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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.

Chugach Region Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Chugach region is 12,176, an increase of 1 percent from 2000.

Housing Units: There are currently 5,947 housing units in the Chugach region. Of these, 4,353 are occupied, 298 are for sale or rent, and the remaining 1,296 (22 percent) are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the Chugach region is 1,875 square feet and uses 208 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 Chugach region is \$5,068. This is approximately 1.2 times the statewide average and 2.2 times the national average.

Overcrowding: In the Chugach region 235 (5 percent) of occupied units are estimated to be either overcrowded (4 percent) or severely overcrowded (2 percent). This is nearly twice the national average and the fourth least overcrowded in the state.

Drafty Homes and Ventilation: Approximately 2,264 (52 percent) of homes in the Chugach 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 2,220 occupied housing units (51 percent) in the Chugach 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 818 (19 percent) of households in the Chugach 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 67 beds in senior housing facilities in the Chugach region. Currently the Alaska Department of Labor and Workforce Development estimates there are 987 seniors in the ANCSA region and projects an increase to 2,021 by 2030.

Housing Issues: There are an estimated 2,098 homes built before the 1980s in the Chugach region that have not been retrofitted through a state program in the past 10 years. Approximately 268 (6 percent) homes in the Chugach region lack complete kitchens and approximately 206 (5 percent) lack complete bathrooms.

Chugach Region Housing Need Highlights

The Chugach region's housing stock has two key challenges: the senior citizen population is projected to grow rapidly in the next 15 years, increasing the demand for senior living facilities; and the housing stock is aging, with an estimated 50 percent of housing units built before 1980 and not having been retrofitted.^{1, 2}

Housing Gap: The overcrowding rate in the Chugach region is approximately 5 percent, which is higher than the national average but one of the lowest in Alaska.³ The population in the region is projected to decline by nearly 1,000 people (10 percent) by 2030.⁴ Since the population is projected to decline, if the most recent five-year average new construction rate continues it will be sufficient to build at least one unit per currently overcrowded home, potentially alleviating the overcrowding in the region.

Affordable Housing Need: An estimated 19 percent of households in the Chugach region are cost-burdened, meaning they spend 30 percent or more of their total household income on housing-related costs.⁵

Senior Housing Needs: While the Chugach region has no registered assisted-living housing, it does have an above-average number of senior independent living facilities.⁶ The senior citizen population is projected to more than double by 2030, to an estimated 2,021 citizens older than the age of 65.⁷ In order to meet the needs of this growing population, the region will likely have to develop some assisted-living facilities and increase the available senior housing facilities overall.

Retrofit Needs: An estimated 10 percent of homes in the region are inefficient, meaning they use four or more times the amount of energy as a similar home built to the newest version of Alaska's Building Energy Efficiency Standard (BEES). These homes would likely be cost-effective to retrofit.

¹ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

² See Appendix C: Methodology for details.

³ U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

⁴ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

⁵ See Appendix C: Methodology for details.

⁶ 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/>

⁷ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

Chugach Region Summary

Community

The Chugach Alaska Corporation ANCSA region is located in the southeast corner of mainland Alaska, just south of the Ahtna region and at the northern edge of the Southeast panhandle. The average home size in the Chugach region is 1,811 square feet.

The ratio of dependents, both those under 16 and those over 65, relative to the working age population in the Chugach region is lower than the statewide average and lower than the national ratio.⁸ The Chugach region is expected to see an increase in the non-working age population by 2030.

The ratio of senior age dependents to the working age population is higher than the statewide average and lower than the national average. The Chugach region is projected to see the ratio of senior age dependents to working age dependents increase by 2.7 times by 2030.

There are an estimated 67 dedicated beds in senior housing in the Chugach region, with none of those dedicated to assisted care living.⁹ Currently the Alaska Department of Labor and Workforce Development estimates there are 987 seniors in the Chugach region and projects that there will be 2,021 senior citizens by 2030.¹⁰ In the Chugach 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 Chugach region the primary pressure for new housing over the next 15 years will come from households with elderly people.

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.

