

Table of Contents

Bering Straits Native Corporation Dashboard	II
Bering Straits Native 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
Bering Straits Native Corporation Profile	1-4

Bering Straits Native Corporation Dashboard¹

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Bering Straits Native Corporation ANCSA region is 9,869, an increase of 7% from 2000.

Housing Units: There are currently 3,975 housing units in the Bering Straits Native Corporation ANCSA region. Of these, 2,756 are occupied, 241 vacant units are for sale or rent, and the remaining 978 are seasonal or otherwise vacant units (Profile Figure R6).

Energy: The average home in the Bering Straits Native Corporation ANCSA region is 1,136 square feet and uses 195,000 BTUs of energy per square foot annually. This is 42% 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 Bering Straits Native Corporation ANCSA region is \$7,900, 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 units in the Bering Straits Native Corporation ANCSA region have completed either the Home Energy Rebate or Weatherization programs, 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 before 1940 are currently rated at 1-star compared to a current average rating of 3-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 exceed the 2012 BEES standard of 4 air-changes per hour at 50 pascals (ACH50). In contrast, homes built before 1940 are 6.2 times leakier than those built since 2000 (Profile Figure R7).

Ventilation: An estimated 887 occupied housing units (or 32%) in the Bering Straits Native 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: Twenty two percent of occupied units are estimated to be either overcrowded (11%) or severely overcrowded (11%). This is roughly 7 times the national average, and makes the Bering Straits Native Corporation region the third most overcrowded ANCSA region in the state.

Affordability: According to American Community Survey (ACS) data, approximately 24% of households in the Bering Straits Native Corporation 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 15% of census median area income for occupied housing.

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

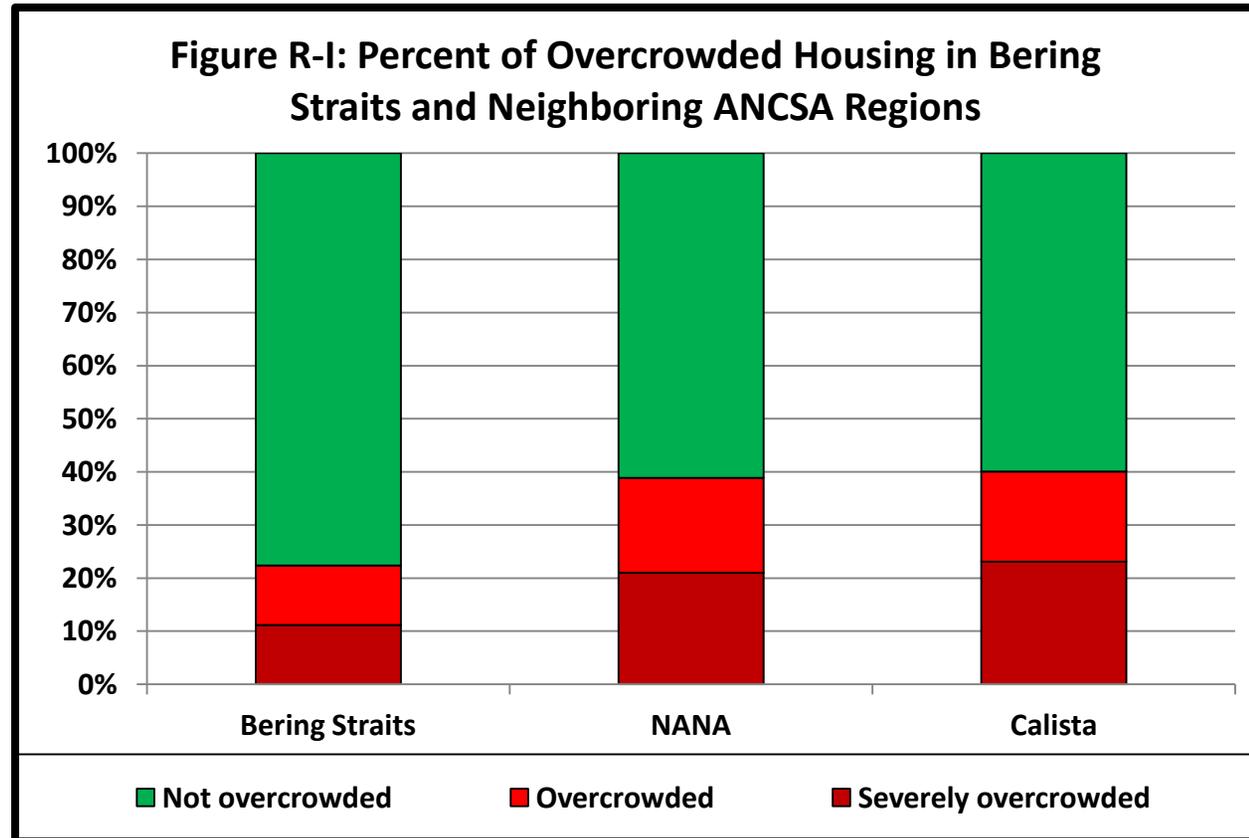
Bering Straits Native Corporation Summary

Community

The Bering Straits ANCSA region is located on the western coast of Alaska, bordered by the NANA region on the north, and the Calista region in the south. Average home sizes in the region range from 593 square feet in Stebbins to 1,302 square feet in Nome.

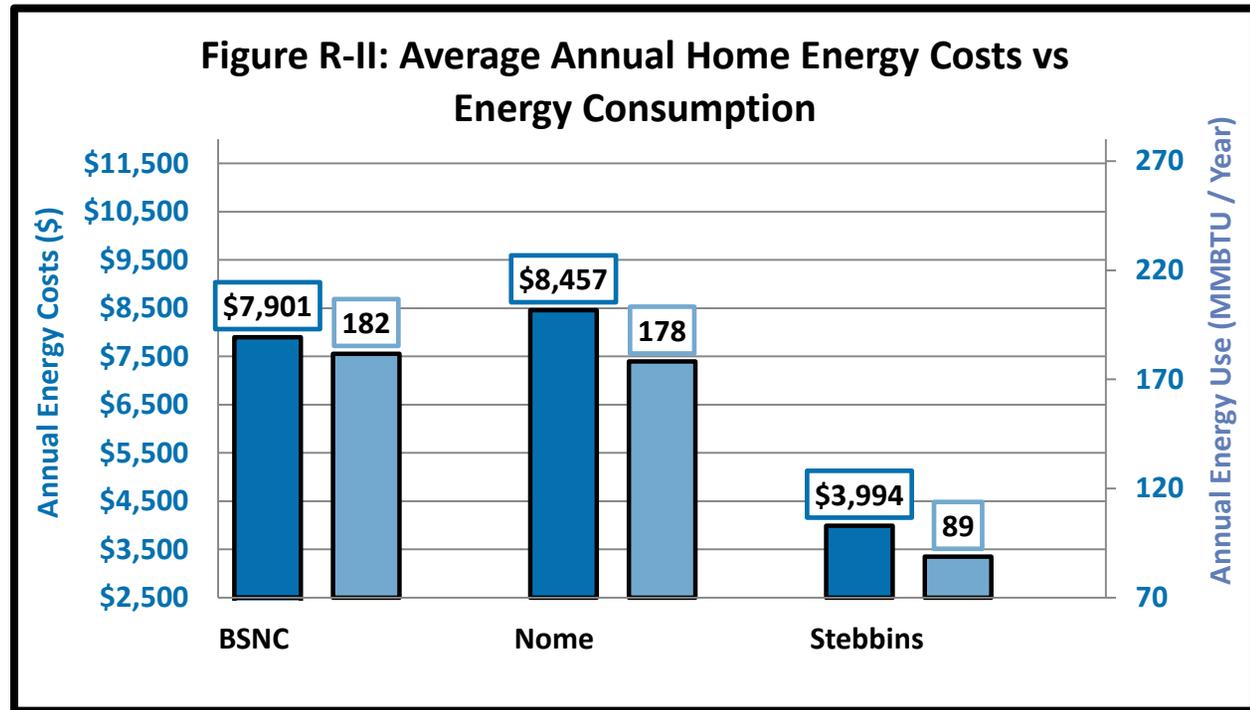
Overcrowding

The Bering Straits ANCSA region is the third most overcrowded area in the state with 22% of occupied housing units with more than one person per room (Figure R-1). Approximately 6% of the housing in the region is vacant and available for sale or rent. Gambell has the lowest percentage of available housing, with no housing units available for sale or rent, and Wales has the highest percentage at 12%. Overcrowding in the region varies by community. Nome has the lowest percentage of overcrowded households (8%) and Savoonga has the highest percentage of households with more than one person per room (61%).



