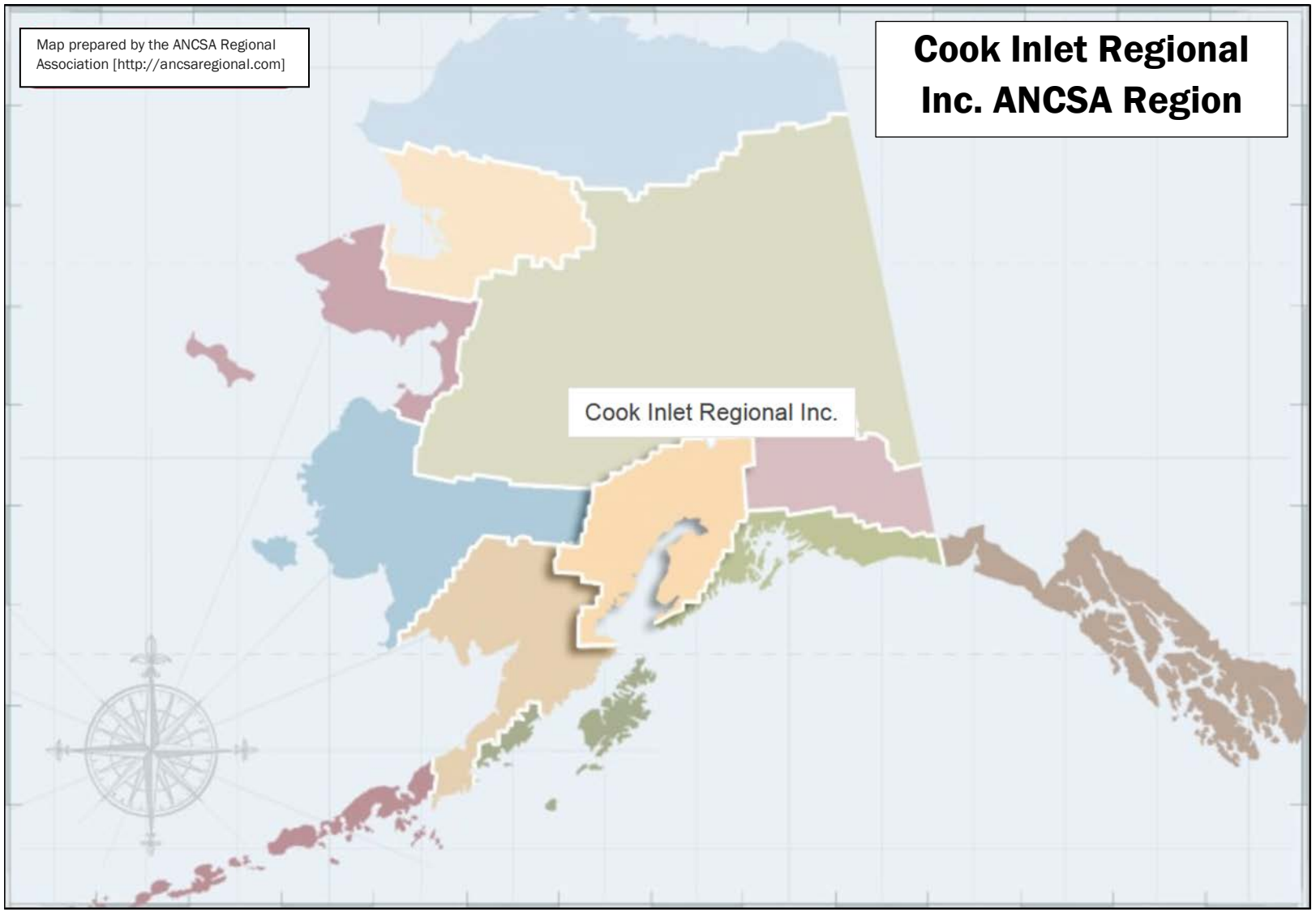
Map prepared by the ANCSA Regional Association [http://ancsaregional.com]
Cook Inlet Regional Inc. ANCSA Region
Cook Inlet Regional Inc.

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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.

