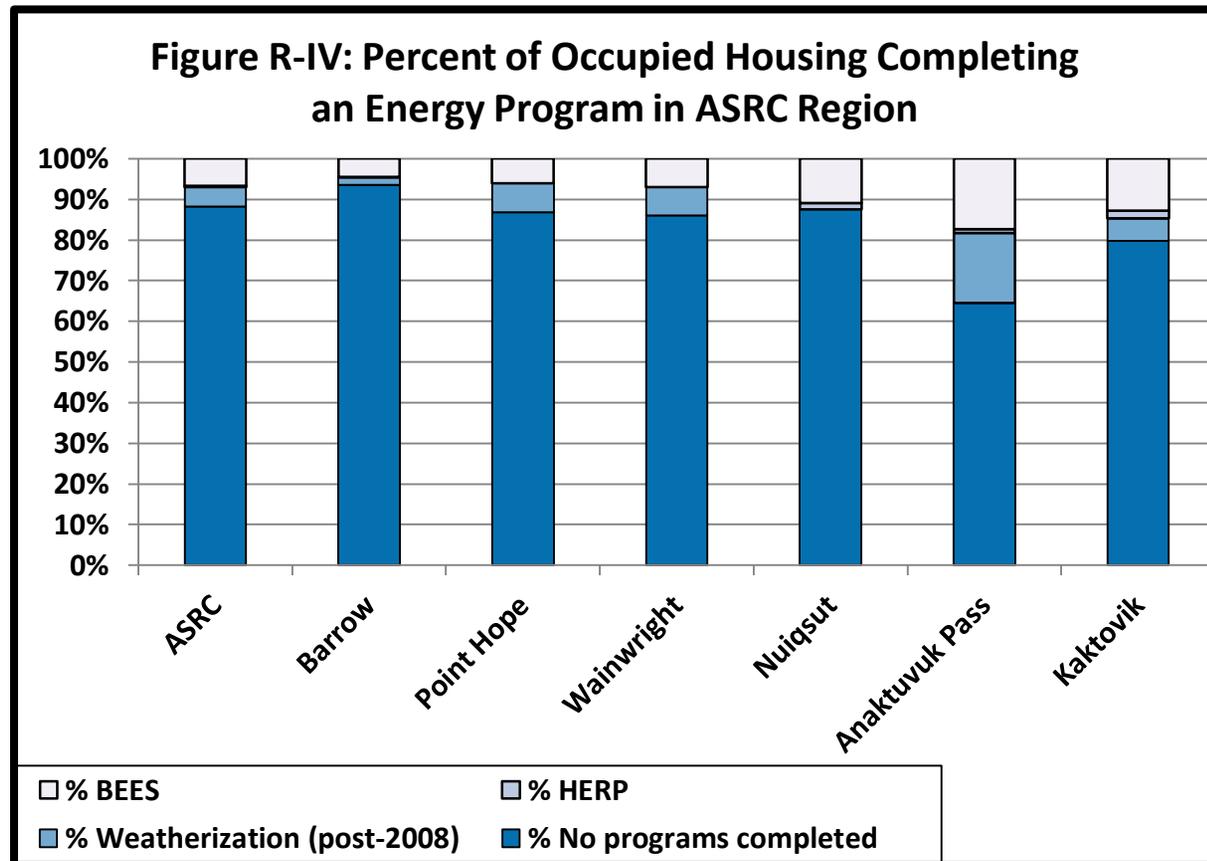
region features the lowest average annual home heating index at 6.7 BTUs/ ft²/HDD. This number is just less than the home heating index of 7.5 in the neighboring NANA region and significantly less than the home heating index of 10.6 in the nearby Bering Straits Native Corporation region.



⁴ 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.

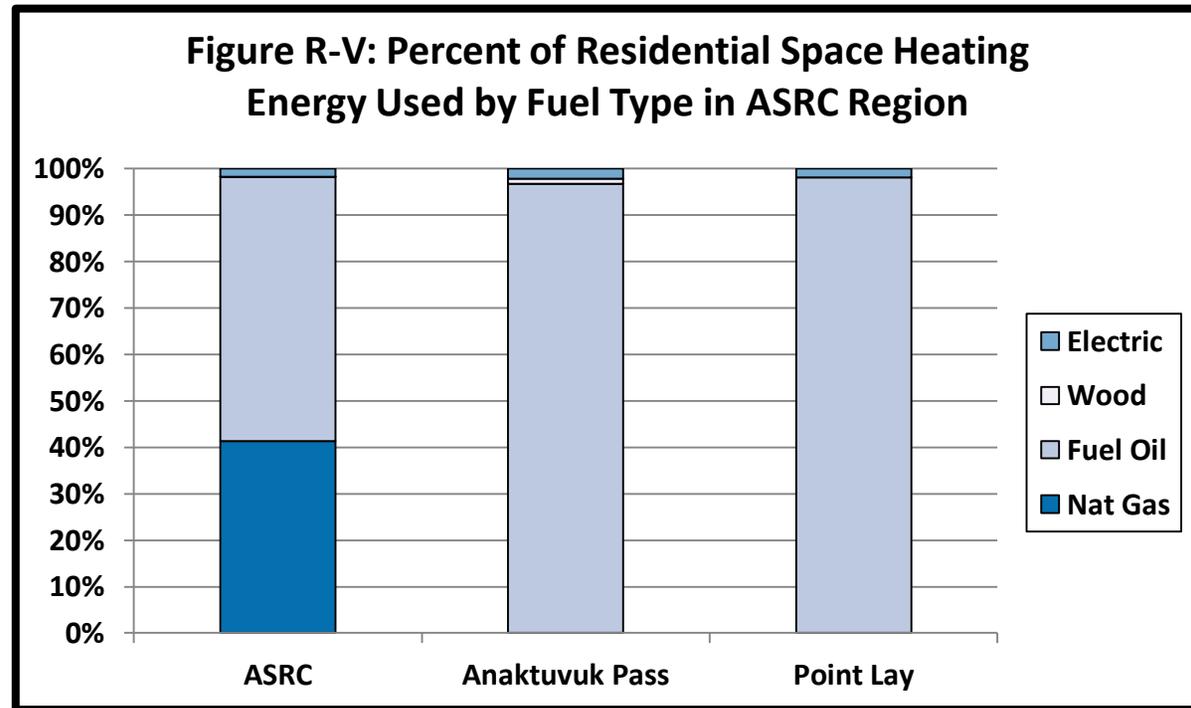
⁵ Energy use per square foot is also known as Energy Use Intensity, or EUI and is given in kBtUs per square foot, per year.

