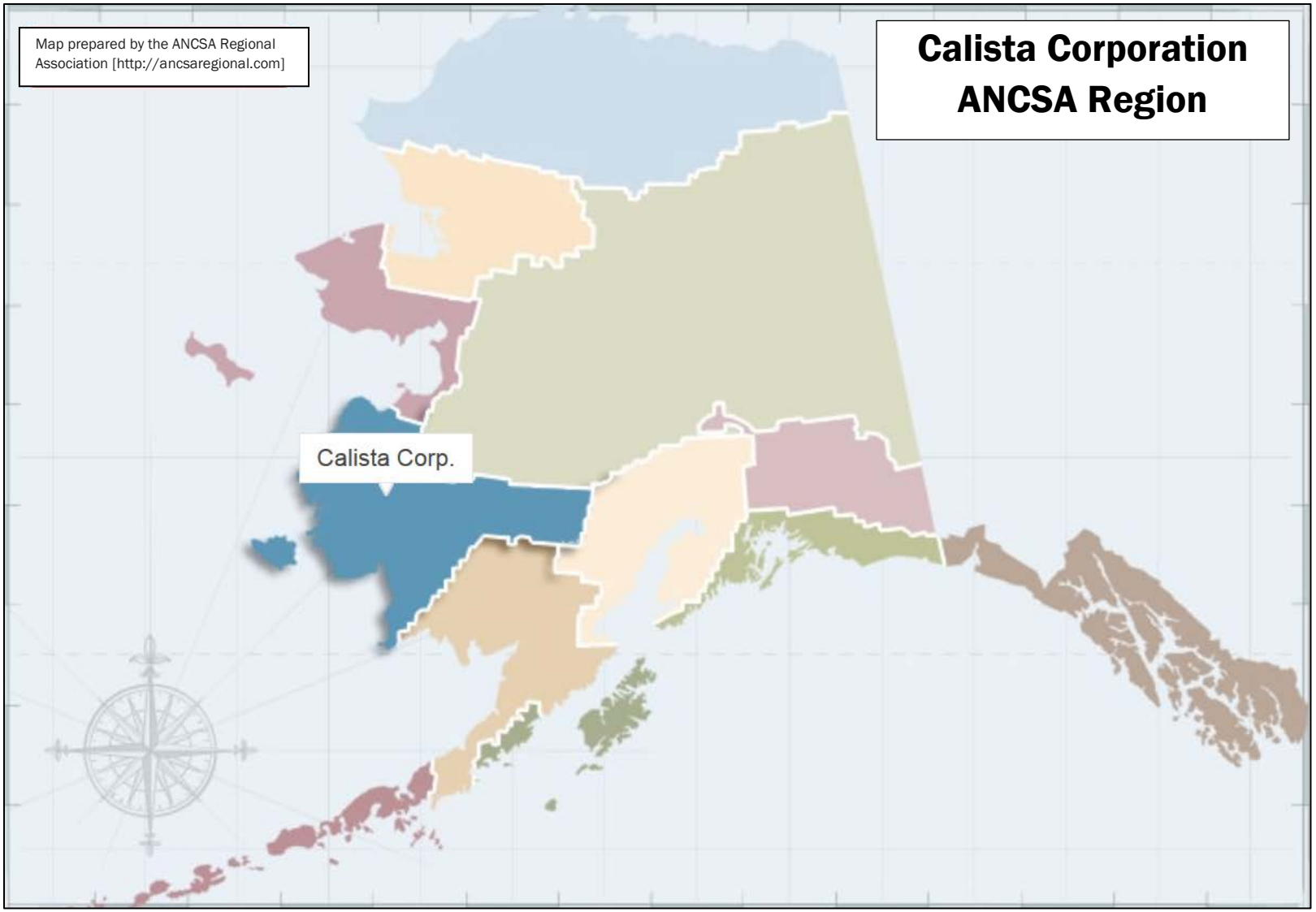
Map prepared by the ANCSA Regional Association [http://ancsaregional.com]
Calista Corporation
ANCSA Region
Calista Corp.