Cook Inlet Region Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Cook Inlet (CIRI) region is 451,547, an increase of 24 percent from 2000.

Housing Units: There are currently 189,103 housing units in the CIRI region. Of these, 161,494 are occupied, 6,398 are for sale or rent, and the remaining 21,243 (11 percent) are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the CIRI region is 2,194 square feet and uses 249 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 CIRI region is $3,599. This is approximately 86 percent of the statewide average and 1.6 times the national average.

Overcrowding: In the CIRI region 7,106 (4 percent) of occupied units are estimated to be either overcrowded (3 percent) or severely overcrowded (1 percent). This is more than 1.3 times the national average and the second least overcrowded in the state.

Drafty Homes and Ventilation: Approximately 46,833 (29 percent) of homes in the CIRI 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 103,356 occupied housing units (64 percent) in the CIRI 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 51,687 (32 percent) of households in the CIRI 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 3,468 beds in senior housing facilities in the CIRI region. Currently the Alaska Department of Labor and Workforce Development estimates there are 47,327 seniors in the ANCSA region and projects an increase to 90,091 by 2030.

Housing Issues: There are an estimated 26,392 homes built before the 1980s in the CIRI region that have not been retrofitted through a state program in the past 10 years. Approximately 2,333 (1 percent) homes in the CIRI region lack complete kitchens and approximately 3,037 (2 percent) lack complete bathrooms.

Cook Inlet Region Housing Need Highlights

The primary housing need for the Cook Inlet Regional, Inc. (CIRI) region is senior housing. There are currently 3,468 beds available in senior housing facilities.[1] However, the senior population is 47,327 and projected to increase to more than 90,000 by 2030.[2] Increasing the number of assisted living and independent living facilities should alleviate housing pressure for this population.

The CIRI region faces other housing needs, including housing affordability and the need to retrofit existing homes. Energy costs are low in the region compared to other areas of the state, approximately one in three homes is cost-burdened.[3] The Matanuska Susitna Borough published a housing needs assessment[4] in 2014 that highlighted its need for affordable housing, since 40 percent of all households in the borough were struggling with housing costs. Energy retrofit programs that address home health and indoor air quality would benefit the region because 64 percent of occupied homes are relatively airtight but lack mechanical ventilation, and approximately 29 percent of occupied homes face the opposite problem of being drafty.[5]

Housing Gap: The CIRI region has 189,103 housing units, of which 85 percent are occupied. Approximately 4 percent of units are either overcrowded or severely overcrowded, a percentage that mirrors the national average and is less than the statewide average.[6] Approximately 3 percent of housing units are vacant and for sale or rent (remaining vacant units are seasonal or for other purposes), this housing gap may be met by new construction.

Affordable Housing Need: Approximately 32 percent of homes in the CIRI region are cost-burdened spending more than 30 percent of their income on housing costs, in spite of the fact residents pay an average of $3,599 annually in energy costs, which is the lowest in the state.[7]

Senior Housing Needs: There are 3,468 beds available in senior housing facilities in the region, with 1,620 of those in assisted-living facilities.[8] This is a fraction of the 47,327 seniors in the region, and the elderly population is expected to increase to 90,091

[1] AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from https://www.ahfc.us/senior-support/
[2] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.
[3] U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.
[4] Allen, J. (2014). *2014 Matanuska Susitna Borough Housing Needs Assessment*. Planning & Land Use Department, Matanuska Susitna Borough.
[5] See Appendix C: Methodology for details.
[6] U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.
[7] ibid
[8] AHFC Senior Housing Office. (2016). *Inventory List: Assisted Living Homes/Facilities*. Revised 5/02/2016.

by 2030.[9] Increasing the amount of available senior housing may ensure there are adequate assisted and independent living facilities for the projected population.

Retrofit Needs: Approximately 29 percent of occupied homes in the region are drafty, and an additional 64 percent of occupied homes face the opposite issue of being relatively airtight but lacking a mechanical ventilation system.[10] Approximately 35 percent of all homes in the region were built before 1980 and have not been retrofitted. These homes have high potential for an energy retrofit that could increase the safety and comfort of the home while decreasing the energy use.