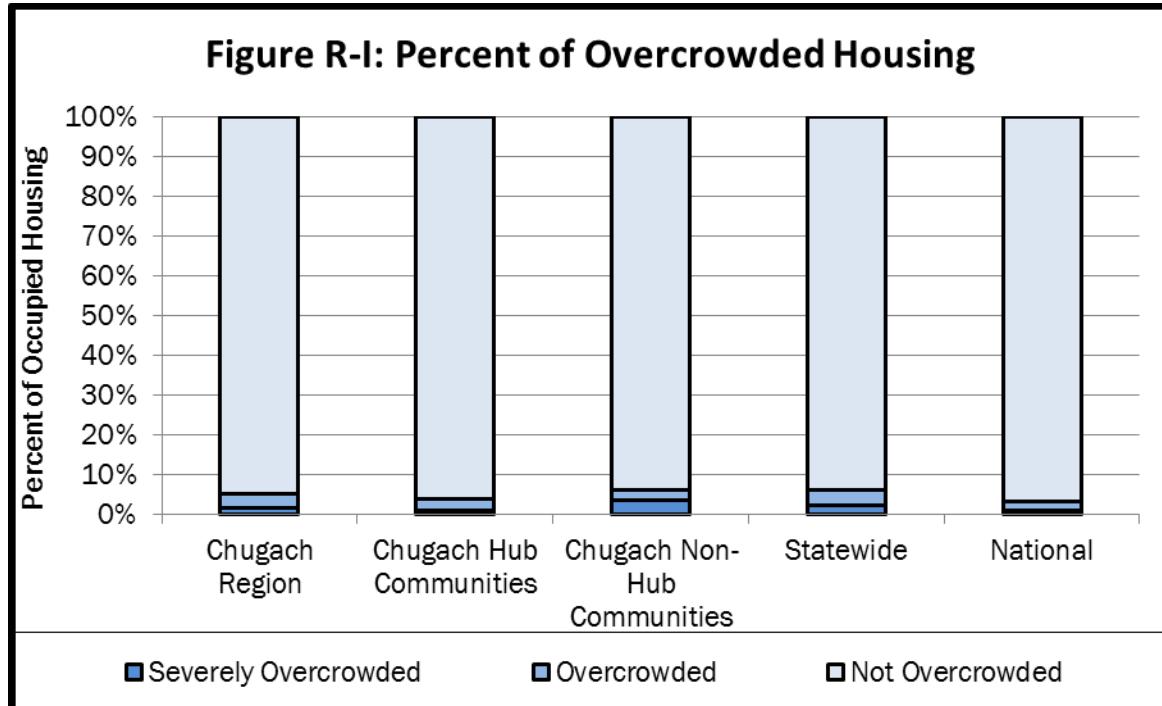
¹¹ Ribbe, M., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., ... Jonnson, P. (1997). "Nursing Homes in 10 Nations: A Comparison Between Countries and Settings." *Age and Ageing*, 26(S2), 3-12

Overcrowding¹²

The Chugach region is the fourth least overcrowded ANCSA region in Alaska. Approximately 5.4 percent of households are overcrowded in the region as a whole. The rate of overcrowding in the Chugach region is approximately 84 percent of the statewide average (6.4 percent) and nearly 1.6 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 Chugach region average nearly 1.5 times the overcrowding rate of the hub community, with approximately 6 percent of households overcrowded compared to the hub community's 4 percent. Further, 3.7 percent of non-hub community households are severely overcrowded. This is 3.7 times the national average.

Approximately 5 percent of housing units in the Chugach region are available for sale or rent. The percentage of units for sale or rent in non-hub communities (7 percent) is more than in the hub community (5 percent). Additionally, 22 percent of housing units in the Chugach region are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