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.

Calista Region Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Calista region is 26,343, an increase of 14 percent from 2000.

Housing Units: There are currently 8,311 housing units in the Calista region. Of these, 6,300 are occupied, 185 are for sale or rent, and the remaining 1,823 (22 percent) are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the Calista region is 903 square feet and uses 132 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 Calista region is $4,677. This is approximately 1.1 times the statewide average and twice the national average.

Overcrowding: In the Calista region 2,514 (40 percent) of occupied units are estimated to be either overcrowded (17 percent) or severely overcrowded (23 percent). This is more than 12 times the national average and the most overcrowded in the state.

Drafty Homes and Ventilation: Approximately 3,150 (50 percent) of homes in the Calista region are drafty, exceeding seven air changes per hour at 50 Pascals (ACH50). The statewide average is 36 percent. In contrast, there are an estimated 1,953 occupied housing units (31 percent) in the Calista 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 1,416 (22 percent) of households in the Calista 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 Calista region. Currently the Alaska Department of Labor and Workforce Development estimates there are 1,692 seniors in the ANCSA region and projects an increase to 2,991 by 2030.

Housing Issues: There are an estimated 2,533 homes built before the 1980s in the Calista region that have not been retrofitted through a state program in the past 10 years. Approximately 1,631 (26 percent) homes in the Calista region lack complete kitchens and approximately 2,154 (34 percent) lack complete bathrooms.

Calista Region Housing Need Highlights

The primary need in the Calista Region is for additional housing. Calista is Alaska's most overcrowded region, with approximately 40 percent of housing classified as overcrowded or severely overcrowded.[1] This is 12 times the national average. Another challenge faced by the region is the need to retrofit current housing.

The *Yukon-Kuskokwim Delta Regional Energy Plan*[2] does not address the overcrowding issue in the region because it is focused on energy priorities; however, the energy plan ranks energy efficiency and conservation as the second-highest priority energy goal for the region behind improving maintenance and operations of energy systems. Specific issues regarding lack of energy efficiency and conservation in residences include lack of standards and best practices for Arctic climate-appropriate design and construction and need for energy education for homeowners and students. The plan recommends future projects include educational visits to homes and schools addressing energy conservation practices, ensuring new buildings are climate-appropriate and energy efficient, and performing research to determine more accurate energy costs. Projects such as these are expected to reduce energy use and cost, helping to decrease the number of cost-burdened households.

Housing Gap: The Calista Region has 8,311 housing units, of which 76 percent are occupied.[3] Approximately 40 percent of total units are either overcrowded or severely overcrowded. Calista's population has risen by 14 percent since 2000 and is predicted to continue to increase. Because only 2 percent of the housing units in the region are vacant and for sale or rent (remaining vacant units are seasonal or for other purposes), this housing gap must be met by new construction.

Affordable Housing Need: Approximately 22 percent of homes in Calista are cost-burdened, spending more than 30 percent of their income on housing costs.[4] Addressing the need to retrofit homes in the region should reduce energy costs and increase affordability.

[1] U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.
[2] WHPacific, Inc., & Information Insights. (2016). *Yukon-Kuskokwim Delta Regional Energy Plan*. Retrieved from http://nuvistacoop.org/resource-library/.
[3] U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.
[4] U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

Senior Housing Needs: There are 39 beds available in senior housing facilities in the region.[5] This is a fraction of the 1,692 seniors in the region, and the population is expected to increase to 2,991 by 2030.[6].

Retrofit Needs: Approximately 50 percent of homes in the region are drafty, and an additional 31 percent of homes face the opposite issue of being relatively airtight but lacking a mechanical ventilation system.[7] Furthermore, approximately 38 percent of all homes in the region were built before 1980 and have not been retrofit. All of these homes have high potential for an energy retrofit that could increase the safety and comfort of the home while decreasing its energy use.