Understanding the variations between communities participating in energy efficiency programs is essential to targeting work and resource allocation in the region. Approximately 5% of housing units in the region have completed an AHFC Home Energy Rebate or Weatherization program, and an additional 7% have been certified to meet BEES. Figure R-IV gives the participation rates for the six most populous communities. Five percent of homes in the region have completed a Weatherization program compared to less than one percent completing the Home Energy Rebate Program. The percentage of homes that have completed an AHFC program or have been certified to meet BEES since 2008 ranges from a low of 6% in Barrow to a high of 35% in Anaktuvuk Pass. Anaktuvuk Pass had the highest participation rates in the region with 17% of homes certified to meet BEES and 17% of homes participating in the Weatherization program. Both



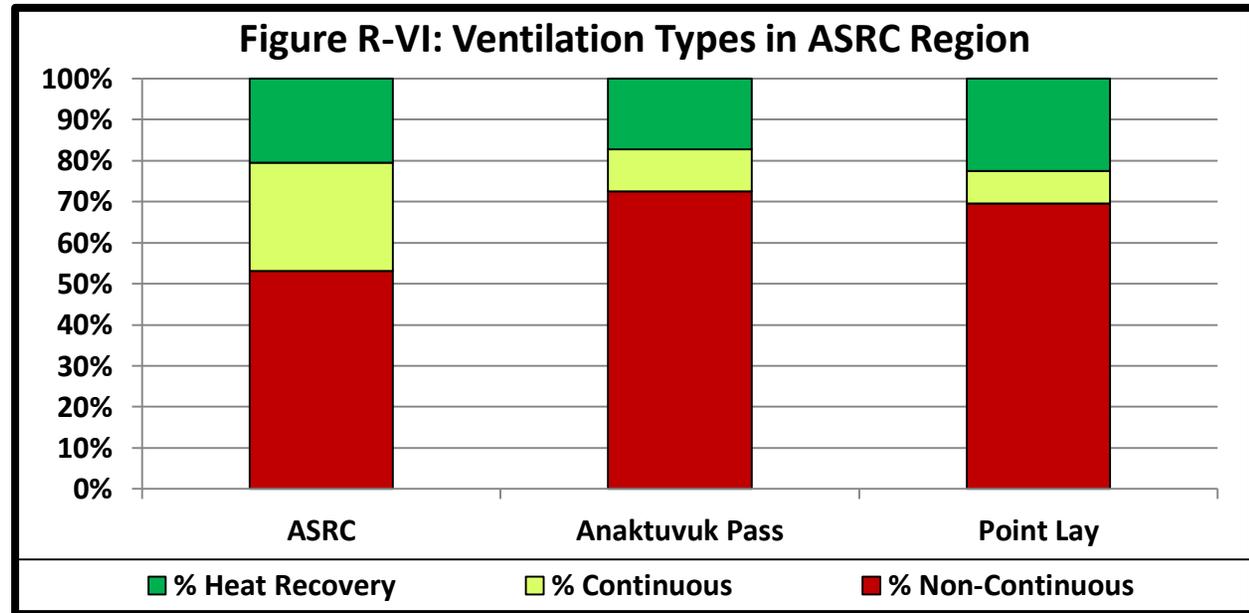
of these figures are the highest program participation rates in the region.

Figure R-V shows that close to half (41%) of the energy used for space heating in the region comes from natural gas, with the rest coming primarily from fuel oil. Natural gas is available in Barrow and Nuiqsut, two of the six most populous communities. Remaining communities use fuel oil almost exclusively to meet their space heating needs. The inexpensive natural gas prices in Barrow and Nuiqsut and the subsidized fuel oil prices in other communities⁶ contribute to the relatively low annual energy costs despite cold climates and high energy use per square foot in homes.



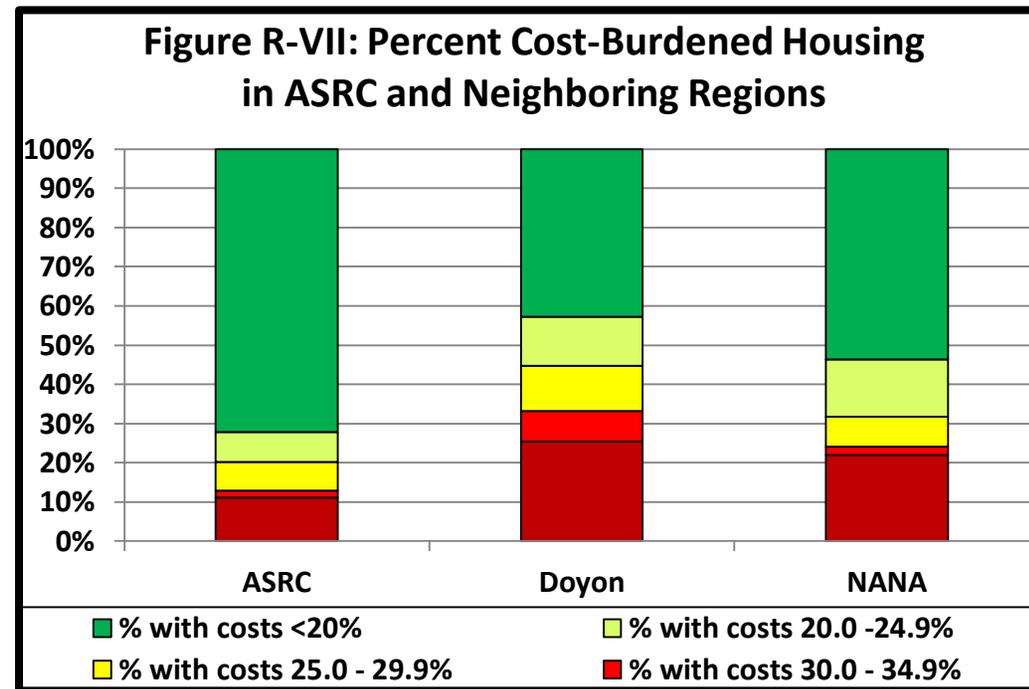
⁶ Alaska Fuel Price Report: Current Community Conditions, January 2013. Alaska Department of Commerce, Community, and Economic Development; Division of Community and Regional Affairs. Available at http://commerce.alaska.gov/dcra/pub/Fuel_Report_2013_January.pdf.

