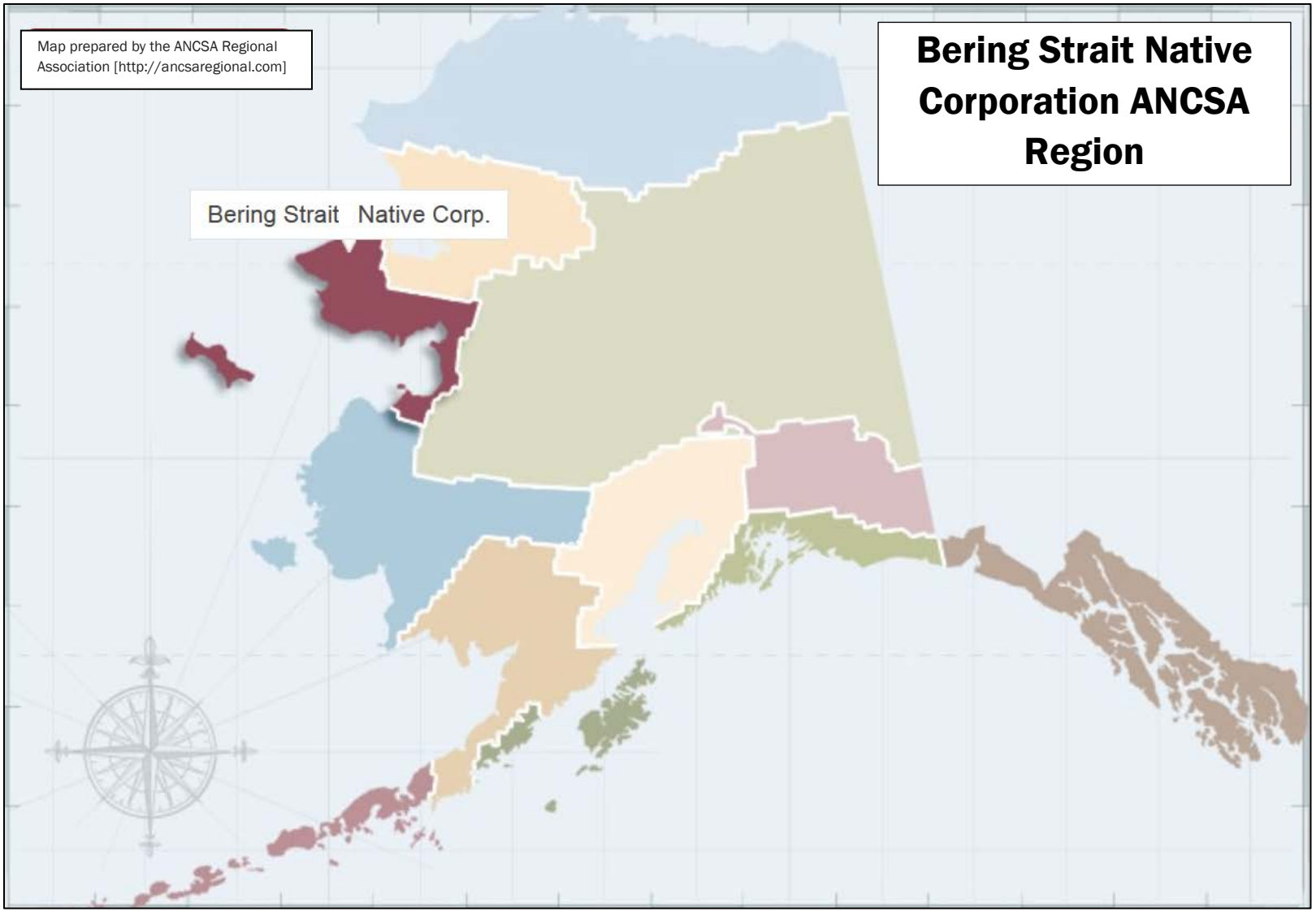

Map prepared by the ANCSA Regional Association [http://ancsaregional.com]
Bering Strait Native Corporation ANCSA Region
Bering Strait Native Corp.

Table of Contents

Regional and Statewide Housing Characteristics

This ANCSA region summary only includes the highlights of housing characteristics at the ANCSA region level. The 2017 Alaska Housing Assessment provides a significant amount of data and analysis at statewide, ANCSA region and census area levels. That assessment provides a statewide analysis of housing characteristics, how they compare to national numbers, and the estimated housing needs. Within the 2017 Alaska Housing Assessment, written summaries are available for each individual ANCSA region and census area, and data profiles are also available characterizing the housing stock from the perspective of community, overcrowding, energy, affordability and need. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a more detailed discussion of estimating housing need and comparison of methods to previous housing assessments, see Appendix C Selected Methodology in the 2017 Alaska Housing Assessment.