Energy²

Regional average energy costs are the third most costly ANCSA region in the state, despite the relatively small regional average home size of 1,136 square feet. Figure R-II shows that annual energy costs vary by community³, from a low of \$3,994 in Stebbins to a high of \$8,457 in Nome. Nome also has an average annual energy use that is approximately double that of Stebbins, due at least partially to an average home size that is more than twice that found in Stebbins.

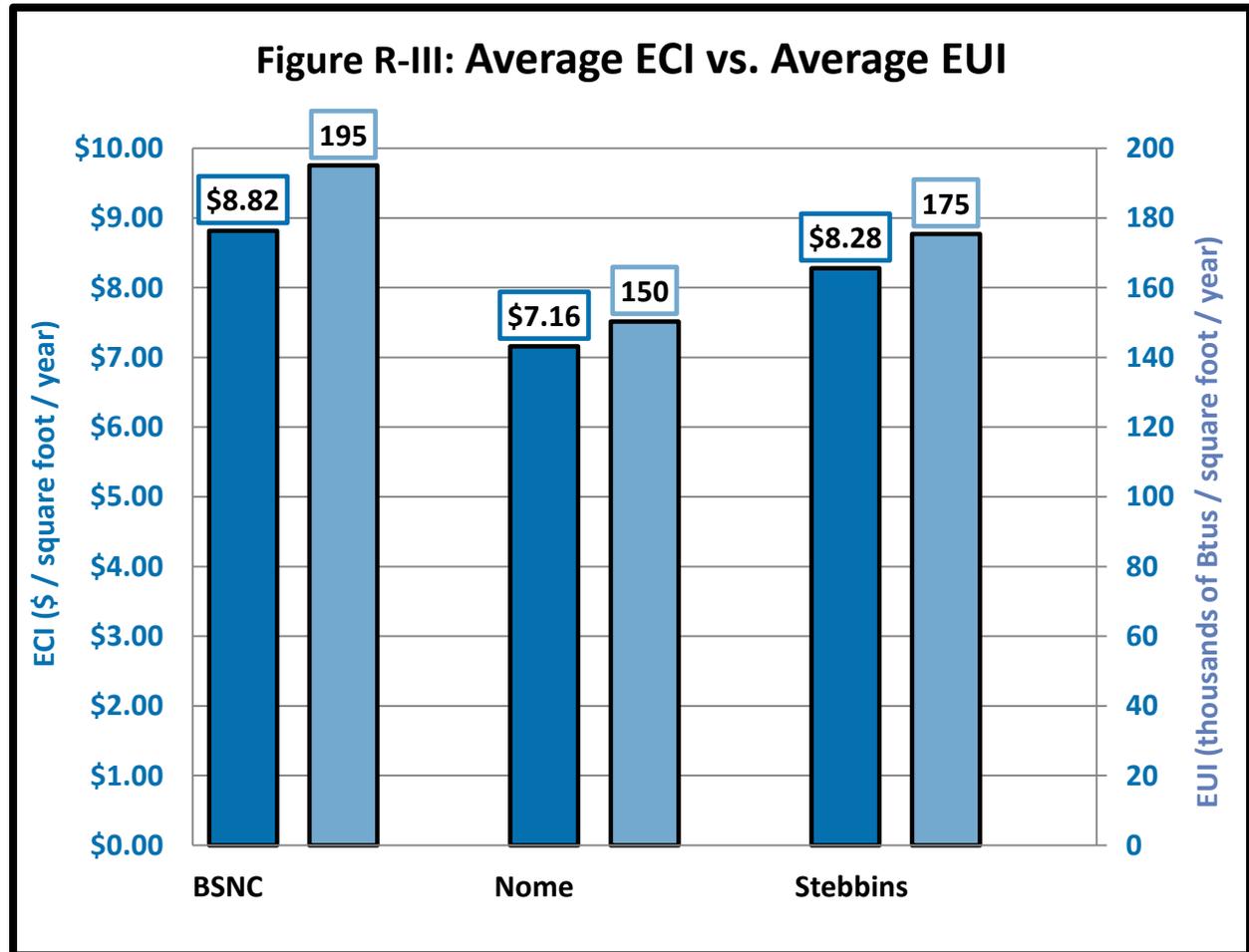


² Regional data appearing in this section is based on communities with sufficient levels of ACS data, meaning not all communities were included in the analysis.

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

The BSNC region has the highest energy use per square foot⁴ of any of the ANCSA regions using an estimated 195 kBtus/ft²/yr. The BSNC region also has the second highest energy cost per square foot⁵ of the ANCSA regions at \$8.82/ft², nearly 9 times the national average. The energy use and cost per square foot for communities in the BSNC region are shown in Figure R-III. Among communities with sufficient AKWarm data for reporting, Nome has both the lowest EUI and ECI in the region at 150 kBtu/ft² and \$7.16/ft² respectively. Stebbins has both the highest EUI and ECI at 175 kBtu/ft² and \$8.28/ft² respectively.

One contributing factor to the high average ECI is the high average home heating index of 10.6 BTUs/ft²/HDD, which is the second highest in the state. Again, there is some variation at the community level, from a low of 7.6 in Nome to a high of 9.4 in Stebbins

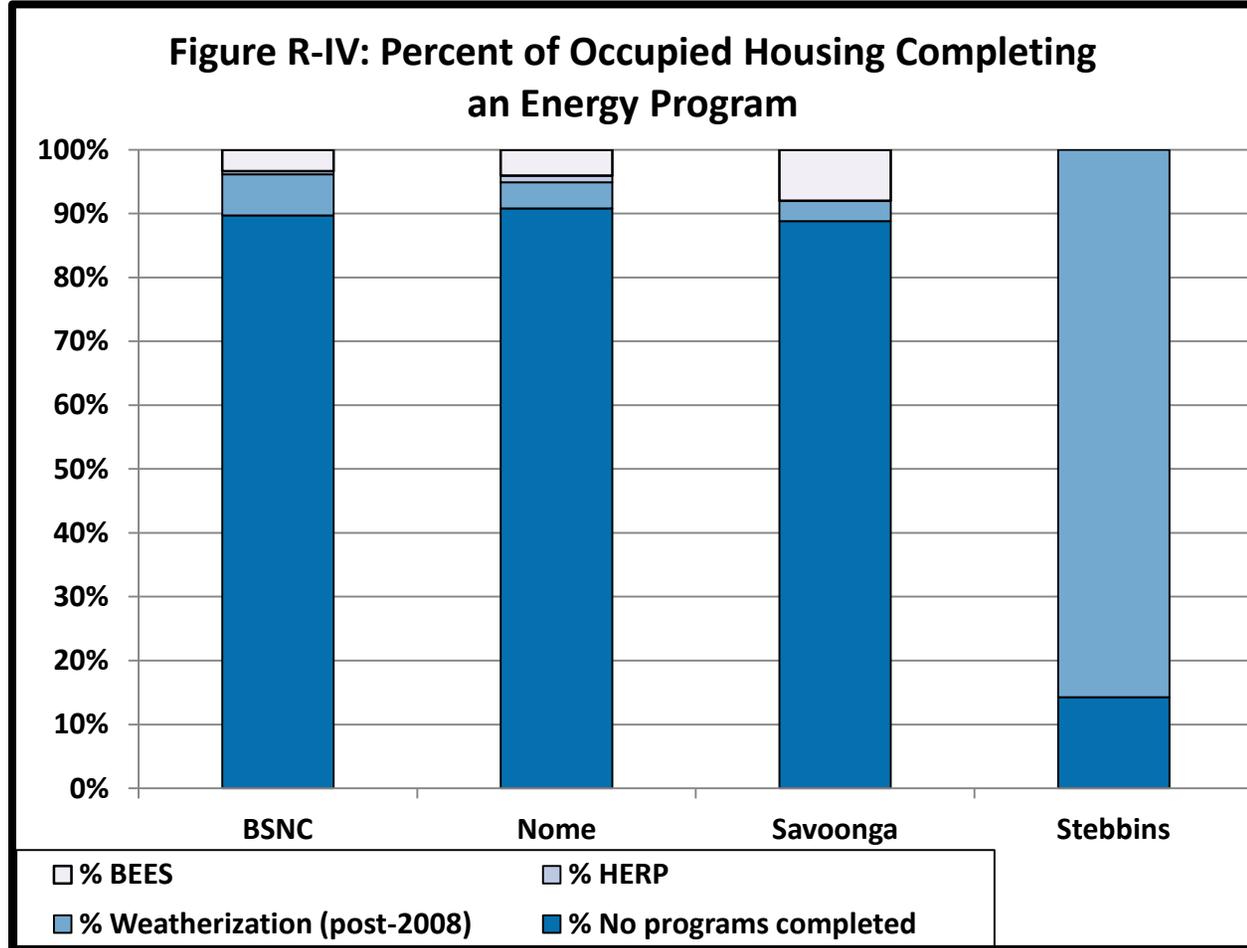


at the community level, from a low of 7.6 in Nome to a high of 9.4 in Stebbins

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.