Figure R-VI gives the types of ventilation found in housing units in the ASRC region. Among ANCSA regions, the ASRC region has the highest estimated percentage of housing units (48%) with heat recovery or continuous mechanical ventilation systems installed. For the two communities with sufficient AKWarm records to report ventilation data individually, Anaktuvuk Pass (29%) and Point Lay (30%) both have relatively fewer mechanical ventilation systems than the rest of the region.



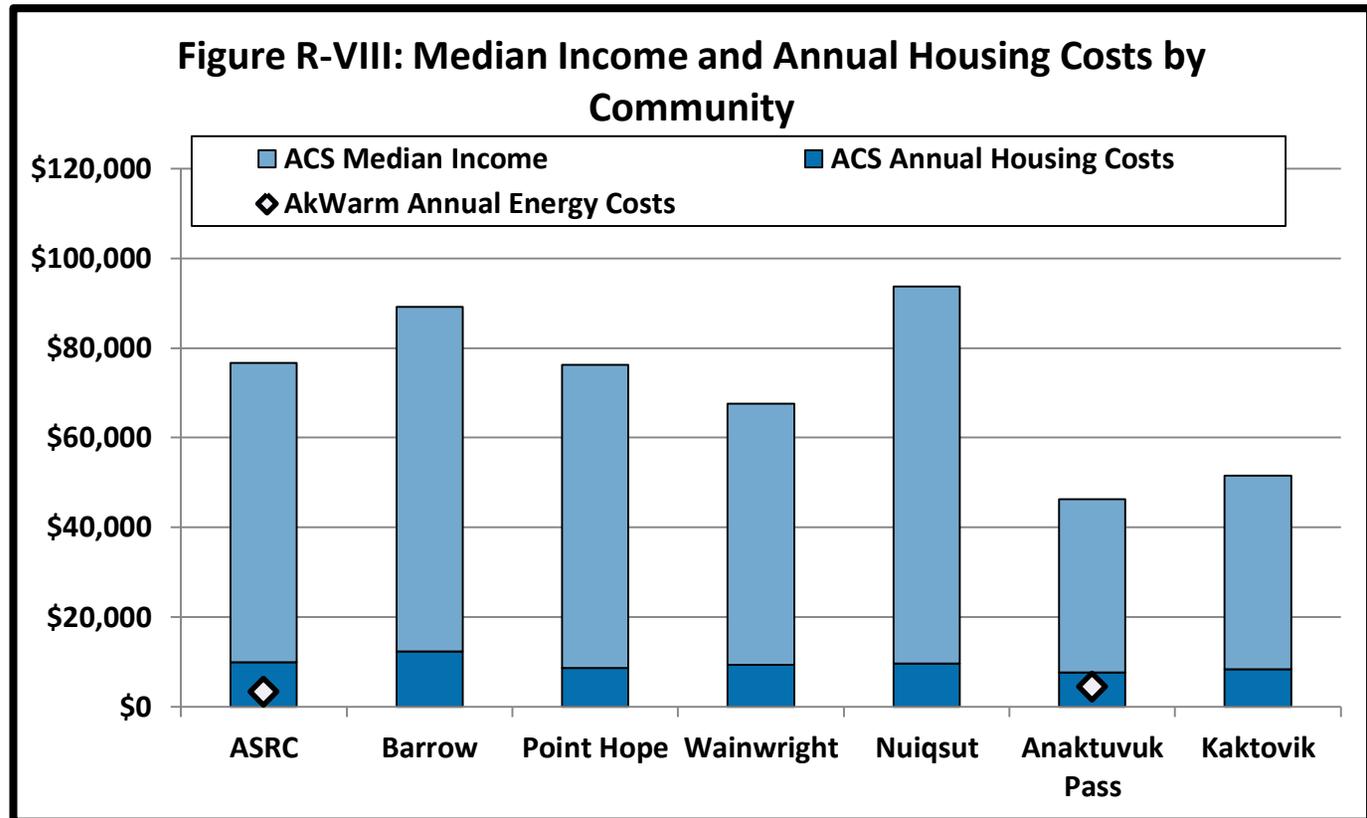
Affordability

According to ACS estimates, approximately 13% of housing units in the ASRC region are considered cost-burdened, spending 30% or more of total household income on housing costs.⁷ Within the ASRC region, affordability varies among communities from a low of approximately no cost-burdened households in Nuiqsut to a high of 31% of households in Point Lay. Figure R-VII shows the percent of cost-burdened households for both the ASRC region and the neighboring ANCSA regions. The ASRC region has the lowest percentage of cost-burdened housing in Alaska. In comparison, the neighboring region of NANA has an estimated 24% of households considered cost-burdened and the Doyon ANCSA region is at an estimate of 33%. The six most populous communities have between 0 and 21% of households paying 30% or more of income on housing costs.



⁷ 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 ASRC's most populous communities, along with housing and energy costs where available.⁶ Regional average household income is approximately \$76,667. According to ACS data, the median household income for the six most populous communities range from \$46,250 in Anaktuvuk Pass to \$93,750 in Nuiqsut. The lowest median income in the region, \$42,188, is found outside the six most populous communities in Point Lay.



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.