[5] 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/
[6] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.
[7] See Appendix C: Methodology for details.

Calista Region Summary

Community

The Calista Corporation region is located in the southwest corner of mainland Alaska directly north of the Bristol Bay region. The average home size in the Calista region is 903 square feet.

The ratio of dependents, both those under 16 and those over 65, relative to the working age population in the Calista region is higher than the statewide average and approximately the same as the national ratio.[8] The Calista 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 Calista region is projected to see the ratio of senior age dependents to working age dependents increase by 1.8 times by 2030.

There are an estimated 39 dedicated beds in senior housing in the Calista region, with none of those dedicated to assisted care living.[9] Currently the Alaska Department of Labor and Workforce Development estimates there are 1,692 seniors in the Calista region and projects that there will be 2,991 senior citizens by 2030.[10] In the Calista 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.[11]

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 Calista region the primary pressure for new housing over the next 15 years will come from households with elderly people.

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

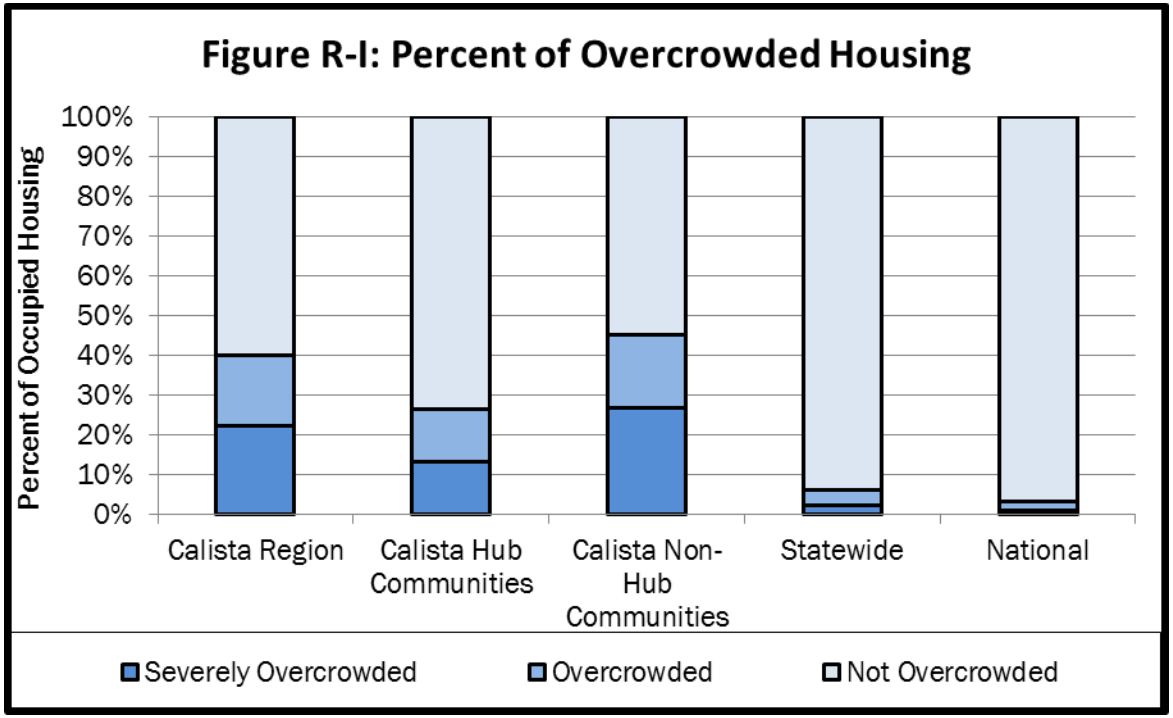
[9] AHFC Senior Housing Office. (2016). *Inventory List: Assisted Living Homes/Facilities*. Revised 5/02/2016.
AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016.
Retrieved from https://www.ahfc.us/senior-support/