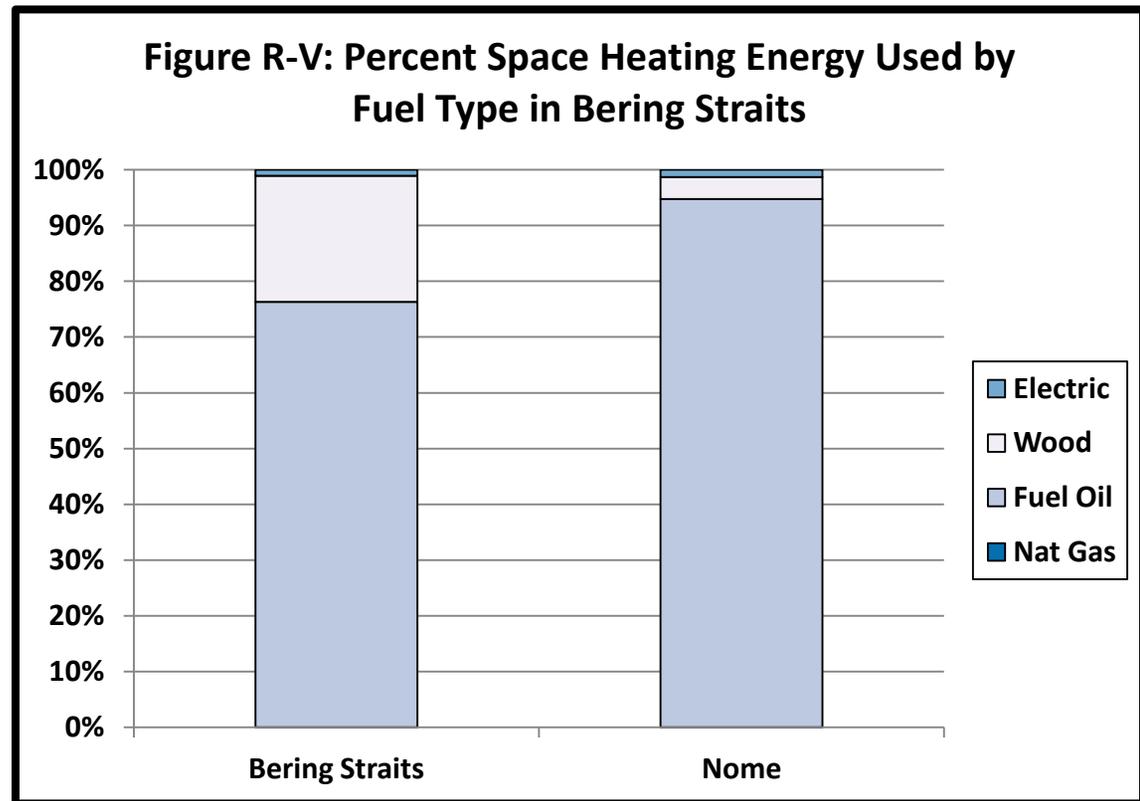
⁵ Energy cost per square foot is also known as the Energy Cost Index, or ECI and is given in dollars per square foot, per year.

Understanding the variations between communities participating in energy efficiency programs is essential to targeting work and resource allocation in the region. Figure R-IV shows the region's participation in the three AHFC energy programs. Approximately 10% of housing units in the Bering Straits region have participated in the Weatherization or Home Energy Rebate program, or have received BEES certification since 2008. The Bering Straits region has the second lowest participation of all the regions with approximately 6% of housing units in the region completing the Home Energy Rebate or Weatherization programs, with an additional 3% certified to meet BEES. Participation varies widely by community, from an estimated zero housing units in Gambell participating to a high of 86% of housing units in Stebbins completing one of the programs. The highest participation in the BEES program occurred in Savoonga where 8% of homes have been certified to meet BEES. Regionally, only 1% of housing units have participated in the Home Energy Rebate Program. The Weatherization program has varying levels of participation by community, from an estimated 0% participation in Savoonga to a high of 86% in Stebbins completing a weatherization retrofit.

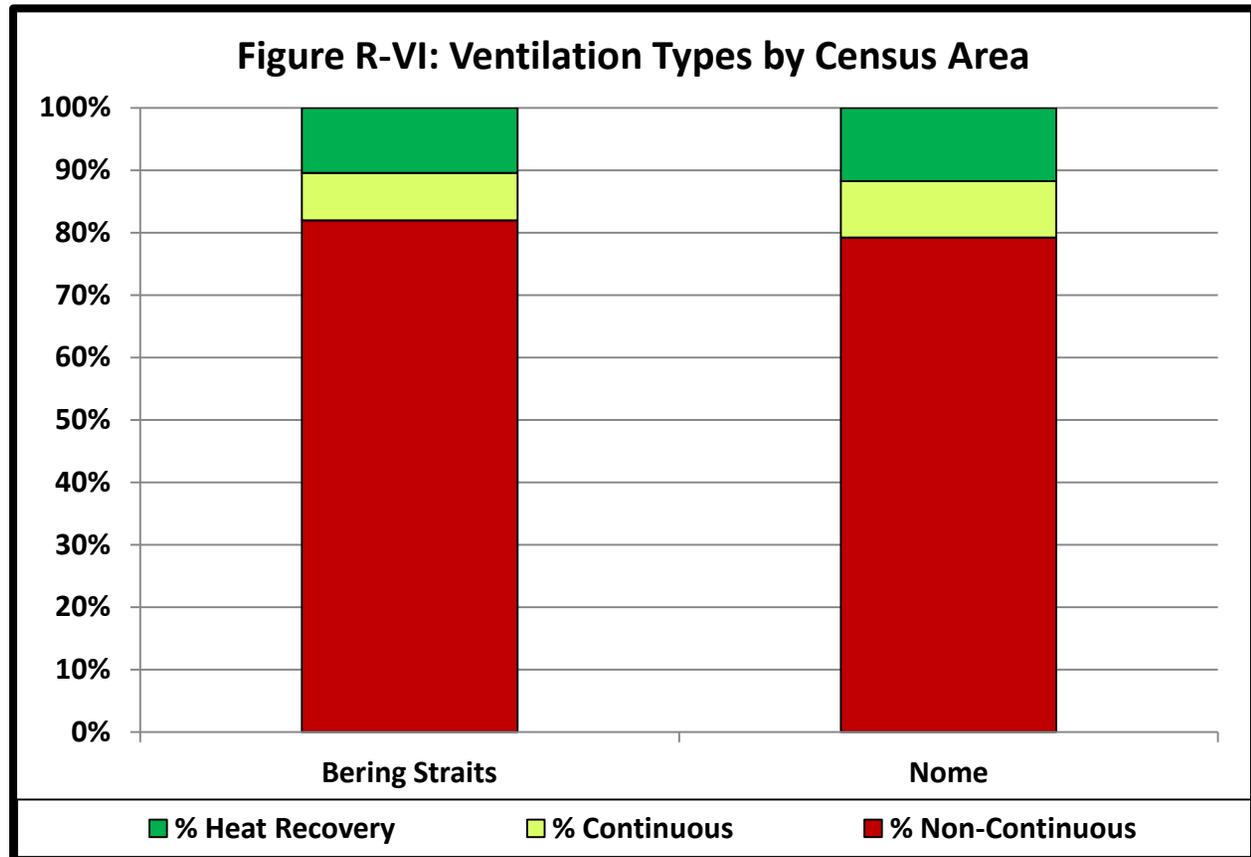


The highest participation in the BEES program occurred in Savoonga where 8% of homes have been certified to meet BEES. Regionally, only 1% of housing units have participated in the Home Energy Rebate Program. The Weatherization program has varying levels of participation by community, from an estimated 0% participation in Savoonga to a high of 86% in Stebbins completing a weatherization retrofit.