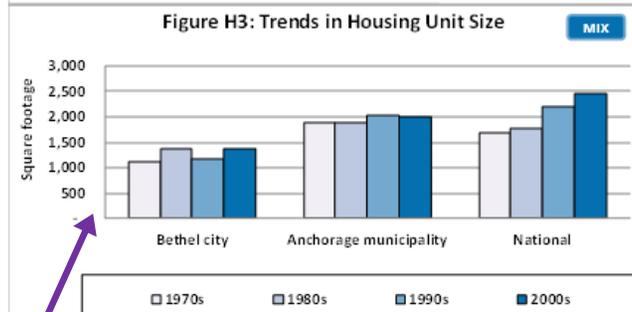
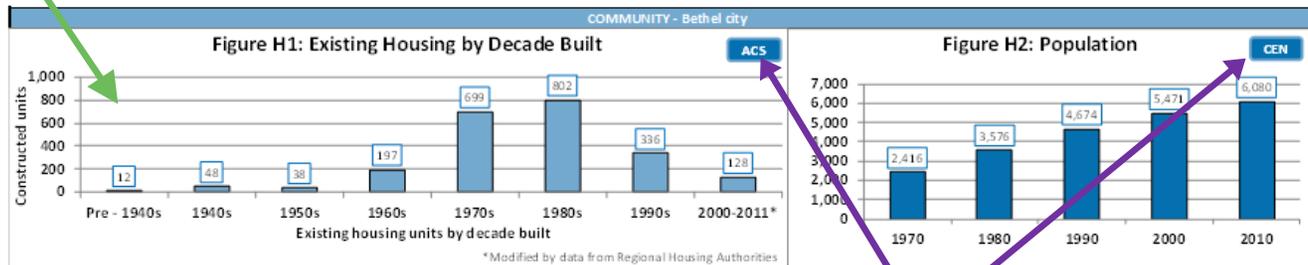
How to Interpret the Profile: Data Sources, Definitions & Clarifications

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.

Community Profile for:	Bethel city	ANCSA Region	Calista
Regional Housing Authority:	AVCP Regional Housing Authority	BEES Climate Zone (Heating Degree Days)	Zone 8 (13,334 HDD)



Data Source Key:

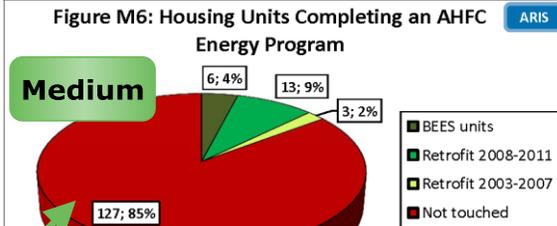
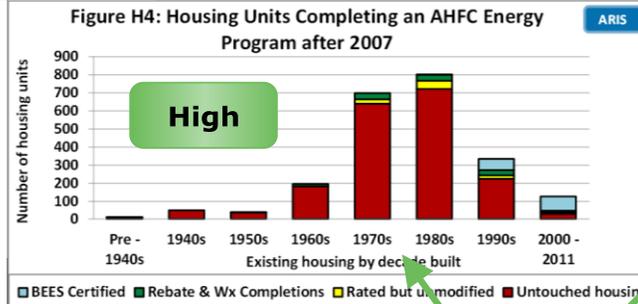
- 2011 American Community Survey 5 year estimates (ACS) **ACS**
- Alaska Retrofit Information System energy audits **ARIS**
- 2010 Decennial Census **CEN**
- Mixed data source; see individual graphs for details. **MIX**

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.

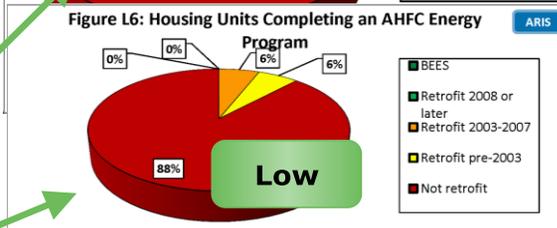
How to Interpret the Profile: Data Sources, Definitions & Clarifications

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.

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

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)

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

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 2008)	
Date Range	Units
2008-2011	17
2003-2007	-
1990-2002	10

Housing Stock Estimates	
All Housing	Nu
All Occupied Housing	
All Housing	
Vacant housing for Sale or Rent	

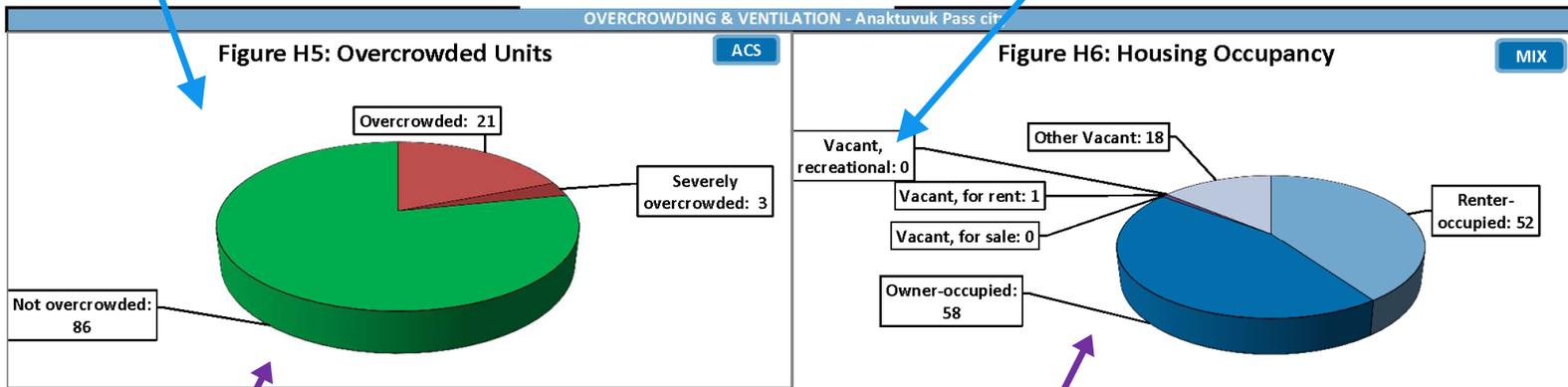
Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

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.



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.