[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] 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[12]

The Calista is the most overcrowded ANCSA region in Alaska. Approximately 40 percent of households are overcrowded in the region as a whole. The rate of overcrowding in the Calista region is more than 6.2 times the statewide average (6.4 percent) and more than 12.1 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 Calista region average nearly 1.7 times the overcrowding rate of the hub community, with approximately 45 percent of households overcrowded compared to the hub community's 27 percent. Further, 26.8 percent of non-hub community households are severely overcrowded. This is 26.8 times the national average.

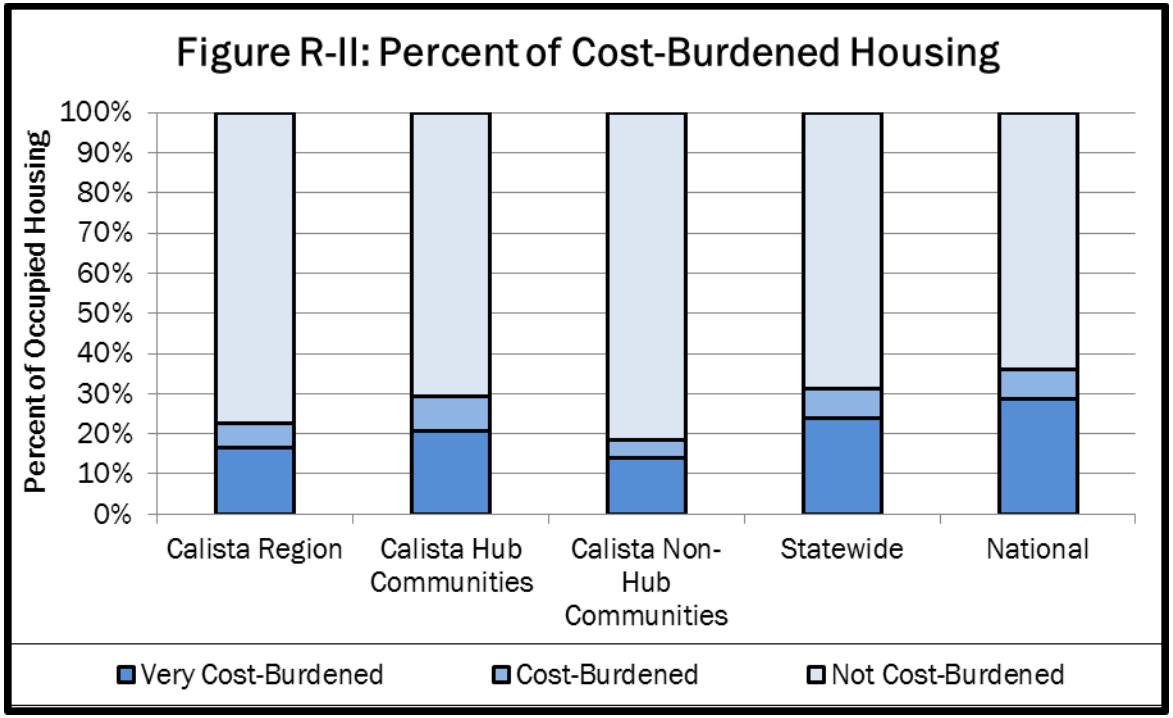
Approximately 2 percent of housing units in the Calista region are available for sale or rent. The percentage of units for sale or rent in non-hub communities (1 percent) is less than in the hub community (4 percent). Additionally, 22 percent of housing units in Calista are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

[12] U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey 5-year estimates*.

Affordability[13]

According to estimates from the U.S. Census American Community Survey (ACS), 22 percent of households in the Calista region are cost-burdened, that is, have families that spend more than 30 percent of their income on housing costs. Non-hub communities have a lower percentage (18 percent) of households that are cost-burdened than the hub community (29 percent). The rate of cost-burdened households in Calista is 61 percent of the national average (36 percent).