The majority of housing units in the Bering Straits region use fuel oil for space heating (Figure R-V). This is especially the case in Nome, the region's largest community, where 95% of space heating needs are met with fuel oil. In other communities in the region wood fuel is used more to supplement fuel oil as evidenced by a 23% usage of wood fuel for space heating region-wide. The lack of wood heat in Nome is likely caused by limited availability of wood in the community. Other communities have trees available to use for space heating needs.

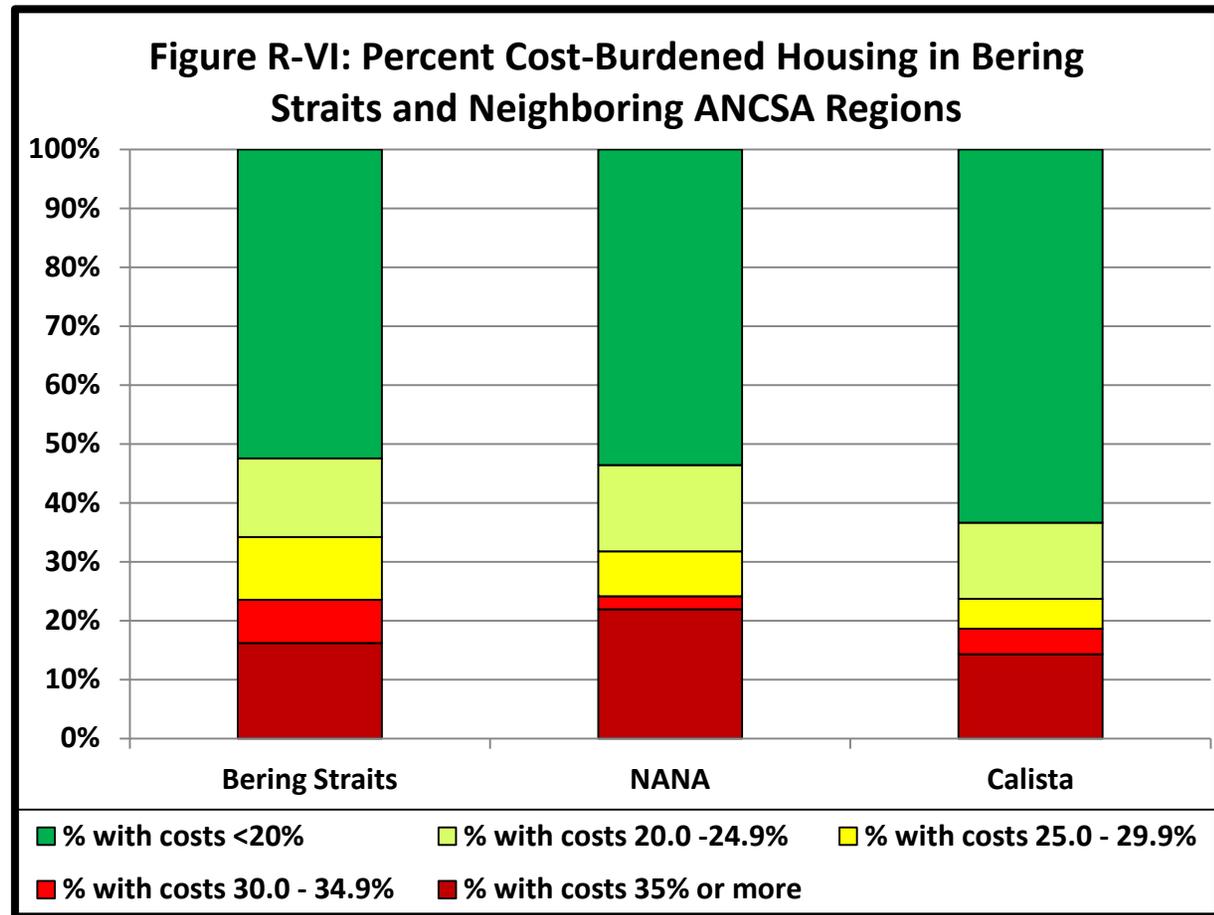


An estimated 18% of homes in the region have a continuous mechanical ventilation or heat recovery ventilation system, which is just slightly lower than the percentage in Nome (19%), the region's largest community. Figure R-VI shows both the regional ventilation characteristics and those of Nome. The Bering Straits region has the second lowest percentage of homes that are relatively air-tight but lack continuous mechanical ventilation. This suggests there are fewer homes at risk of moisture and indoor air quality-related issues, but likely comes at a high energy penalty since the Bering Straits region has, on average, the second leakiest homes in the state.



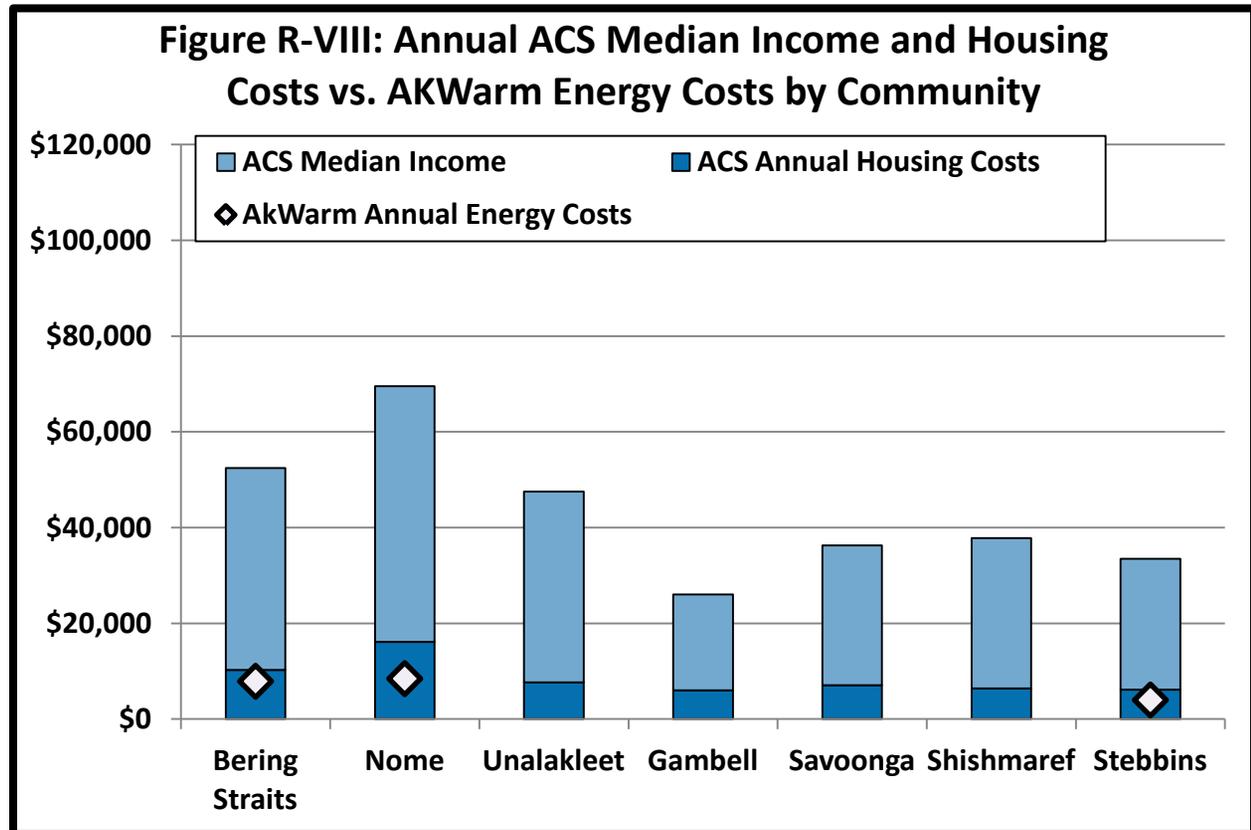
Affordability

Approximately 24% of households in the Bering Straits Native Corporation region are considered cost-burdened, spending 30% or more of total household income on housing costs.⁶ This is similar to the affordability found in the neighboring ANCSA regions of NANA and Calista (Figure R-VI), which have an estimated 24% and 19% of cost-burdened housing units, respectively. Affordability varies by community in the region, ranging from a low of 8% of cost-burdened housing in Unalakleet to a high of 46% in Brevig Mission. The percent of cost-burdened households in the six most populous communities range from a low of 8% in Unalakleet to a high of 44% in Savoonga.