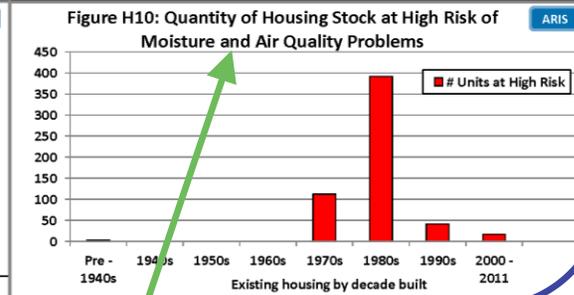
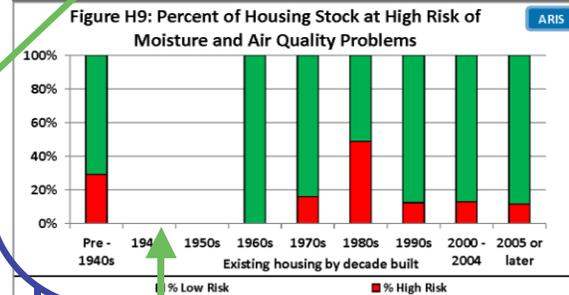
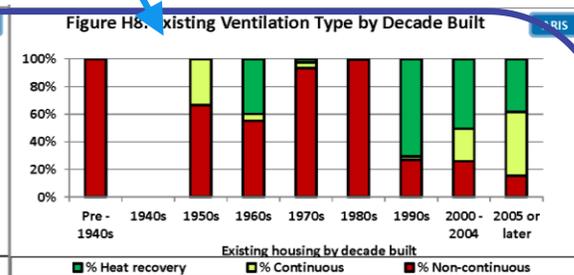
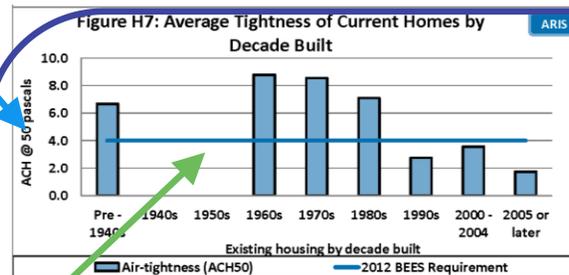
Continuous: Mechanical ventilation without heat recovery operated with automatic controls.

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

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.

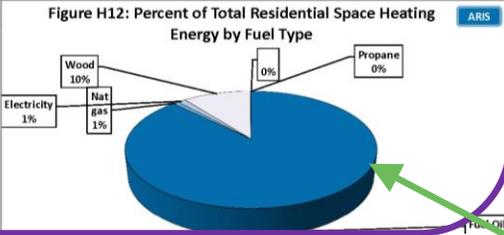
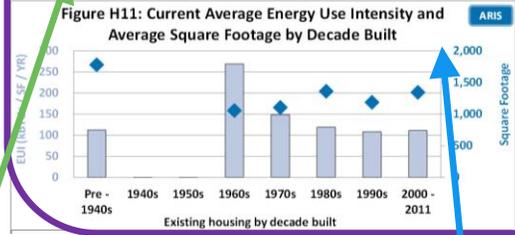
Space Heating, DHW, Appliances:
Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

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 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 Use (million Btus)			Avg. EUI (kBtu/SqFt)	Avg. ECI (\$ / SqFt)	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	153	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 or 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

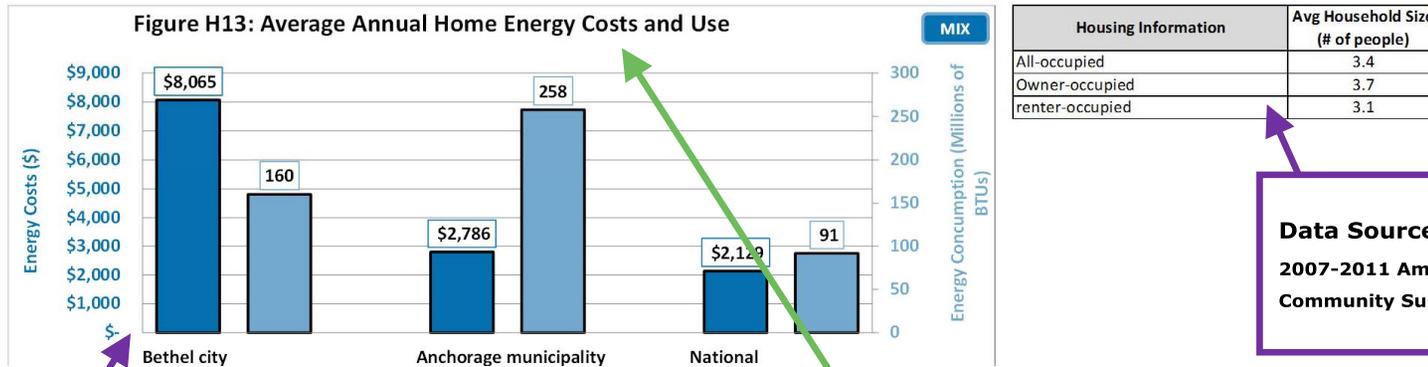
Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--

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



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.

Data Source:
2007-2011 American Community Survey

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?"

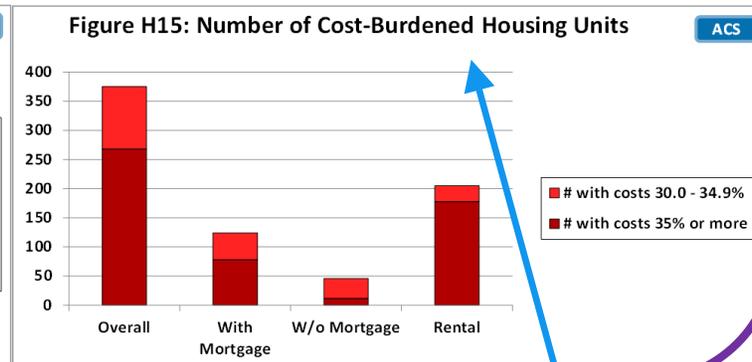
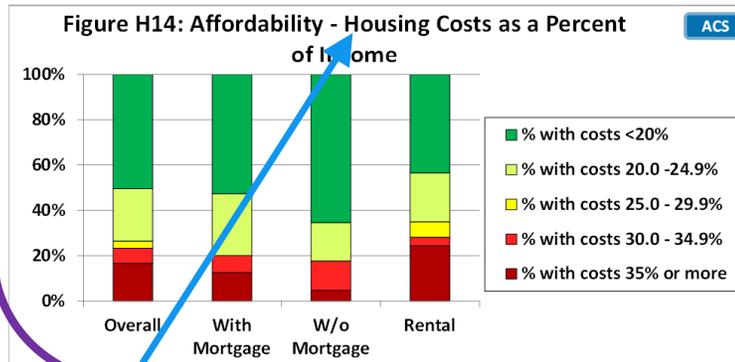
Household income includes all earnings from salaries, stocks, gifts, public assistance, etc.

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-occupied 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.