The median household income in the Calista region is $47,494. This is lower than the statewide median of $71,829. The national median is $53,482.

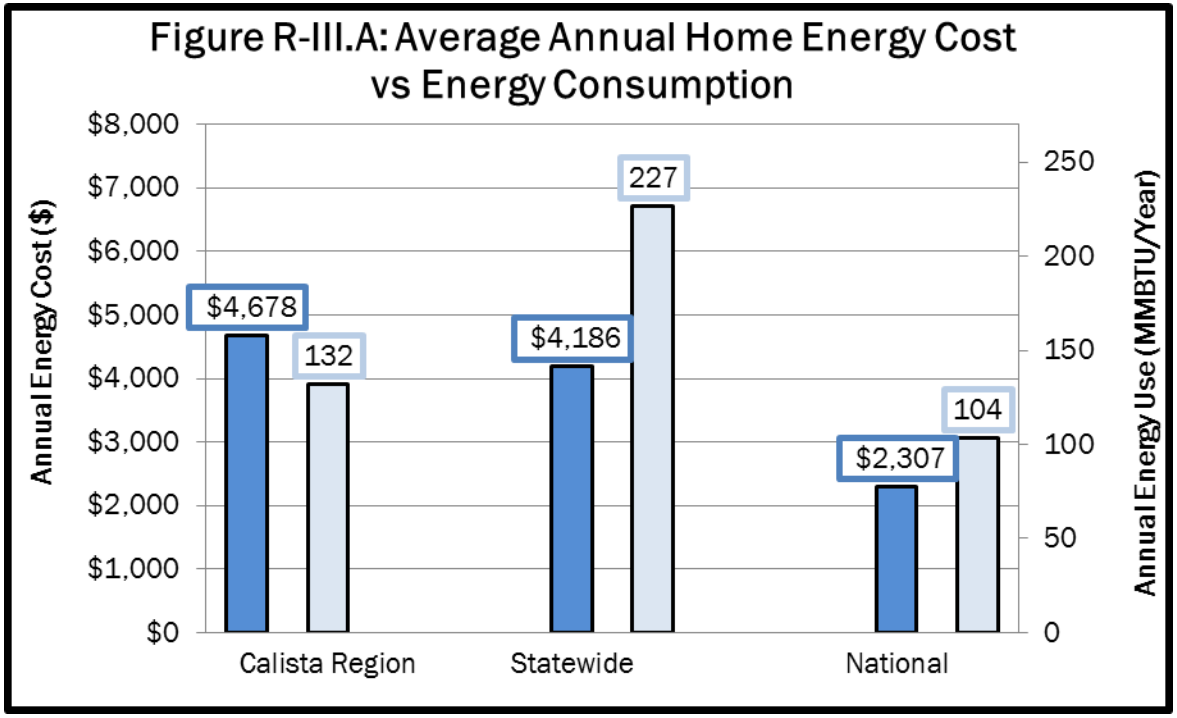


[13] U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey 5-year estimates*.

Energy[14]

Single-family Units

Single-family homes in the Calista region consume an average of 132 million BTUs per year in energy, the lowest energy consumption in the state. This average annual energy consumption is 58 percent of the statewide average of 227 million BTUs and 1.3 times the national average.



Energy costs for single-family homes in the Calista region average $4,677 annually. This is the fifth lowest in the state. Calista energy costs are 1.1 times the statewide average and twice the national average.

With an average footprint of 903 square feet, single-family homes in the Calista 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 Calista region averages 157,378 BTUs per square foot, the fourth highest in the state. This is 69 percent of the statewide average of 227,000 BTUs per square foot and 3.7 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the Calista region averages $5.18, the third highest in the state. This is 2.2 times the statewide average of $2.31 per square foot and 5.5 times the national average of $0.95 per square foot.