Bering Strait Region Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Bering Strait region is 10,040, an increase of 9 percent from 2000.

Housing Units: There are currently 3,980 housing units in the Bering Strait region. Of these, 2,818 are occupied, 143 are for sale or rent, and the remaining 1,018 (26 percent) are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the Bering Strait region is 1,172 square feet and uses 161 million BTUs of energy annually, compared to the statewide average of 227 million BTUs per year. Using AKWarm estimates, the average annual energy cost for homes in the Bering Strait region is $6,427. This is approximately 1.5 times the statewide average and 2.8 times the national average.

Overcrowding: In the Bering Strait region 772 (27 percent) of occupied units are estimated to be either overcrowded (14 percent) or severely overcrowded (13 percent). This is more than eight times the national average and the third most overcrowded in the state.

Drafty Homes and Ventilation: Approximately 1,353 (48 percent) of homes in the Bering Strait region are drafty, exceeding 7 air changes per hour at 50 Pascals (ACH50). The statewide average is 36 percent. In contrast, there are an estimated 817 occupied housing units (29 percent) in the Bering Strait region that are relatively airtight and lack a continuous ventilation system. These houses are at higher risk of issues with moisture and indoor air quality.

Affordability: On average, approximately 832 (30 percent) of households in the Bering Strait region are cost-burdened, spending more than 30 percent of total household income on housing costs, which include rent, utilities and energy costs. Statewide 31 percent of households are cost-burdened.

Senior Housing: There are an estimated 39 beds in senior housing facilities in the Bering Strait region. Currently the Alaska Department of Labor and Workforce Development estimates there are 700 seniors in the ANCSA region and projects an increase to 1,269 by 2030.

Housing Issues: There are an estimated 1,463 homes built before the 1980s in the Bering Strait region that have not been retrofitted through a state program in the past 10 years. Approximately 459 (16 percent) homes in the Bering Strait region lack complete kitchens and approximately 590 (21 percent) lack complete bathrooms.

Bering Strait Region Housing Need Highlights

The Bering Strait region has significant housing needs in each of the areas evaluated: housing gap, affordable housing, senior housing and retrofit needs.

Housing is difficult to afford for renters in the region. [1, 2] There is a large housing gap due to overcrowding, and this is projected to get worse unless rates of new construction increase because the current building rate is inadequate to meet the expected population growth.[3] [4] There are currently few senior housing facilities, and with the projected senior population boom, providing additional senior housing facilities represents a major need. The region has one of the higher estimated energy costs and an aging, inefficient housing stock, providing energy retrofits to homes would likely be a cost-effective way to increase the affordability of living in this cold climate.

Housing Gap: The overcrowding rate in the Bering Strait region is one of the highest in the state, with an estimated 27 percent of households being overcrowded or severely overcrowded.[5] The authors of the *Assessment of American Indian, Alaska Native and Native Hawaiian Housing Needs*[6] point out that overcrowding is often the expression of what is actually homelessness, with families taking in relatives who otherwise could not find affordable housing options.

In addition to the current housing gap caused by overcrowding, if construction rates continue at their current pace, they will not keep pace with projected population demand. This will further exacerbate existing overcrowding and affordability issues unless the rate of new residential building construction increases.

Affordable Housing Need: The Bering Strait region has significant housing affordability needs. The region has the second highest fair market rent for a two-bedroom unit in the state; it is estimated that a renter household needs one full-time job paying $26.46 per hour in order for a two-bedroom rental unit to be affordable.

---

[1] Yentel, D., Aurand, A., Emmanuel, D., Errico, E., Leong, G. M., & Rodrigues, K. (2016). *Out of Reach 2016*. National Low Income Housing Coalition. Retrieved from: http://nlihc.org/sites/default/files/oor/OOR_2016.pdf

[2] U.S. Census Bureau. (2016). American Community Survey, 2010–2014 American Community Survey Five-year Estimates.

[3] Ibid

[4] See Appendix C: Methodology for details.

[5] U.S. Census Bureau. (2016). American Community Survey, 2010–2014 American Community Survey Five-year Estimates.