⁶CCHRC'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 shows the median household incomes for the region and the six most populous communities along with housing and energy costs.⁶ The lowest median household income in the region is \$23,929 in Koyuk, and the highest median income is \$69,522, found in Nome. Considering only the six most populous communities, median household incomes range between \$26,000 in Gambell and \$69,522 in Nome.



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.

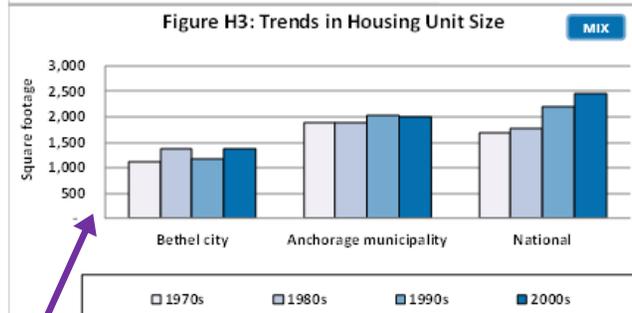
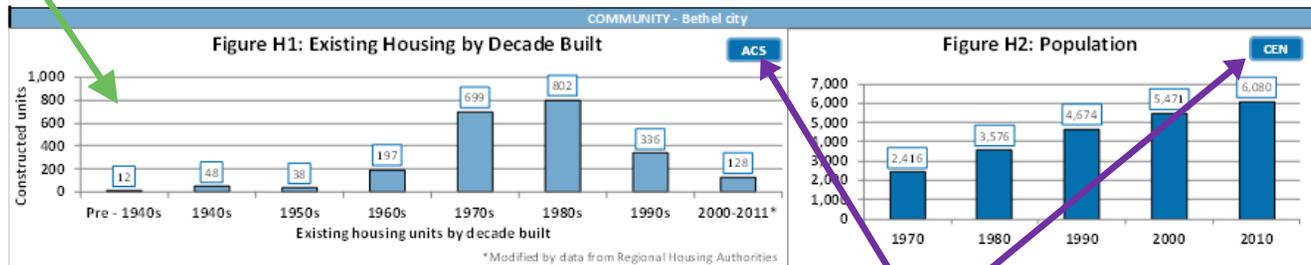
How to Interpret the Profile: Data Sources, Definitions & Clarifications

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:

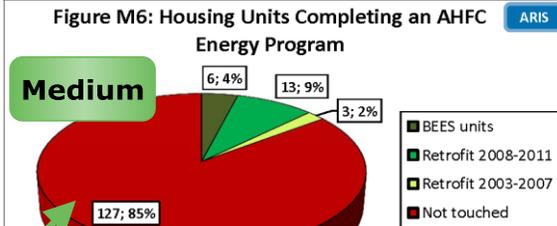
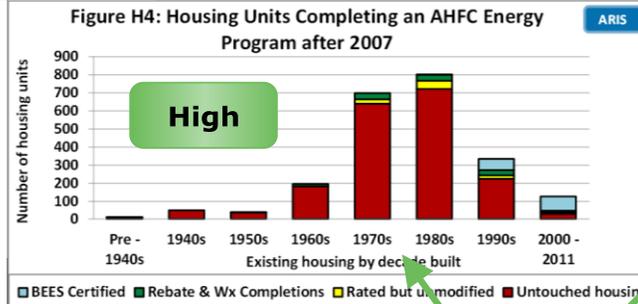
- 2011 American Community Survey 5 year estimates (ACS) **ACS**
- Alaska Retrofit Information System energy audits **ARIS**
- 2010 Decennial Census **CEN**
- Mixed data source; see individual graphs for details. **MIX**

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.

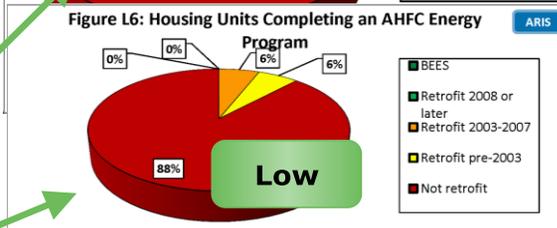
How to Interpret the Profile: Data Sources, Definitions & Clarifications

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	

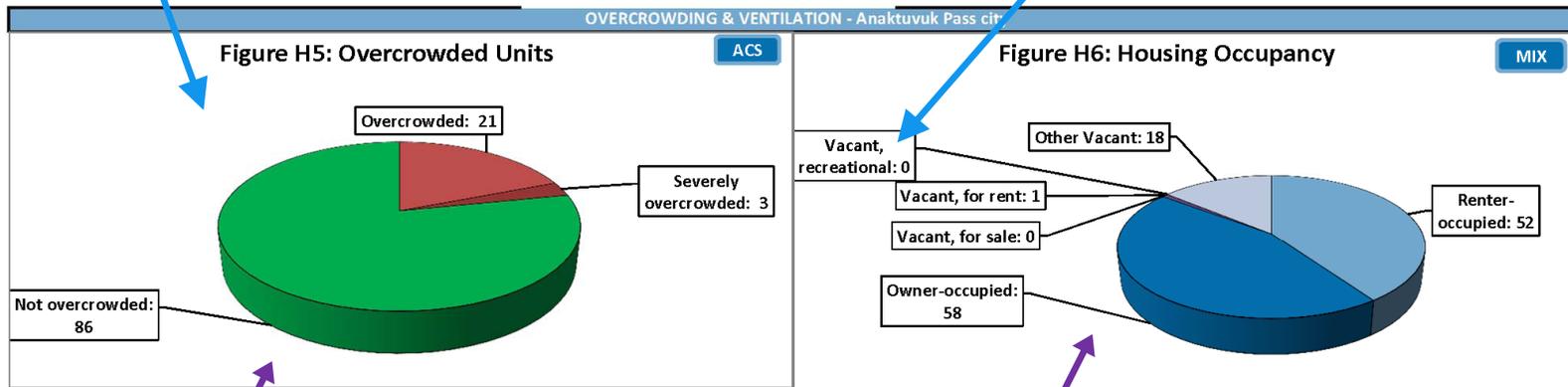
Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

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.

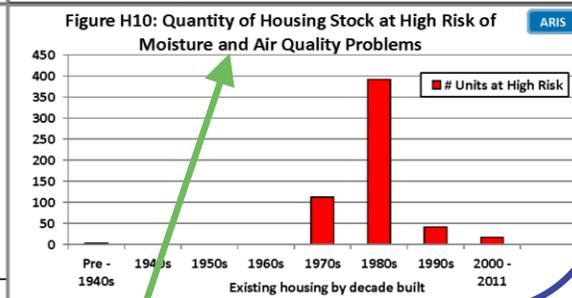
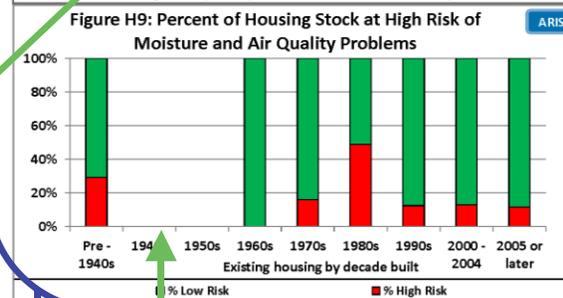
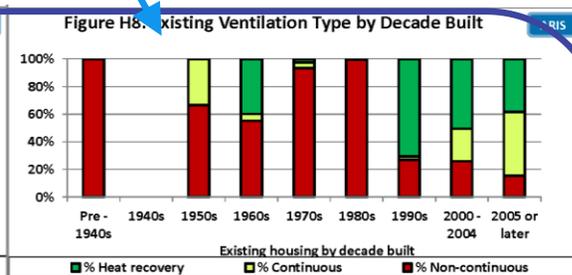
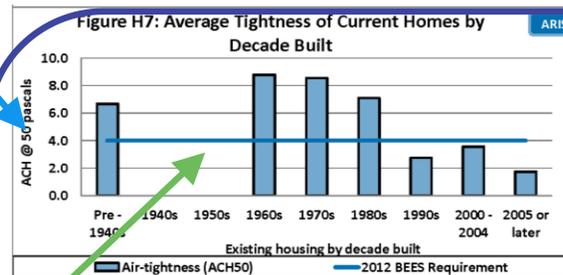
Continuous: Mechanical ventilation without heat recovery operated with automatic controls.