The home heating index (HHI) in the Calista region for the average single-family homes is 8.91 BTUs/ft2/HDD. This is the sixth highest in the state. The HHI for the Calista region is approximately the same as the statewide average. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the Calista region averages $31.80, the third highest in

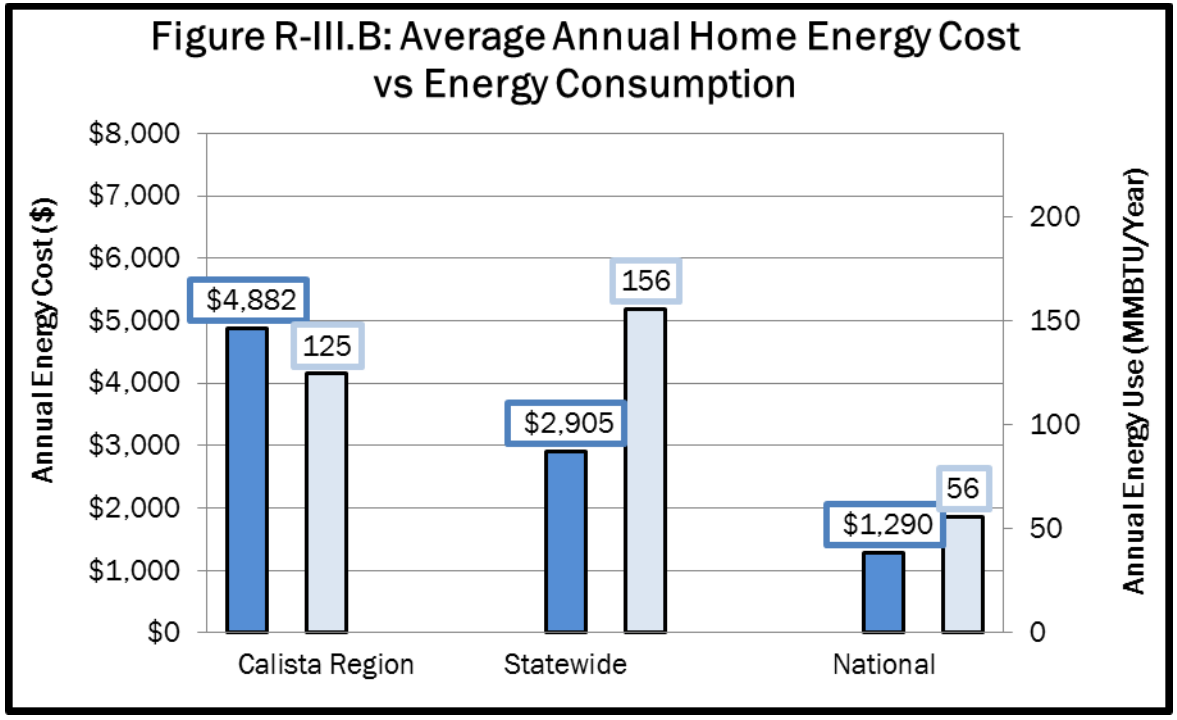
[14] See Appendix C: Methodology for details.

the state. This is twice the statewide average of $15.80 per million BTUs and 1.4 times the national average of $22.27 per million BTUs.

Multifamily Units

Multi-family housing units in the Calista region consume an average of 125 million BTUs per year in energy, the sixth lowest energy consumption in the state. This average annual energy consumption is 80 percent of the statewide average of 156 million BTUs and 1.3 times the national average.

Energy costs for multi-family housing units in the Calista region average $4,882 annually. This is the second highest in the state. Calista energy costs are 1.7 times the statewide average and 3.8 times the national average.