[6] Pindus, N., Kngsley, G. T., Biess, J., Levy, D., Simington, J., & Hayes, C. (2017). *Final Report: Housing Needs of American Indians and Alaska Natives*. The Urban Institute. Retrieved from: https://www.huduser.gov/portal/publications/HousingNeedsAmerIndians-ExecSumm.html

Additionally, Bering Strait region has one of the lowest area median incomes in the state.[7] The income needed to afford a two-bedroom unit at fair market rent represents 114 percent of Area Median Income that suggests the typical renter household cannot afford housing.

Senior Housing Needs: The Bering Strait region currently has no registered assisted living housing in contrast to statewide, where there are beds for an estimated 2.8 percent of seniors.[8] The region does have some independent senior housing but the senior population is projected to nearly double by 2030, creating a large need assisted living and independent housing.[9]

Retrofit Needs: An estimated 44 percent of housing units in the region were built before 1980 and have not had an energy retrofit and 11 percent were identified as inefficient, meaning they use at least four times the energy of a new home built to modern energy standards. These homes would likely be the most cost-effective to retrofit. In addition to energy retrofit needs, many homes still lack basic facilities such as complete kitchens (16 percent) and complete bathrooms (21 percent).

[7] U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.
[8] AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from: https://www.ahfc.us/senior-support/
[9] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016)."Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

Bering Strait Region Summary

Community

The Bering Strait Native Corporation 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. The average home size in the Bering Strait region is 1,168 square feet.

The ratio of dependents, both those under 16 and those over 65, relative to the working age population in the Bering Strait region is higher than the statewide average and lower than the national ratio.[10] The Bering Strait region is expected to see an increase in the nonworking age population by 2030.

The ratio of senior age dependents to the working age population is lower than the statewide average and lower than the national average. The Bering Strait region is projected to see the ratio of senior age dependents to working age dependents increase by 1.7 times by 2030.

There are an estimated 39 dedicated beds in senior housing in the Bering Strait region, with none of those dedicated to assisted care living.[11] Currently the Alaska Department of Labor and Workforce Development estimates there are 700 seniors in the Bering Strait region and projects that there will be 1,269 senior citizens by 2030.[12] In the Bering Strait region no senior citizens are in registered assisted care housing, whereas statewide 2.8 percent of senior citizens live in assisted care housing. Nationally, approximately 3.5 percent of senior citizens are in senior living facilities.[13]

Comparison of the growth rates in the senior age (65+) segment of the population to the young dependent age (0 to 15) population indicate that in the Bering Strait region the primary pressure for new housing over the next 15 years will come from households with elderly people.

---

[10] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016)."Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

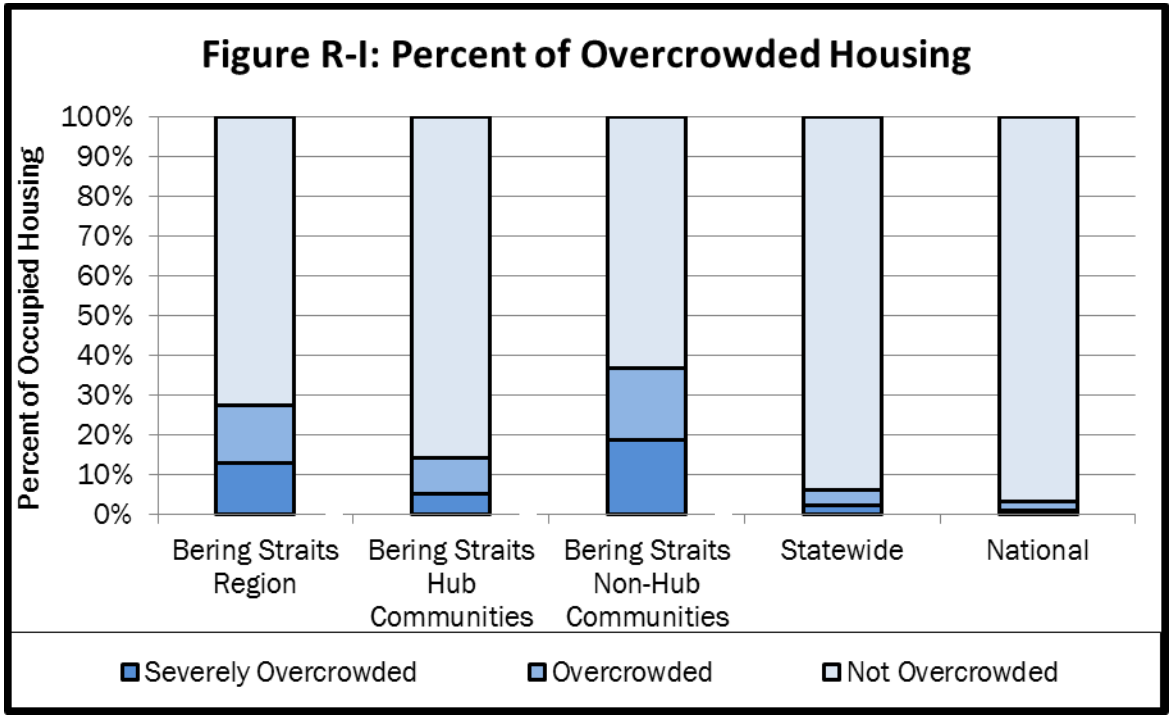
[11] AHFC Senior Housing Office. (2016). *Inventory List: Assisted Living Homes/Facilities*. Revised 5/02/2016.
AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016.
Retrieved from https://www.ahfc.us/senior-support/