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

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.

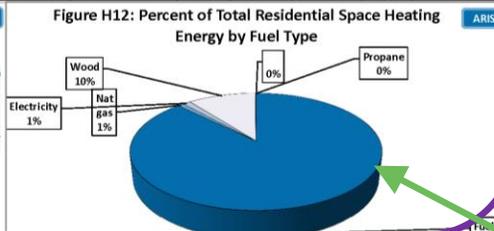
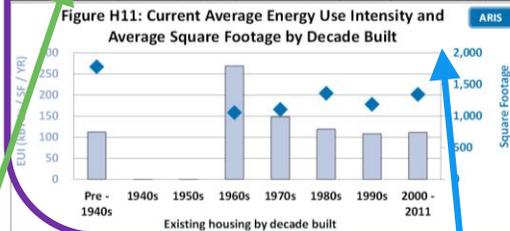
Space Heating, DHW, Appliances:
Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

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

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

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



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

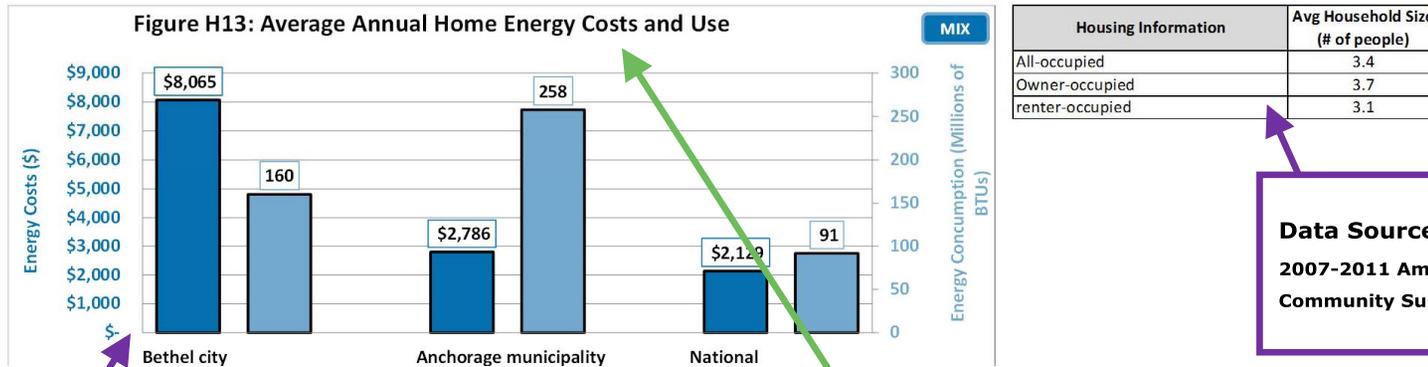
Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--

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.

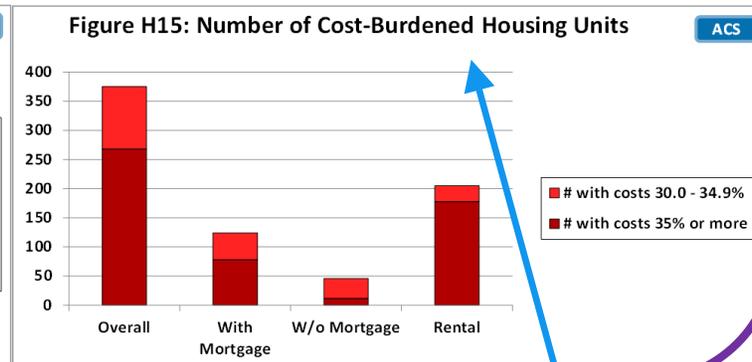
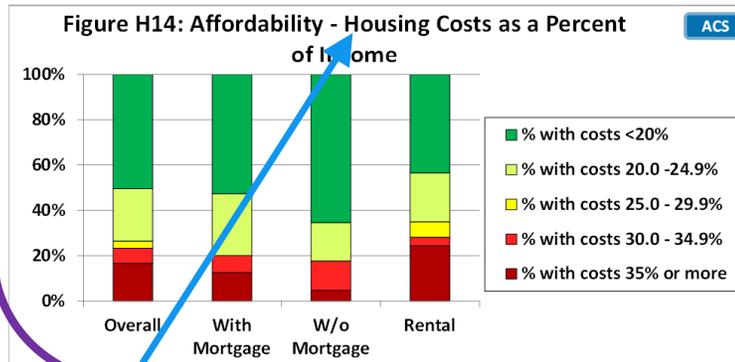
Data Source: Median income comes from 2007-2011 ACS estimates; energy costs come from AHFC's Alaska Retrofit Information System (ARIS).

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%
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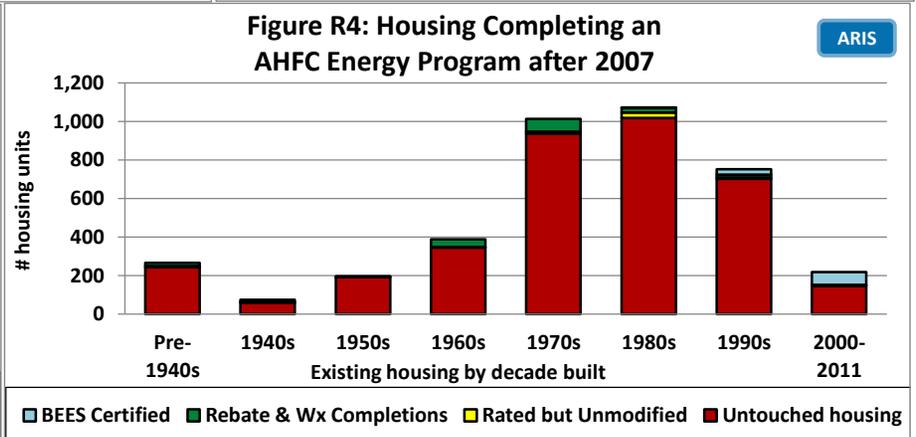
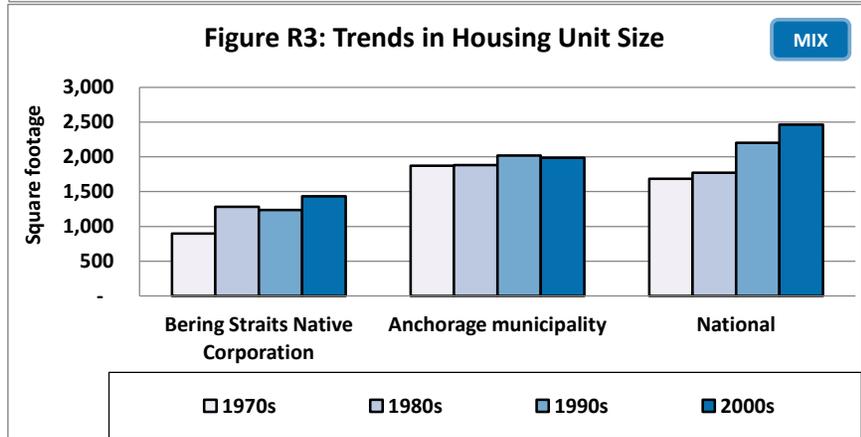
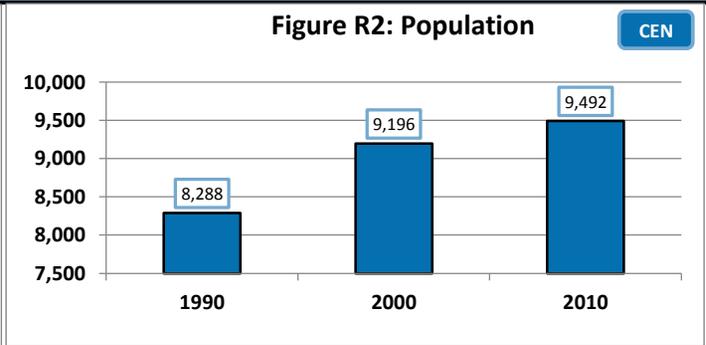
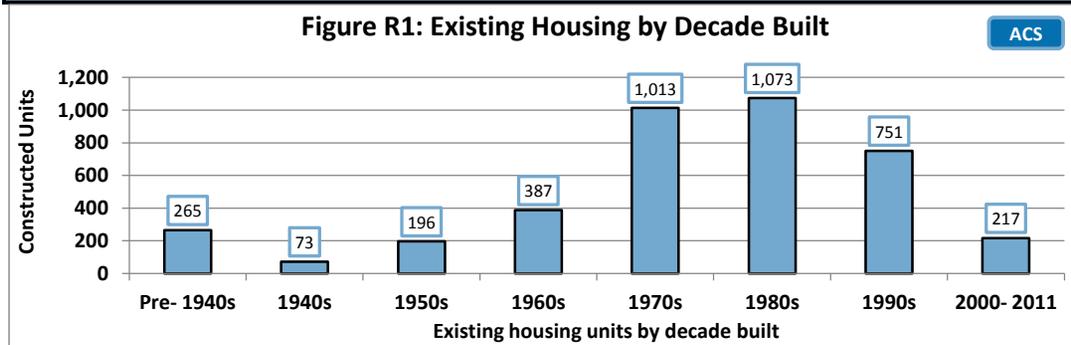