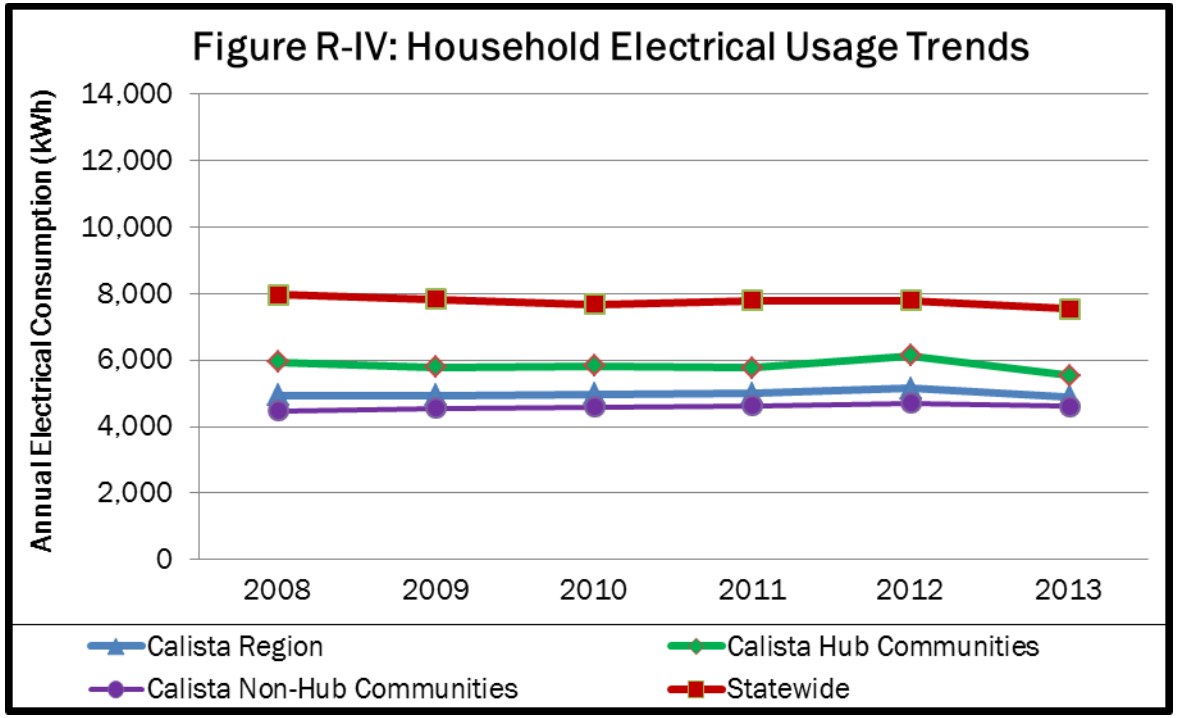
With an average footprint of 992 square feet, multi-family housing units in the Calista region are smaller than the statewide average of 1,284 square feet. Nationally the average unit in multi-family housing is 930 square feet.

The energy use intensity (EUI), or annual energy used per square foot for a unit in multi-family housing in the Calista region averages 131,601 BTUs per square foot, the third highest in the state. This is approximately the same as the statewide average of 128,000 BTUs per square foot and 2.2 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 Calista region averages $4.92, the second highest in the state. This is 2.2 times the statewide average of $2.27 per square foot and 3.5 times the national average of $1.39 per square foot.

The home heating index (HHI) in the Calista region for the average multi-family housing unit is 6.37 BTUs/ft2/HDD. This is the sixth lowest in the state. The HHI for the Calista region is 77 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 Calista region averages $37.25, the third highest in the state. This is 2.9 times the statewide average of $12.79 per million BTUs and 1.6 times the national average of $23.12 per million BTUs.

Regional Residential Electrical Use Trends[15]

In 2013 the average household in the Calista region consumed 4,902 kWh of electricity annually. This is approximately the same as in 2008. Hub communities in the region averaged 5,535 kWh per year. This is a decrease of 7 percent over the same period. In contrast, non-hub communities averaged 4,616 kWh in 2013, an increase of 3 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[16]

Approximately 655 (10 percent) of the occupied homes in the Calista 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 38 percent of all homes in the Calista region fit these two criteria. This is slightly lower than the statewide average of 39 percent.