[12] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). "Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

[13] Ribbe, M., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., ... Jonnson, P. (1997). "Nursing Homes in 10 Nations: A Comparison Between Countries and Settings." *Age and Ageing, 26(S2), 3-12*

Overcrowding[14]

The Bering Strait region is the third most overcrowded ANCSA region in Alaska. Approximately 27 percent of households are overcrowded in the region as a whole. The rate of overcrowding in the Bering Strait region is more than 4.3 times the statewide average (6.4 percent) and more than 8.3 times the national average (3.3 percent).



Overcrowding in the non-hub communities is more than that found in the hub community. Overcrowding is defined as households with more than 1 person per room. Severe overcrowding is defined as households with more than 1.5 persons per room. Non-hub communities in the Bering Strait region average nearly 2.6 times the overcrowding rate of the hub community, with approximately 37 percent of households overcrowded compared to the hub community's 14 percent. Further, 18.8 percent of non-hub community households are severely overcrowded. This is 18.8 times the national average.

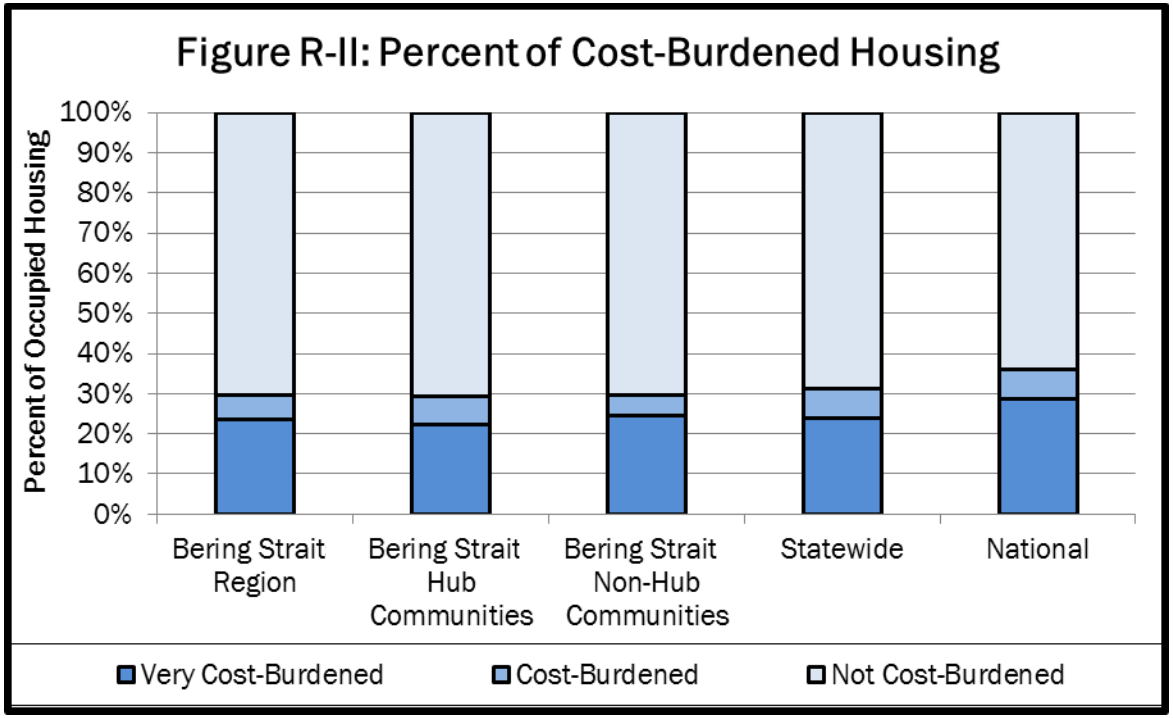
Approximately 4 percent of housing units in the Bering Strait region are available for sale or rent. The percentage of units for sale or rent in non-hub communities (2 percent) is less than in the hub community (6 percent). Additionally, 26 percent of housing units in Bering Strait region are considered vacant because they are used for seasonal, recreational or "other" non-year-round purposes.