Rental housing costs: Contract rent, fuels, utilities.

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.

COMMUNITY - Bering Straits Native Corporation



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	565	21%
Lack complete kitchen	482	18%

Avg Annual Energy Cost with PCE	\$7,901
Avg Annual Energy Cost without PCE	\$9,149

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008-2011	165
2003-2007	85
1990-2002	535

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	2,218,556	(gallons)
Natural Gas	-	(ccf)
Electricity	1,216,663	(kWh)
Wood	4,798	(cords)
Propane	-	(gallons)
Coal	-	(tons)

Housing Need Indicators	Number of units	% Occupied Housing
Overcrowded	616	22%
Housing cost burdened	572	21%
1 Star Homes	686	25%

Housing Stock Estimates	Number of Units
All Housing	3,975
All Occupied Housing	2,756
All Vacant housing	1,219
Vacant Housing for Sale or Rent	241

OVERCROWDING & VENTILATION - Bering Straits Native Corporation

Figure R5: Overcrowded Units

ACS

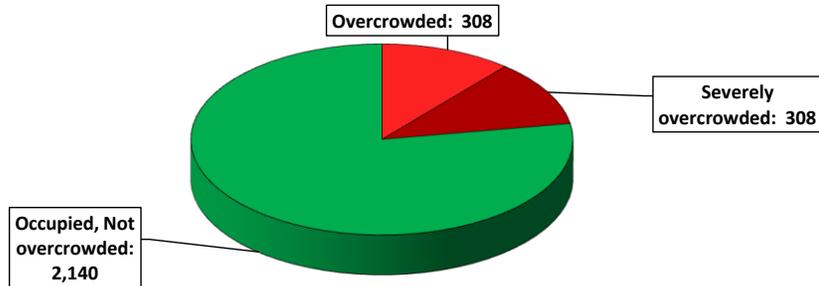


Figure R6: Housing Occupancy

MIX

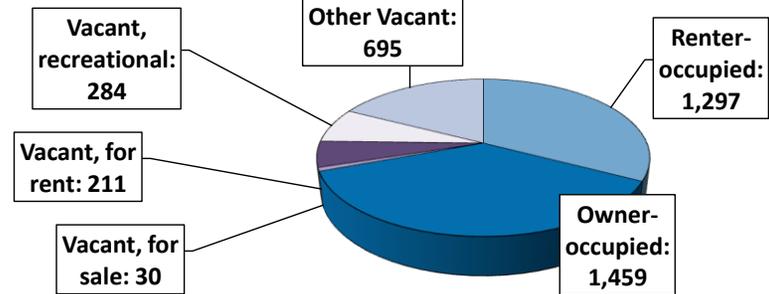


Figure R7: Average Air-Tightness of Current Homes by Decade Built

ARIS

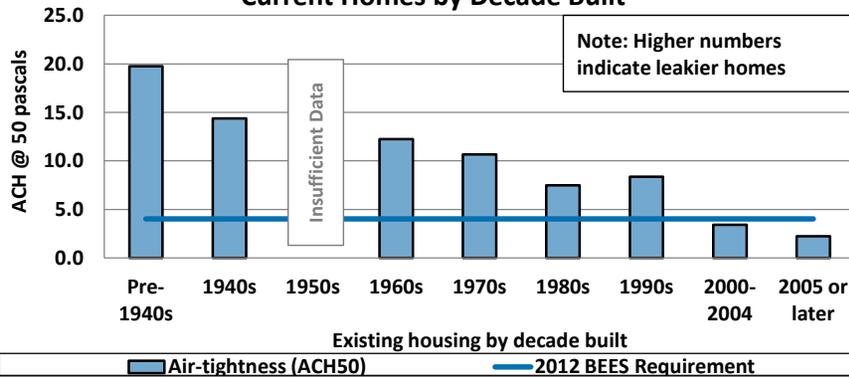


Figure R8: Existing Ventilation Type by Decade Built

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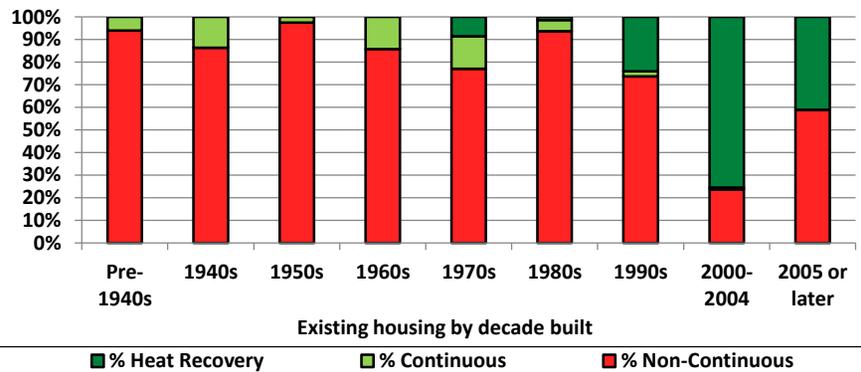


Figure R9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

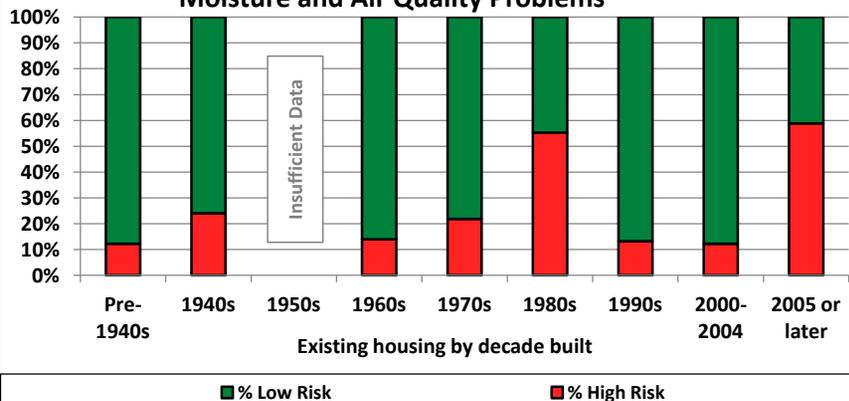
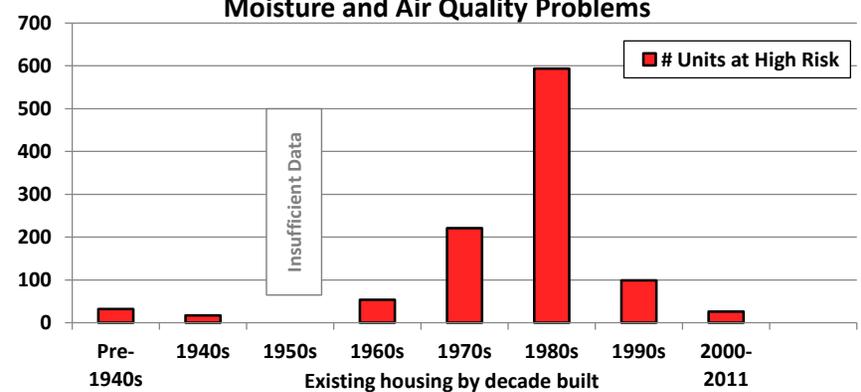