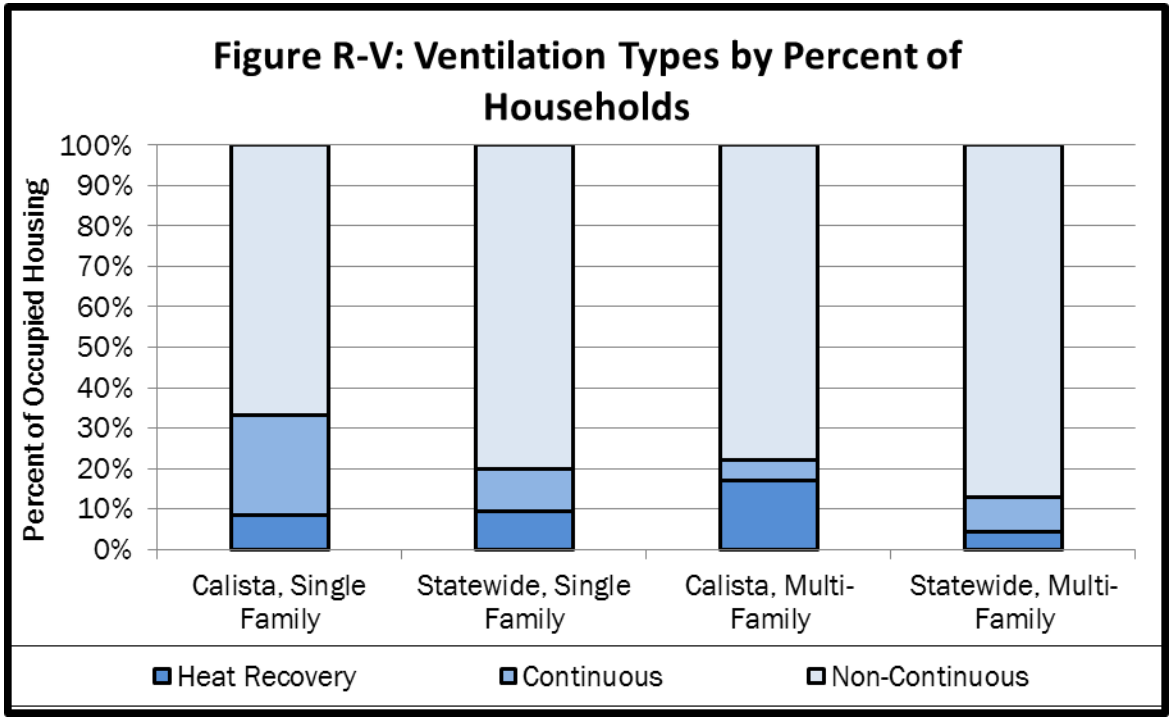
[15] Fay, G., Villalobos Melendez, A. & West. C. (2014). *Alaska Energy Statistics: 1960-2011*. UAA Institute of Social and Economic Research. Retrieved from: http://iser.uaa.alaska.edu/Publications/2013_12-AlaskaEnergyStatistics2011Report_Final_2014-04-30.pdf

[16] See Appendix C: Methodology for details.

Housing Condition [17]

Ventilation

Approximately 33 percent of the occupied homes in the Calista region have heat recovery or continuous mechanical ventilation systems installed. This is the second 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 Calista region has the third lowest percentage of housing units in the state that are relatively airtight and lack continuous mechanical ventilation. Approximately 1,322 (21 percent) of the occupied homes in the Calista region are estimated to be at moderate risk, with 641 (10 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 2,414 (38 percent) of the occupied homes in the Calista region are estimated to be drafty, with 752 (12 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.

[17] See Appendix C: Methodology for details.