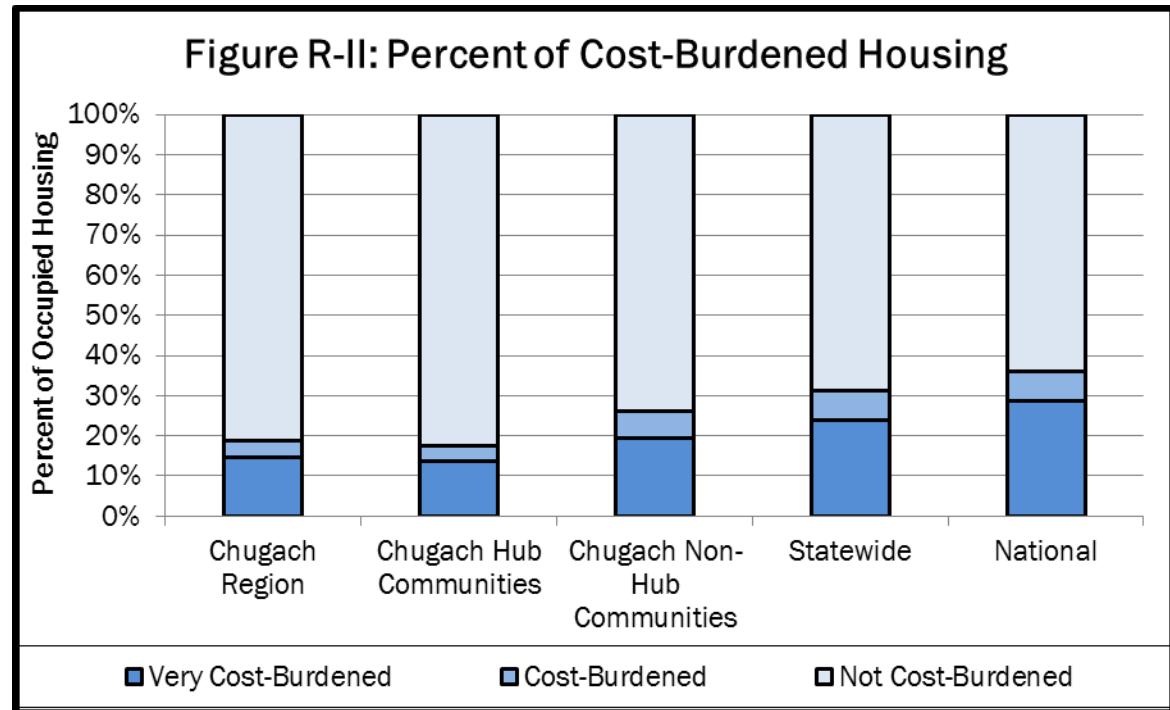


¹² U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey 5-year estimates*.

Affordability¹³

According to estimates from the U.S. Census American Community Survey (ACS), 19 percent of households in the Chugach 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 higher percentage (26 percent) of households that are cost-burdened than the hub community (18 percent). The rate of cost-burdened households in the Chugach region is 53 percent of the national average (36 percent).

The median household income in the Chugach region is \$80,020. This is higher 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*.

Energy¹⁴

Single-family Units

Single-family homes in the Chugach region consume an average of 208 million BTUs per year in energy, the fourth highest energy consumption in the state. This average annual energy consumption is 92 percent of the statewide average of 227 million BTUs and twice the national average.

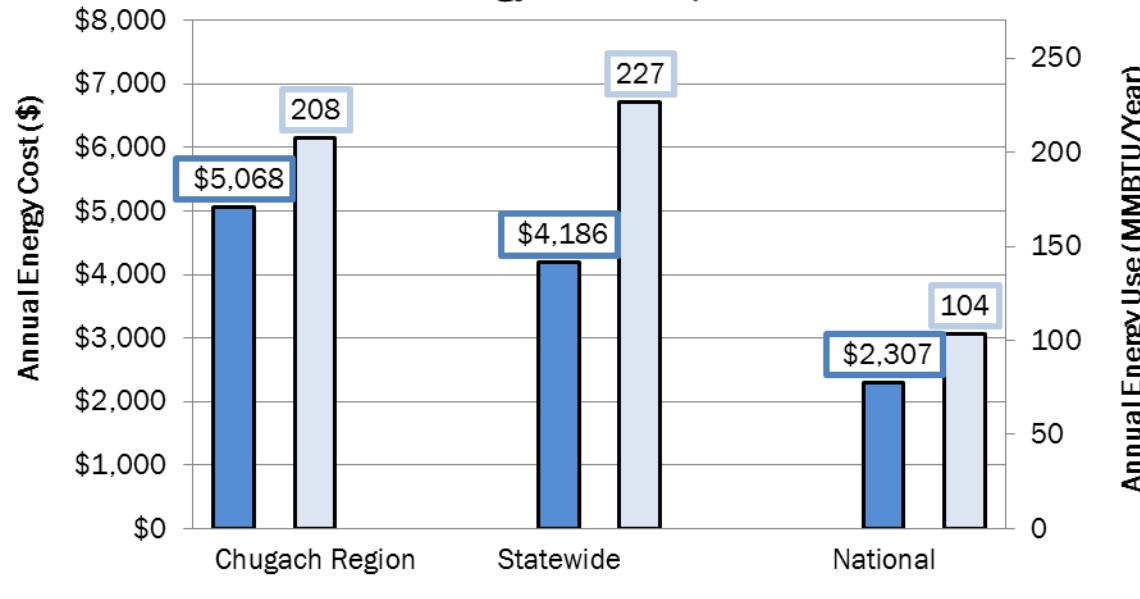
Energy costs for single-family homes in the Chugach region average \$5,068 annually. This is the fifth highest in the state. Chugach energy costs are 1.2 times the statewide average and 2.2 times the national average.