[14] U.S. Census Bureau. (2016). American Community Survey, 2010–2014 American Community Survey Five-year Estimates.

Affordability[15]

According to estimates from the U.S. Census American Community Survey (ACS), 30 percent of households in the Bering Strait region are cost-burdened, that is, spend more than 30 percent of their income on housing costs. Non-hub communities have a higher percentage (30 percent) of households that are cost-burdened than the hub community (29 percent). The rate of cost-burdened households in Bering Strait is 80 percent of the national average (36 percent).

The median household income in the Bering Strait region is $47,579. This is lower than the statewide median of $71,829. The national median is $53,482.



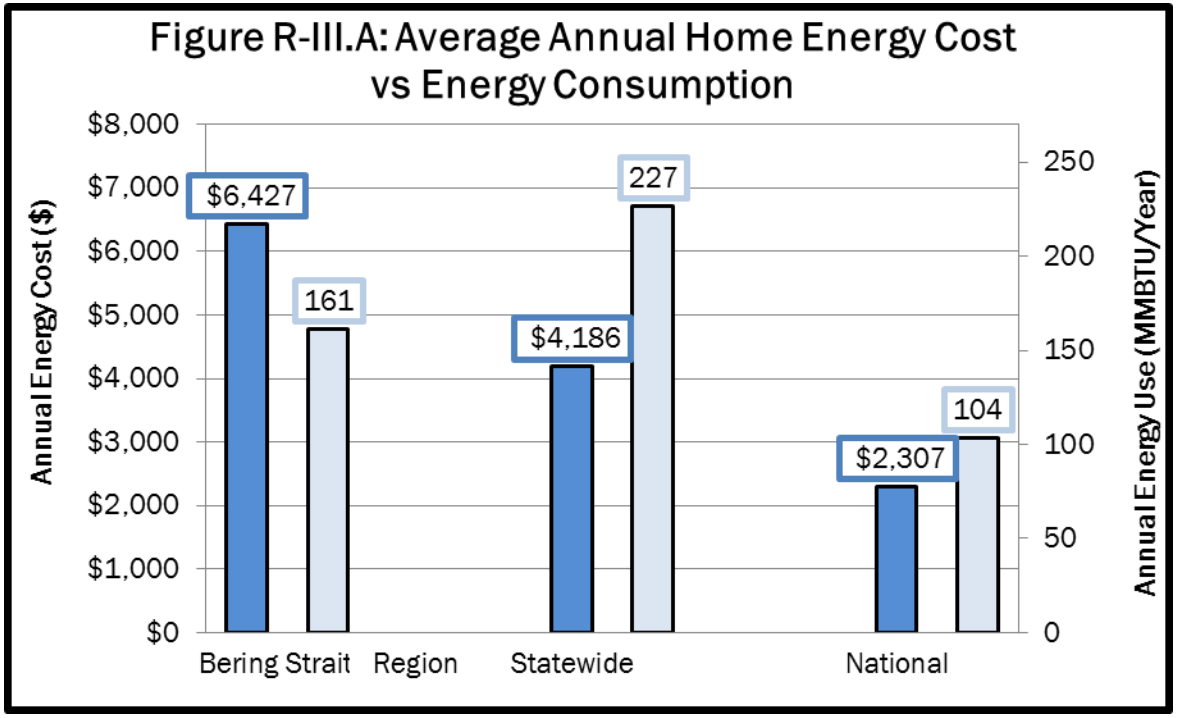
[15] U.S. Census Bureau. (2016). American Community Survey, 2010–2014 American Community Survey Five-year Estimates.

Energy[16]

Single-family Units

Single-family homes in the Bering Strait region consume an average of 161 million BTUs per year in energy, the fifth lowest energy consumption in the state. This average annual energy consumption is 71 percent of the statewide average of 227 million BTUs and 1.6 times the national average.

Energy costs for single-family homes in the Bering Strait region average $6,427 annually. This is the highest in the state. Energy costs in the Bering Strait region are 1.5 times the statewide average and 2.8 times the national average.



With an average footprint of 1,172 square feet, single-family homes in the Bering Strait region are smaller than the statewide average of 1,955 square feet. Nationally the average house size is 2,425 square feet.