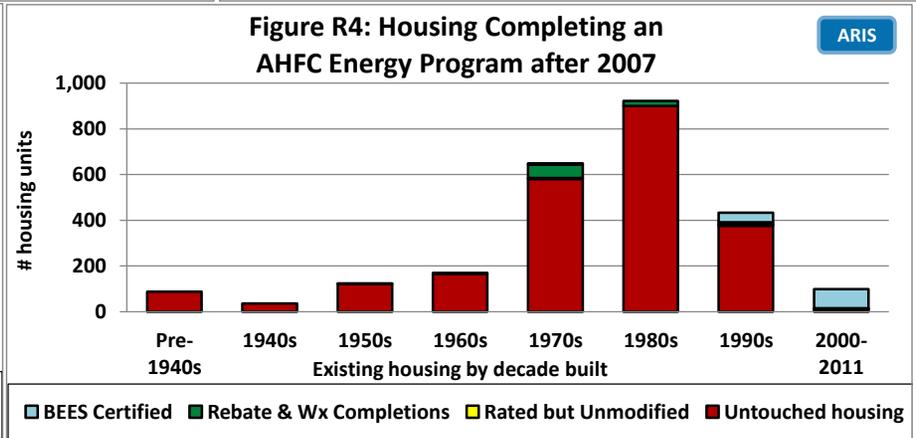
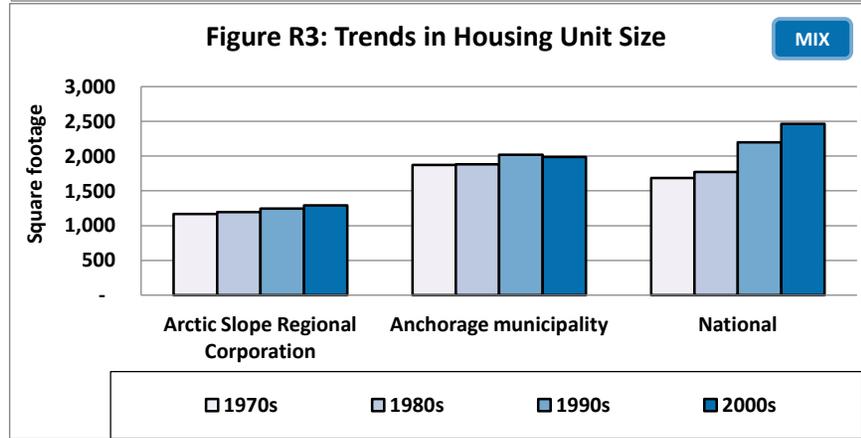
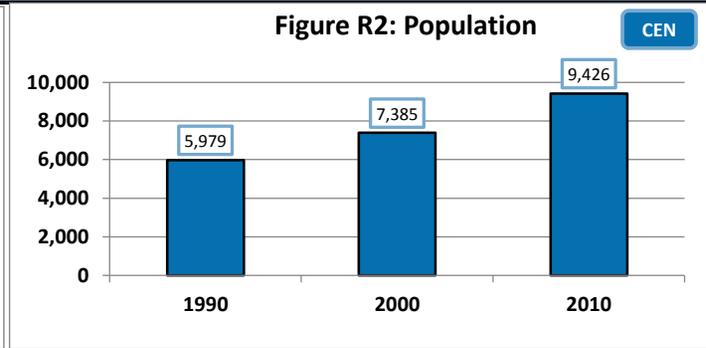
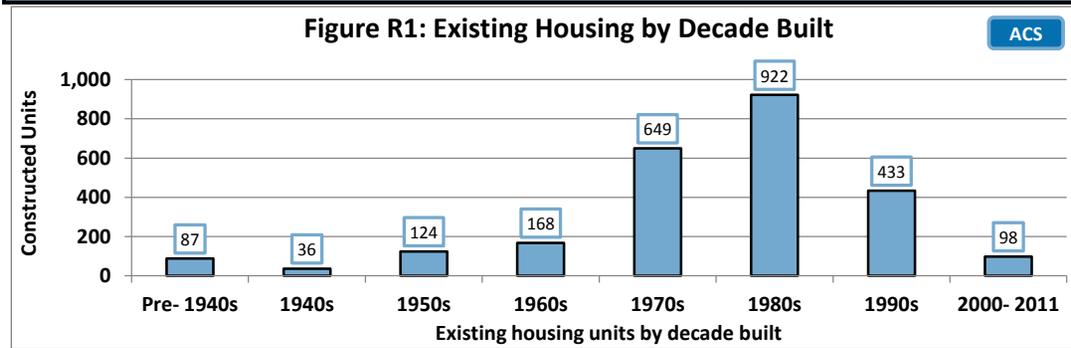
Owner housing costs: Mortgage payments, property taxes, insurance, fuels, utilities, condo fees.

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: Arctic Slope Regional Corporation

Climate Zone (Heating Degree Day Range) Zone 9 (16,800 - 21,000 HDD)

COMMUNITY - Arctic Slope Regional Corporation



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	246	13%
Lack complete kitchen	177	9%

Avg Annual Energy Cost with PCE	\$3,204
Avg Annual Energy Cost without PCE	\$3,229

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008-2011	94
2003-2007	17
1990-2002	7

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	1,200,042	(gallons)
Natural Gas	1,177,524	(ccf)
Electricity	1,438,061	(kWh)
Wood	7	(cords)
Propane	1,081	(gallons)
Coal	-	(tons)

Housing Need Indicators	Number of units	% Occupied Housing
Overcrowded	421	21%
Housing cost burdened	215	11%
1 Star Homes	138	7%

Housing Stock Estimates	Number of Units
All Housing	2,517
All Occupied Housing	1,966
All Vacant housing	551
Vacant Housing for Sale or Rent	160