With an average footprint of 1,875 square feet, single-family homes in the Chugach 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 Chugach region averages 122,689 BTUs per square foot, the fourth lowest in the state. This is 54 percent of the statewide average of 227,000 BTUs per square foot and 2.9 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the Chugach region averages \$2.70, the fourth lowest in the state. This is 1.2 times the statewide average of \$2.31 per square foot and 2.8 times the national average of \$0.95 per square foot.

The home heating index (HHI) in the Chugach region for the average single-family homes is 9.67 BTUs/ft²/HDD. This is the fourth highest in the state. The HHI for the Chugach region is 1.1 times the statewide average. The normalized cost of energy, in terms

Figure R-III.A: Average Annual Home Energy Cost vs Energy Consumption



¹⁴ See Appendix C: Methodology for details.

of dollars per million BTUs, for a single-family home in the Chugach region averages \$21.56, the sixth highest in the state. This is 1.4 times the statewide average of \$15.80 per million BTUs and 97 percent of the national average of \$22.27 per million BTUs.

Multifamily Units

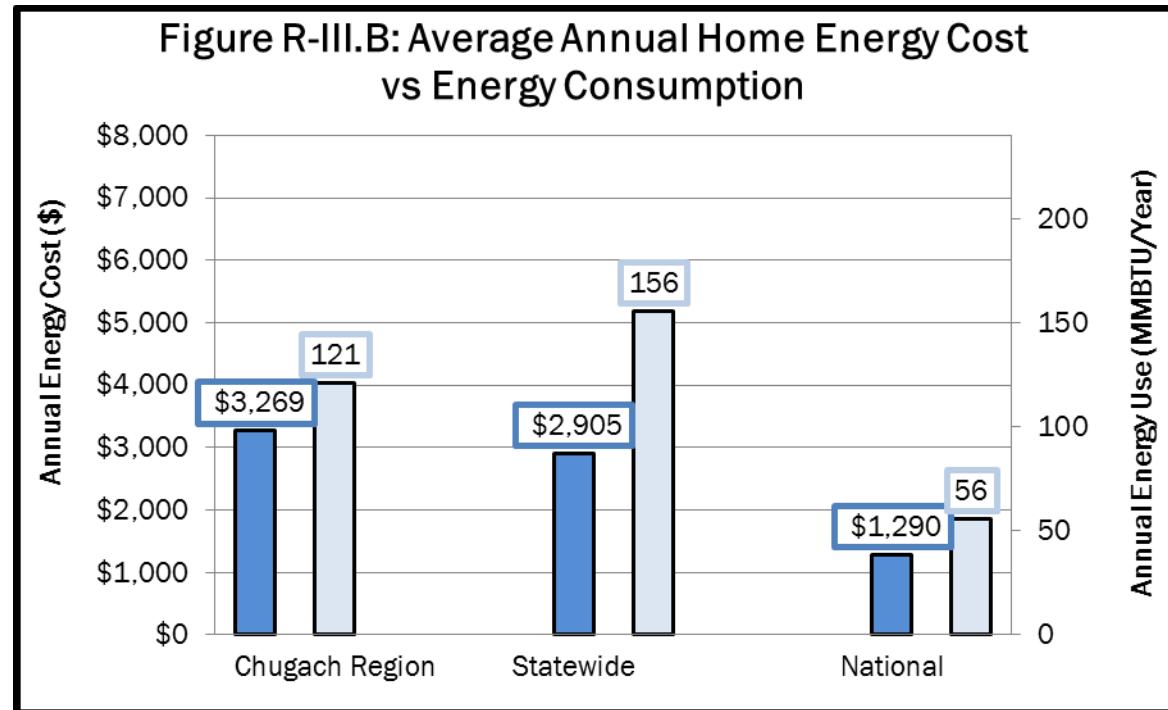
Multi-family housing units in the Chugach region consume an average of 121 million BTUs per year in energy, the fifth lowest energy consumption in the state. This average annual energy consumption is 78 percent of the statewide average of 156 million BTUs and twice the national average.