The energy use intensity (EUI), or annual energy used per square foot for a single-family home in the Bering Strait region averages 149,997 BTUs per square foot, the fifth highest in the state. This is 66 percent of the statewide average of 227,000 BTUs per square foot and 3.5 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the Bering Strait region averages $5.49, the second highest in the state. This is 2.4 times the statewide average of $2.31 per square foot and 5.8 times the national average of $0.95 per square foot.

The home heating index (HHI) in the Bering Strait region for the average single-family homes is 7.65 BTUs/ft2/HDD. This is the third lowest in the state. The HHI for the Bering Strait region is 87 percent of the statewide average. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the Bering Strait region averages $37.47, the second highest in

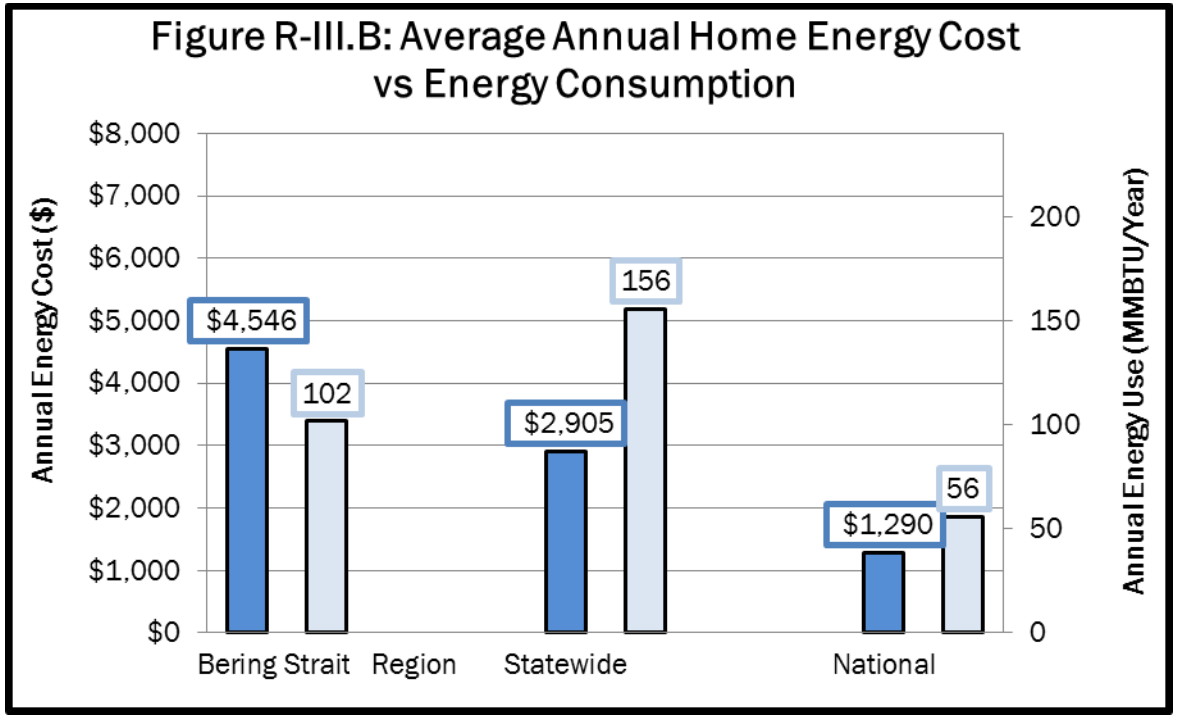
[16] See Appendix C: Methodology for details.

the state. This is 2.4 times the statewide average of $15.80 per million BTUs and 1.7 times the national average of $22.27 per million BTUs.

Multifamily Units

Multi-family housing units in the Bering Strait region consume an average of 102 million BTUs per year in energy, the second lowest energy consumption in the state. This average annual energy consumption is 65 percent of the statewide average of 156 million BTUs and 1.6 times the national average.

Energy costs for multi-family housing units in the Bering Strait region average $4,546 annually. This is the third highest in the state. Energy costs in the Bering Strait region are 1.6 times the statewide average and 3.5 times the national average.



With an average footprint of 1,045 square feet, multi-family housing units in the Bering Strait region are smaller than the statewide average of 1,284 square feet. Nationally the average unit in multi-family housing is 930 square feet.