OVERCROWDING & VENTILATION - Arctic Slope Regional Corporation

Figure R5: Overcrowded Units

ACS

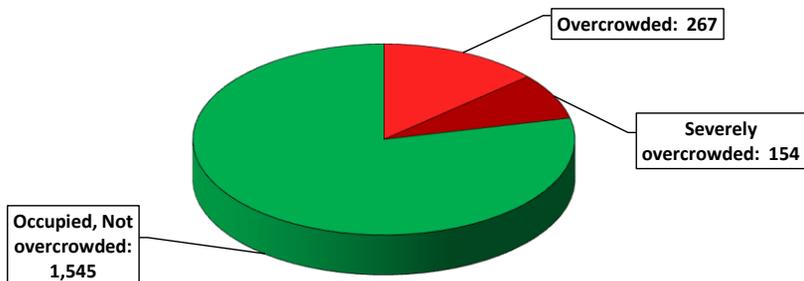


Figure R6: Housing Occupancy

MIX

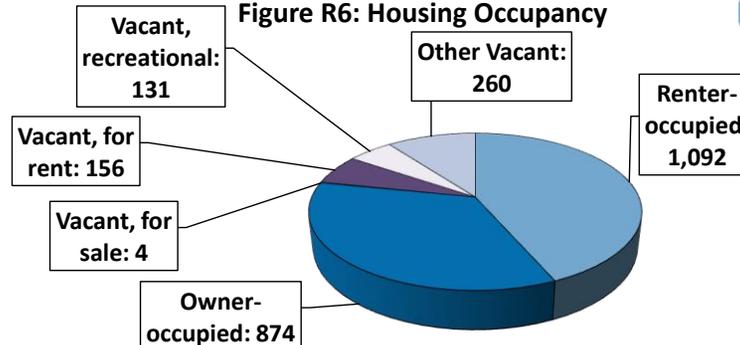


Figure R7: Average Air-Tightness of Current Homes by Decade Built

ARIS

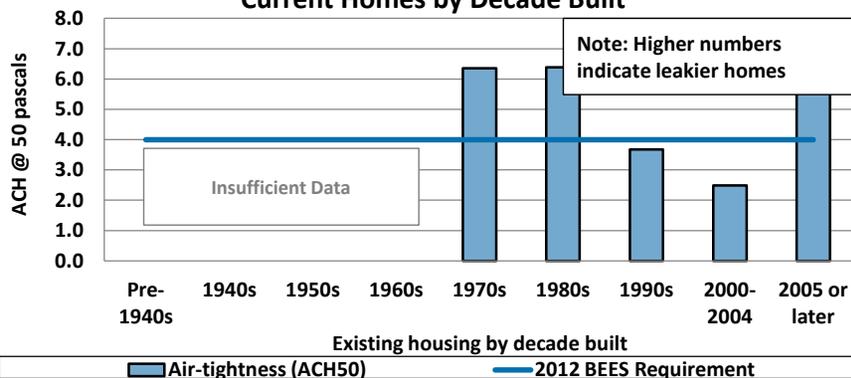


Figure R8: Existing Ventilation Type by Decade Built

ARIS

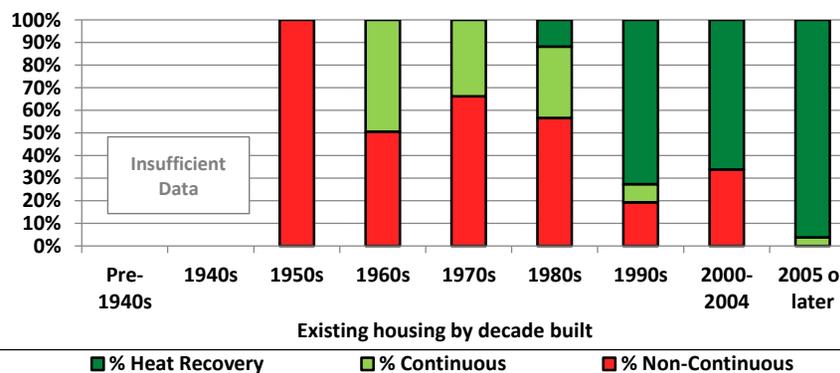


Figure R9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

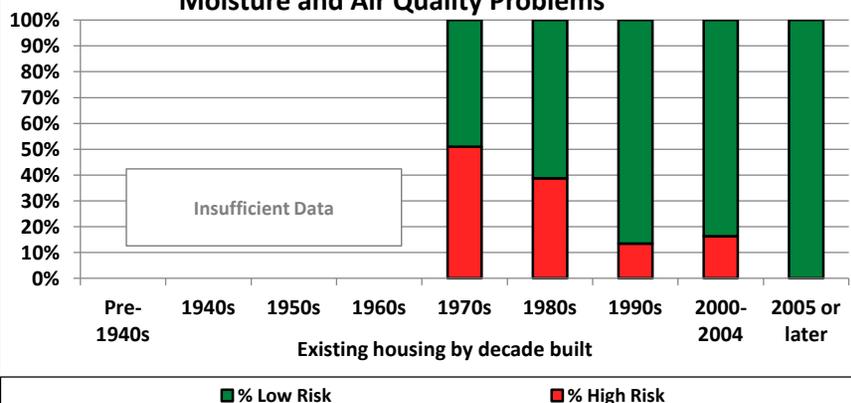
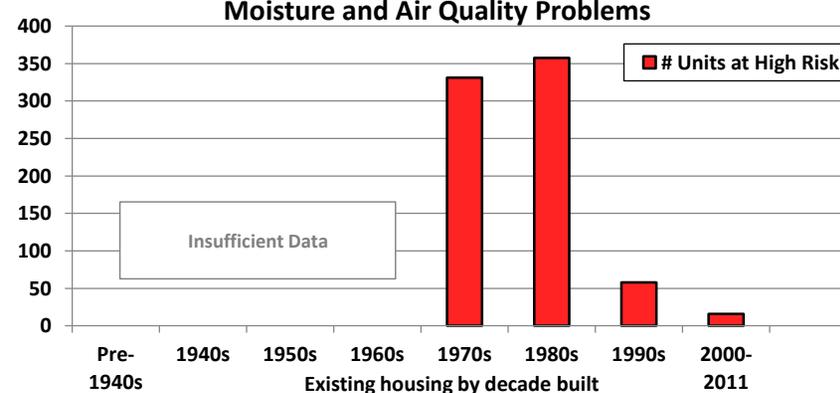


Figure R10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Arctic Slope Regional Corporation												
Current Arctic Slope Regional Corporation 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	249	3-star	68.8	1,134	\$3,204	195	135	27	29	175	\$3.16	6.7
Pre- 1940	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	4	2-star plus	64.7	801	NR	140	115	7	18	174	\$3.36	7.4
1970- 79	69	2-star plus	64.0	1,167	\$3,951	215	159	26	29	188	\$3.60	7.5
1980- 89	25	3-star	69.8	1,196	\$3,509	206	147	28	31	175	\$3.02	6.6
1990- 99	58	4-star	81.0	1,246	\$2,541	177	98	33	29	134	\$2.21	4.3
2000- 2004	39	4-star plus	84.6	1,293	\$2,446	168	91	47	29	119	\$2.12	3.7
2005 or later	52	4-star plus	87.5	772	\$2,039	87	55	12	20	117	\$2.74	3.9