Energy costs for multi-family housing units in the Chugach region average \$3,269 annually. This is the sixth lowest in the state. Chugach energy costs are 1.1 times the statewide average and 2.5 times the national average.

With an average footprint of 1,176 square feet, multi-family housing units in the Chugach 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 Chugach region averages 104,216 BTUs per square foot, the sixth lowest in the state. This is 81 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 Chugach region averages \$2.78, the sixth highest in the state. This is 1.2 times the statewide average of \$2.27 per square foot and twice the national average of \$1.39 per square foot.

The home heating index (HHI) in the Chugach region for the average multi-family housing unit is 7.00 BTUs/ft²/HDD. This is the fourth highest in the state. The HHI for the Chugach region is 84 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 Chugach region averages \$22.20, the fifth highest in the state. This is 1.7 times the statewide average of \$12.79 per million BTUs and 96 percent of the national average of \$23.12 per million BTUs.



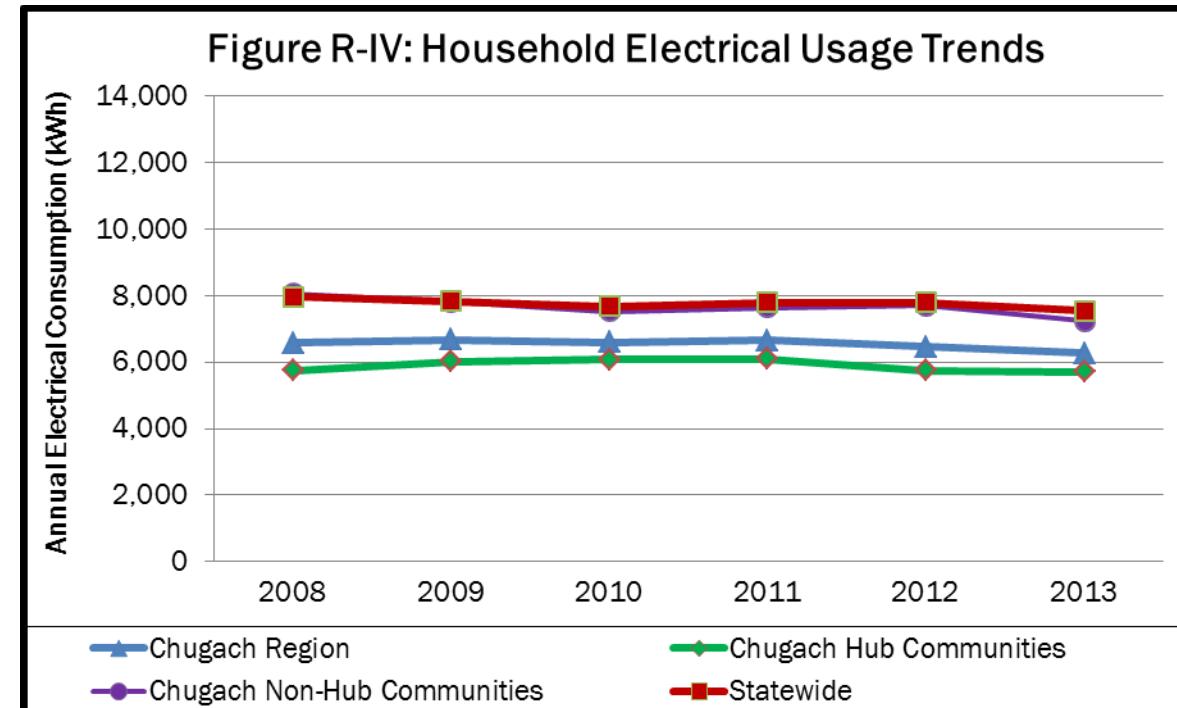
Regional Residential Electrical Use Trends¹⁵