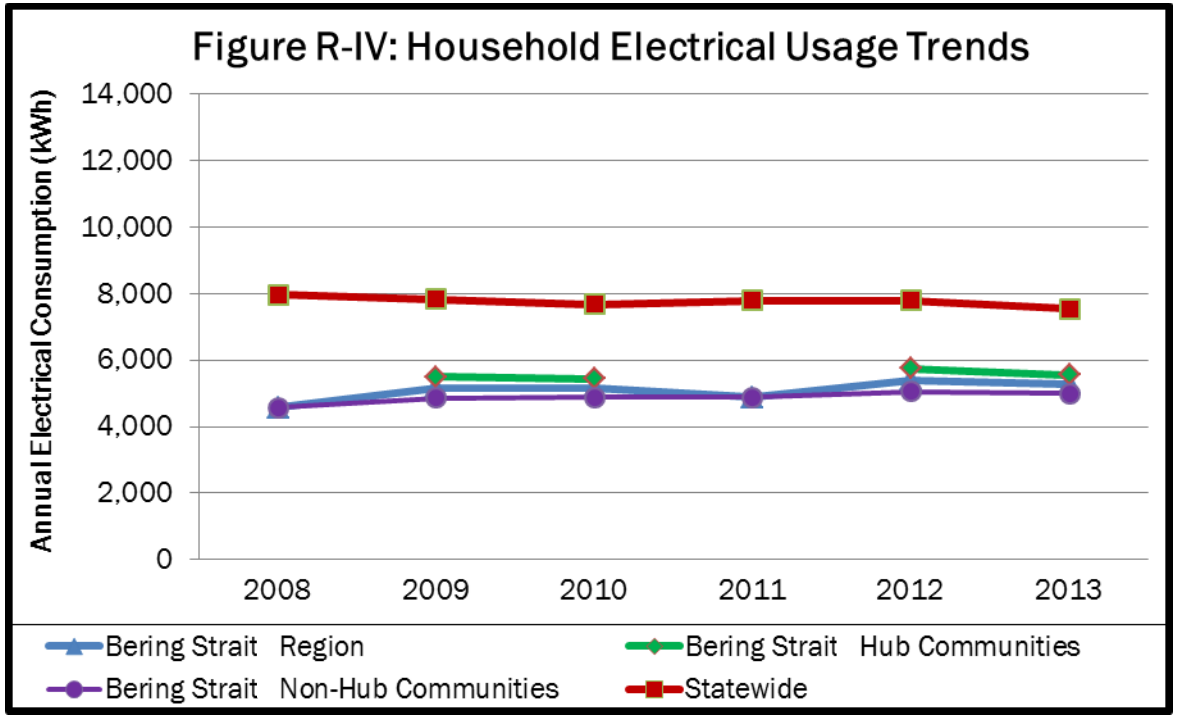
The energy use intensity (EUI), or annual energy used per square foot for a unit in multi-family housing in the Bering Strait region averages 99,411 BTUs per square foot, the second lowest in the state. This is 78 percent of the statewide average of 128,000 BTUs per square foot and 1.7 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a unit in multi-family housing in the Bering Strait region averages $4.35, the third highest in the state. This is 1.9 times the statewide average of $2.27 per square foot and 3.1 times the national average of $1.39 per square foot.

The home heating index (HHI) in the Bering Strait region for the average multi-family housing unit is 4.23 BTUs/ft2/HDD. This is the lowest in the state. The HHI for the Bering Strait region is 51 percent of the statewide average. The normalized cost of energy, in terms of dollars per million BTUs, for a unit in multi-family housing in the Bering Strait region averages $38.97, the highest in

the state. This is three times the statewide average of $12.79 per million BTUs and 1.7 times the national average of $23.12 per million BTUs.

Regional Residential Electrical Use Trends[17]

In 2013 the average household in the Bering Strait region consumed 5,277 kWh of electricity annually. This is approximately 16 percent more than in 2009. Hub communities in the region averaged 5,562 kWh per year. This has remained approximately the same over the same period. In contrast, non-hub communities averaged 4,988 kWh in 2013, an increase of 9 percent since 2008. Statewide, the average household consumed 7,540 kWh of electricity in 2013, a decrease of 5 percent since 2008.



Inefficient and Older Homes[18]

Approximately 321 (11 percent) of the occupied homes in the Bering Strait region are estimated to be 1-star homes. A 1-star home uses approximately four times more energy than if built to AHFC's Building Energy Efficiency Standard (BEES). Statewide, an estimated 14,966 (6 percent) of occupied homes are 1-star homes.