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

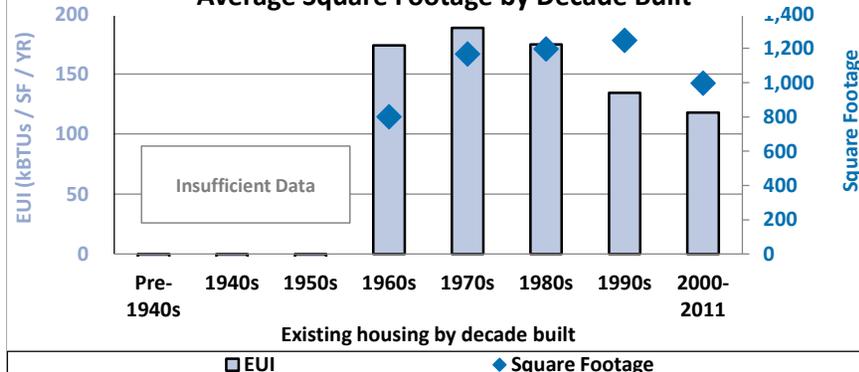
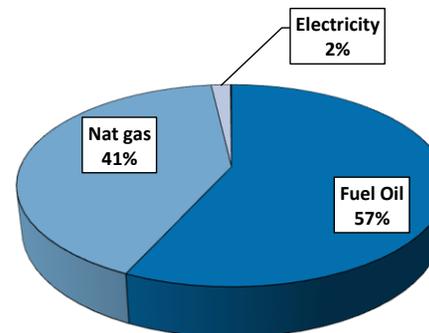


Figure R12: Percent of Total Residential Space Heating Energy by Fuel Type

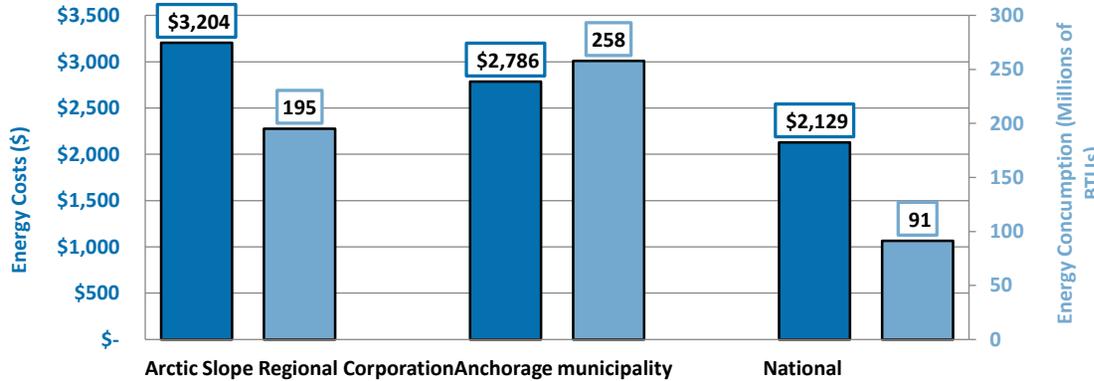


Current Arctic Slope Regional Corporation Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	249	5.9	30	17	NR	27	3	NR	0.26	0.26	0.49
Pre- 1940	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	4	NR	21	12	NR	23	NR	NR	0.30	0.30	0.51
1970- 79	69	6.4	29	15	NR	24	NR	NR	0.26	0.26	0.51
1980- 89	25	6.4	27	15	NR	28	NR	NR	0.29	0.29	0.51
1990- 99	58	3.7	41	29	NR	44	NR	NR	0.23	0.23	0.42
2000- 2004	39	2.5	38	27	NR	38	NR	NR	0.24	0.24	0.40
2005 or later	52	7.4	50	31	NR	53	NR	NR	0.26	0.26	0.24

BEES 2009 - Climate Zone 9	7.0	52	35	NR	43	NR	NR	NR	0.20	0.20	0.20
BEES 2012 - Climate Zone 9	4.0	52	35	NR	43	NR	NR	NR	0.20	0.20	0.20

AFFORDABILITY - Arctic Slope Regional Corporation

Figure R13: Average Annual Home Energy Cost and Use



Housing Information	Avg Household Size (# of people)
All-occupied	4.0
Owner-occupied	4.6
Renter-occupied	3.6

Median value of owner-occupied house with mortgage
\$175,700

Median value of owner-occupied house without a mortgage
\$114,200

Median Household Income	
Housing Units	Annual Household Income
All-occupied	\$ 76,667
Renter-occupied	\$ 70,330
Owner-occupied	\$ 86,964
w/ mortgage	\$ 88,977
w/o mortgage	\$ 75,938

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 829	\$ 9,948
Gross rent	\$ 936	\$ 11,232
Owner-occupied	\$ 673	\$ 8,076
Housing units w/ mortgage	\$ 1,143	\$ 13,716
Housing units w/out a mortgage	\$ 511	\$ 6,132

Avg % of Median Income Spent on Energy
4.2%

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

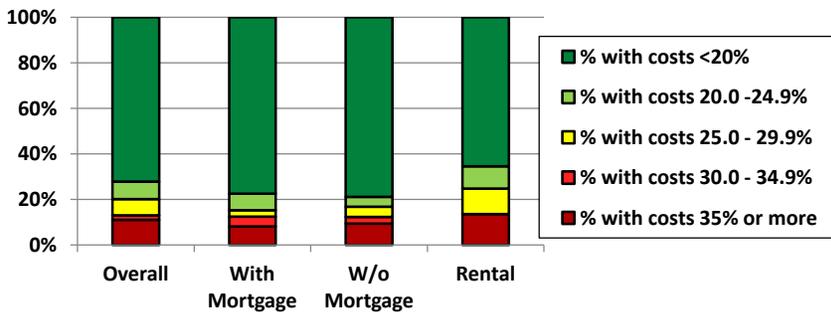


Figure R15: Number of Cost-Burdened Housing Units