In 2013 the average household in the Chugach region consumed 6,276 kWh of electricity annually. This is approximately 5 percent less than in 2008. Hub communities in the region averaged 5,708 kWh per year. This remains approximately the same over the same period. In contrast, non-hub communities averaged 7,225 kWh in 2013, a decrease of 10 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 Homes¹⁶

Approximately 431 (10 percent) of the occupied homes in the Chugach 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 52 percent of all homes in the Chugach region fit these two criteria. This is higher 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

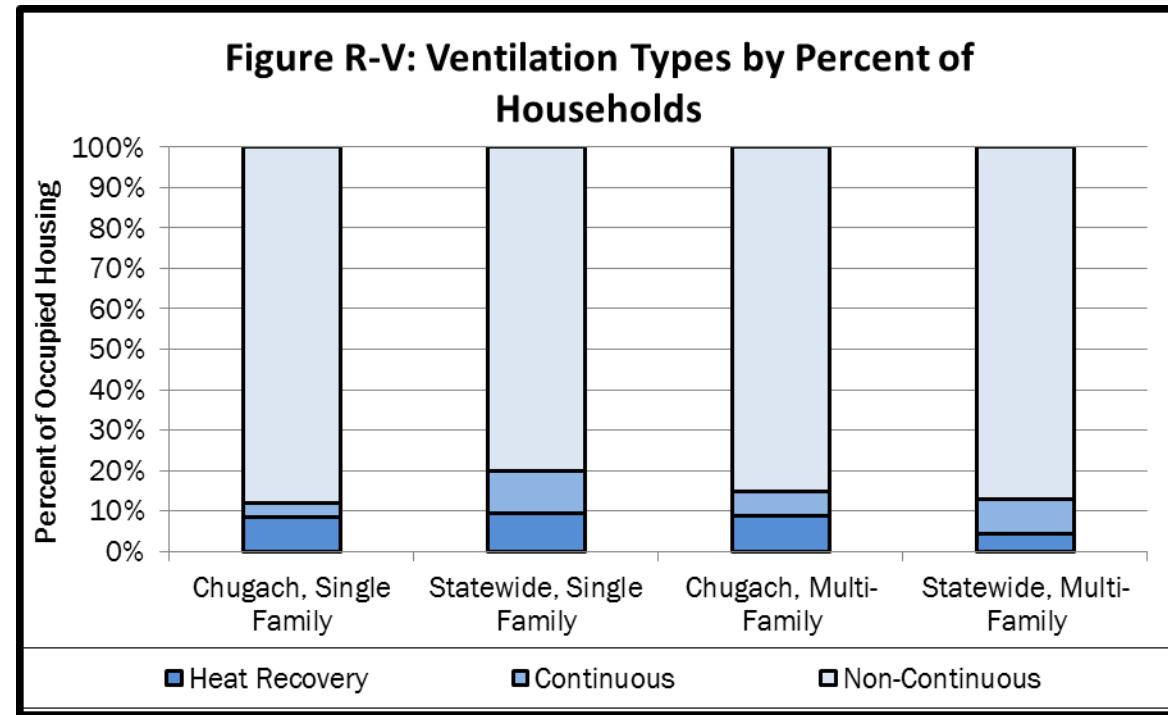
Approximately 12 percent of the occupied homes in the Chugach region have heat recovery or continuous mechanical ventilation systems installed. This is the third lowest in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems, with or without heat 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 Chugach region has the fourth highest percentage of housing units in the state that are relatively airtight and lack continuous mechanical ventilation. Approximately 1,173 (27 percent) of the occupied homes in the Chugach region are estimated to be at moderate risk, with 1,030 (24 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 1,247 (29 percent) of the occupied homes in the Chugach region are estimated to be drafty, with 1,002 (23 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.