Figure R10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Bering Straits Native Corporation													
Current Bering Straits Native 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	351	2-star	58.3	1,136	\$7,901	182	130	24	26	195	\$8.82	10.6	
Pre- 1940	27	1-star	32.1	1,006	\$11,792	259	215	22	23	302	\$13.37	18.0	
1940- 49	15	1-star plus	43.6	849	\$8,533	182	133	23	25	225	\$10.89	12.1	
1950- 59	5	2-star plus	60.9	1,523	NR	200	151	22	27	132	\$6.49	6.9	
1960- 69	44	1-star	32.9	715	\$6,725	133	100	12	21	243	\$13.15	13.0	
1970- 79	77	2-star	54.3	897	\$7,112	171	127	19	25	228	\$9.41	13.0	
1980- 89	61	3-star	69.9	1,284	\$8,000	168	114	31	24	133	\$6.38	6.5	
1990- 99	51	2-star plus	65.0	1,237	\$7,165	180	128	21	25	163	\$6.24	8.9	
2000- 2004	57	4-star plus	86.2	1,435	\$7,129	144	74	41	29	100	\$4.95	3.9	
2005 or later	15	2-star plus	64.5	2,325	\$11,723	449	330	56	62	170	\$4.70	10.2	

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

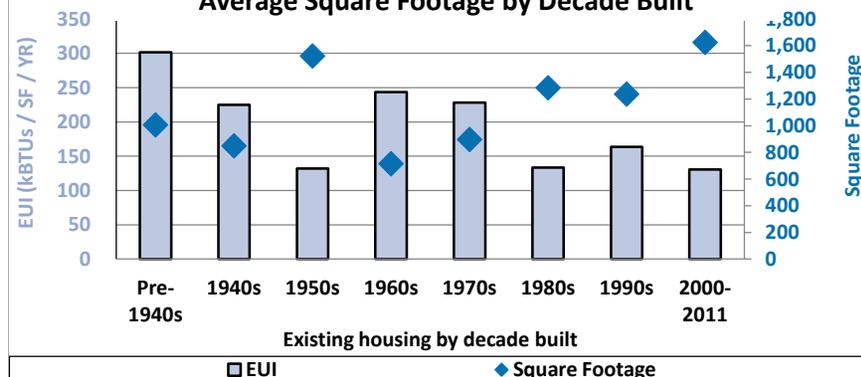
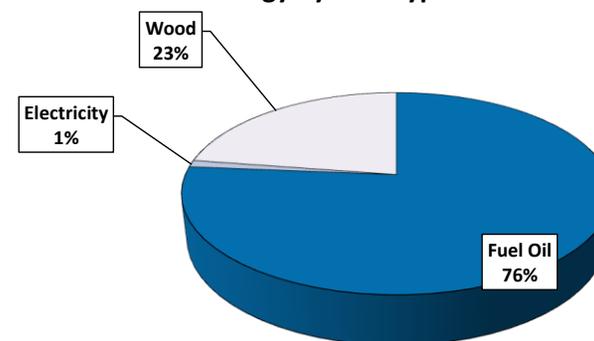


Figure R12: Percent of Total Residential Space Heating Energy by Fuel Type

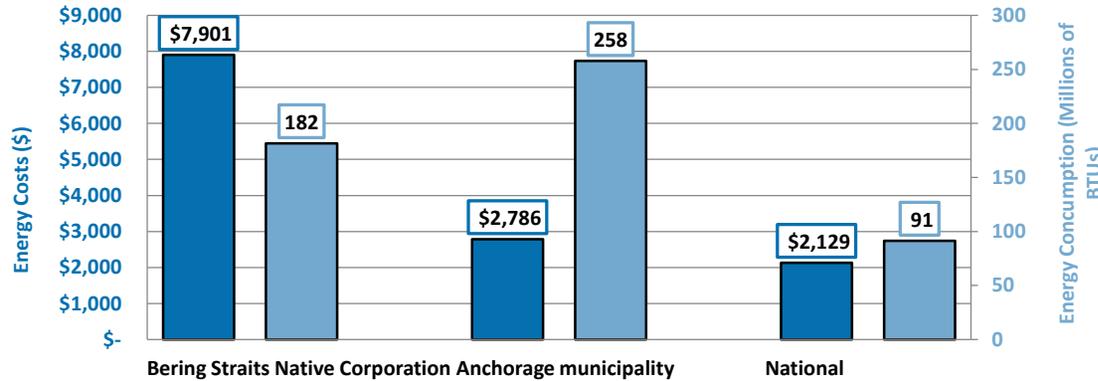


Current Bering Straits Native Corporation Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	351	10.2	16	14	7	20	3	3	0.51	0.51	0.61
Pre- 1940	27	19.7	9	7	NR	14	NR	NR	0.49	0.49	0.62
1940- 49	15	14.4	10	14	NR	23	NR	NR	0.60	0.60	0.68
1950- 59	5	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	44	12.2	9	12	NR	12	NR	NR	0.72	0.72	0.81
1970- 79	77	10.7	16	14	NR	17	NR	NR	0.55	0.55	0.66
1980- 89	61	7.5	28	18	NR	30	NR	NR	0.39	0.39	0.51
1990- 99	51	8.4	35	19	NR	34	NR	NR	0.55	0.55	0.54
2000- 2004	57	3.4	38	23	NR	37	NR	NR	0.25	0.25	0.36
2005 or later	15	2.2	42	6	NR	37	NR	NR	0.34	0.34	0.69

BEES 2009 - Climate Zone 8	7.0	38	30	15	38	15	15	15	0.22	0.22	0.22
BEES 2012 - Climate Zone 8	4.0	48	30	15	38	15	15	15	0.22	0.22	0.22

AFFORDABILITY - Bering Straits Native Corporation

Figure R13: Average Annual Home Energy Cost and Use



Housing Information	Avg Household Size (# of people)
All-occupied	3.3
Owner-occupied	3.7
Renter-occupied	2.9

Median value of owner-occupied house with mortgage
\$171,800

Median value of owner-occupied house without a mortgage
\$93,700

Median Household Income	
Housing Units	Annual Household Income
All-occupied	\$ 52,435
Renter-occupied	\$ 50,244
Owner-occupied	\$ 58,274
w/ mortgage	\$ 91,855
w/o mortgage	\$ 41,780

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 855	\$ 10,260
Gross rent	\$ 1,003	\$ 12,036
Owner-occupied	\$ 736	\$ 8,832
Housing units w/ mortgage	\$ 1,281	\$ 15,372
Housing units w/out a mortgage	\$ 472	\$ 5,664

Avg % of Median Income Spent on Energy: 15.1%

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

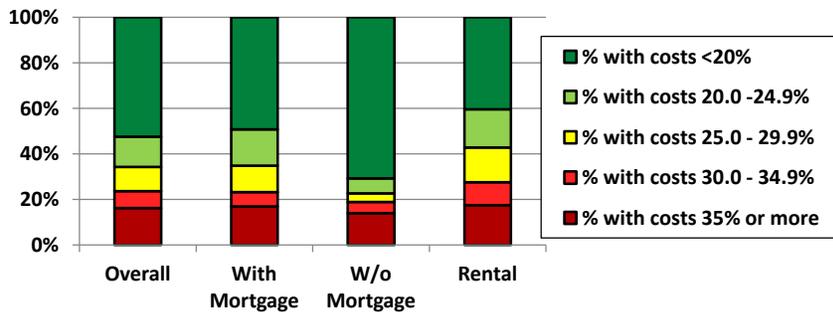


Figure R15: Number of Cost-Burdened Housing Units