Homes built before 1980 that have not been retrofit are potentially homes in need. Approximately 44 percent of all homes in the Bering Strait region fit these two criteria. This is higher than the statewide average of 39 percent.

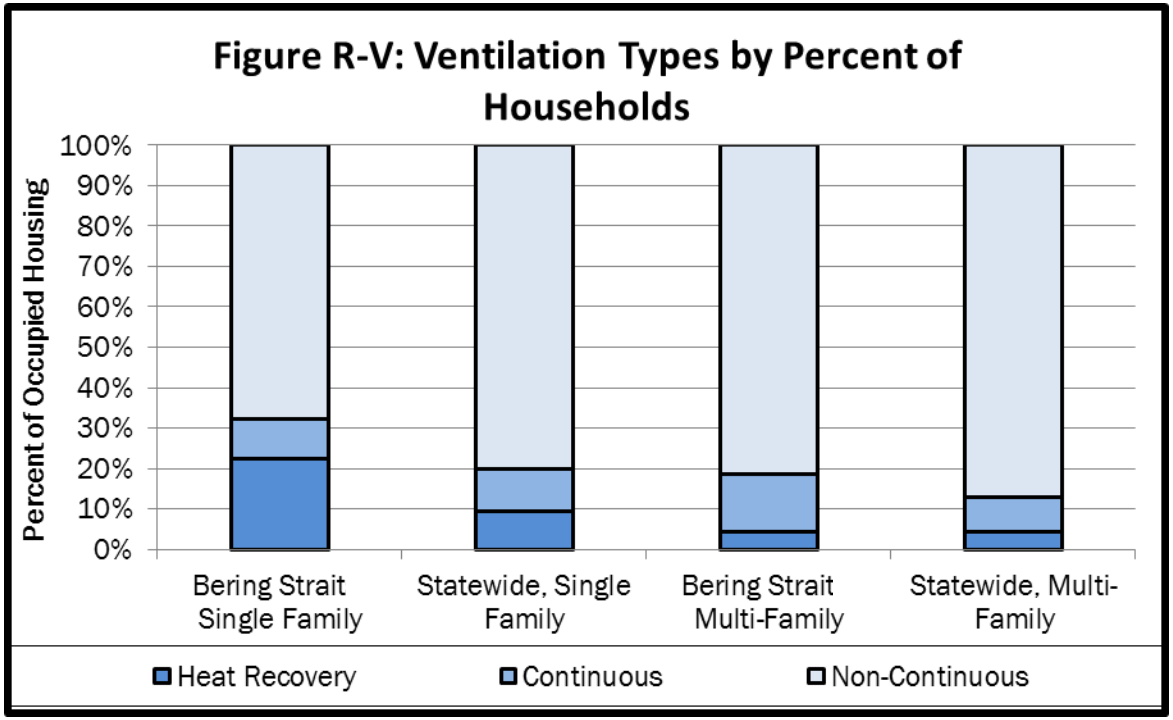
[17] Fay, G., Villalobos Melendez, A. & West. C. (2014). *Alaska Energy Statistics: 1960-2011*. UAA Institute of Social and Economic Research. Retrieved from: http://iser.uaa.alaska.edu/Publications/2013_12-AlaskaEnergyStatistics2011Report_Final_2014-04-30.pdf

[18] See Appendix C: Methodology for details.

Housing Condition [19]

Ventilation

Approximately 32 percent of the occupied homes in the Bering Strait region have heat recovery or continuous mechanical ventilation systems installed. This is the third highest in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems, with or without heat recovery.



Indoor Air Quality

A tight home with no or inadequate ventilation has an increased risk of issues with indoor air quality or moisture. The Bering Strait region has the lowest percentage of housing units in the state that are both relatively airtight and lacking continuous mechanical ventilation. Approximately 593 (21 percent) of the occupied homes in the Bering Strait region are estimated to be at moderate risk, with 224 (8 percent) estimated to be at high risk. Statewide, approximately 30 percent of occupied homes are estimated to be at moderate risk and 26 percent are estimated to be at high risk.

Draftiness

To quantify drafty homes, the following definitions were used. Drafty homes will see test results of between 7 and 12 air changes per hour at 50 Pascals (ACH50) when subjected to a blower door test. Very drafty homes will see test results of greater than 12 ACH50. Approximately 847 (30 percent) of the occupied homes in the Bering Strait region are estimated to be drafty, with 506 (18 percent) estimated to be very drafty. Statewide approximately 24 percent of occupied homes are estimated to be drafty and 12 percent are estimated to be very drafty.

[19] See Appendix C: Methodology for details.