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.

[10] See Appendix C: Methodology for details.

Cook Inlet Region Summary

Community

The Cook Inlet Regional, Incorporated (CIRI) ANCSA region is located in Southcentral Alaska. Anchorage, the largest city in the state, is in this region as are the numerous communities of the Matanuska-Susitna Valley and Kenai Peninsula. The average home size in the CIRI region is 1,969 square feet.

The ratio of dependents, both those under 16 and those over 65, relative to the working age population in the CIRI region is lower than the statewide average and lower than the national ratio. [11] The CIRI 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 CIRI region is projected to see the ratio of senior age dependents to working age dependents increase by 1.8 times by 2030.

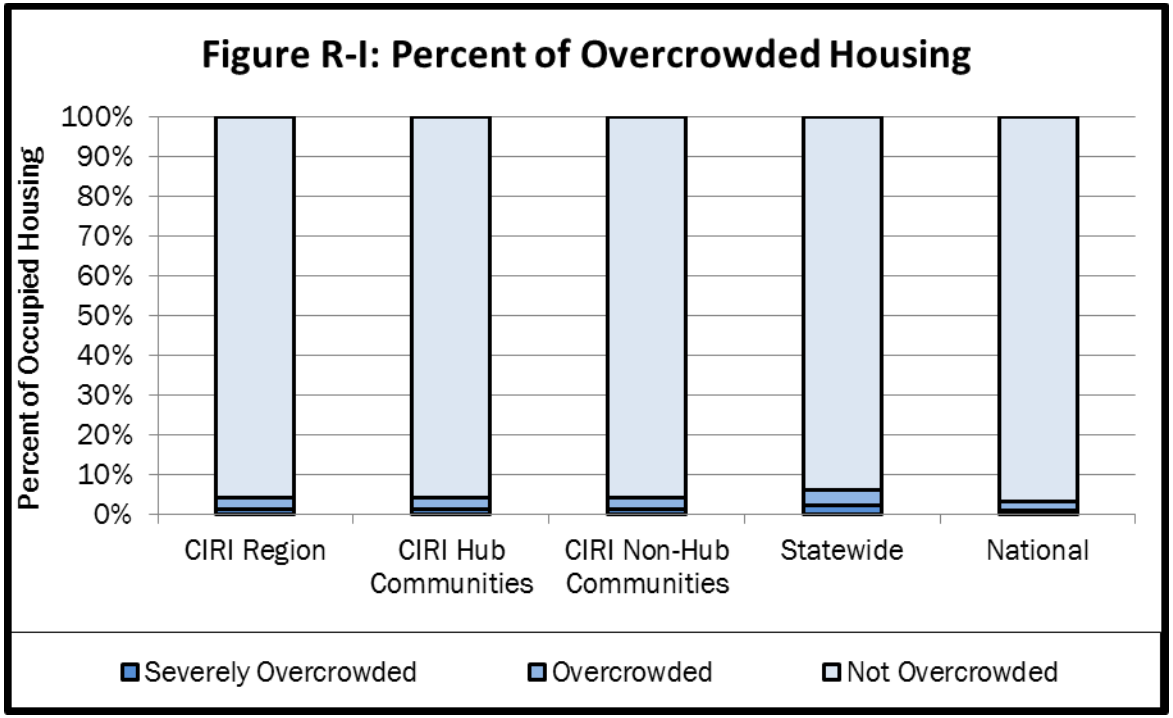
There are an estimated 3,468 dedicated beds in senior housing in the CIRI region, with 1,620 of those dedicated to assisted care living.[12] Currently the Alaska Department of Labor and Workforce Development estimates there are 47,327 seniors in the CIRI region and projects that there will be 90,091 senior citizens by 2030.[13] In the CIRI region 3.4 percent of senior citizens are in assisted care housing. This is higher than the statewide rate of 2.8 percent senior citizens in assisted care housing. Nationally, approximately 3.5 percent of senior citizens are in senior living facilities.[14]

[11] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016)."Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.
U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey 5-year estimates*.
[12] 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/
[13] Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). "Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.
[14] 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*

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

Overcrowding[15]

The CIRI region is the second least overcrowded ANCSA region in Alaska. Approximately 4 percent of households are overcrowded in the region as a whole. The rate of overcrowding in the CIRI region is nearly 69 percent of the statewide average (6.4 percent) and more than 1.3 times the national average (3.3 percent).



Overcrowding in the non-hub communities is approximately the same as 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 CIRI region average approximately the same overcrowding rate that the hub community has, with approximately 4 percent of households overcrowded. Further, 1.3 percent of non-hub community households are severely overcrowded. This is 1.3 times the national average.

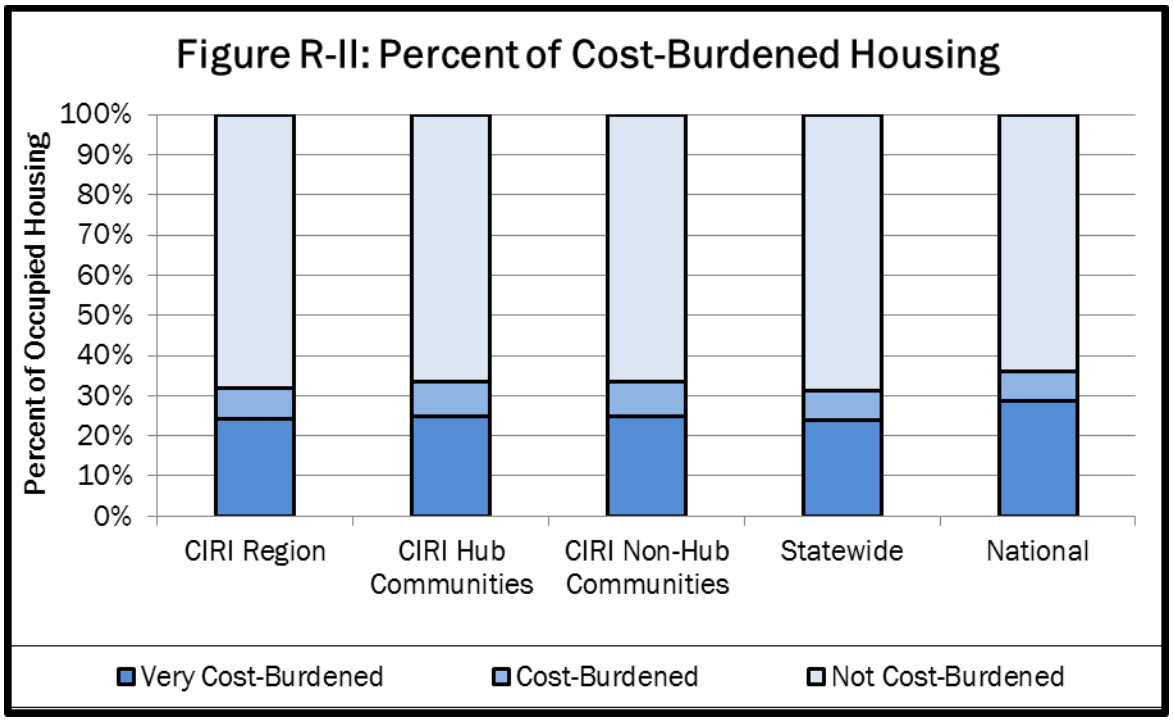
Approximately 3 percent of housing units in the CIRI region are available for sale or rent. The percentage of units for sale or rent in non-hub communities (3 percent) is approximately the same as in the hub community (3 percent). Additionally, 11 percent of housing units in the CIRI region are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

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

Affordability[16]

According to estimates from the U.S. Census American Community Survey (ACS), 32 percent of households in the CIRI region are cost-burdened, that is, have families that spend more than 30 percent of their income on housing costs. Non-hub communities have approximately the same percentage (33 percent) of households that are cost-burdened than the hub community (33 percent). The rate of cost-burdened households in the CIRI region is 89 percent of the national average (36 percent).

The median household income in the CIRI region is $74,722. This is higher than the statewide median of $71,829. The national median is $53,482.

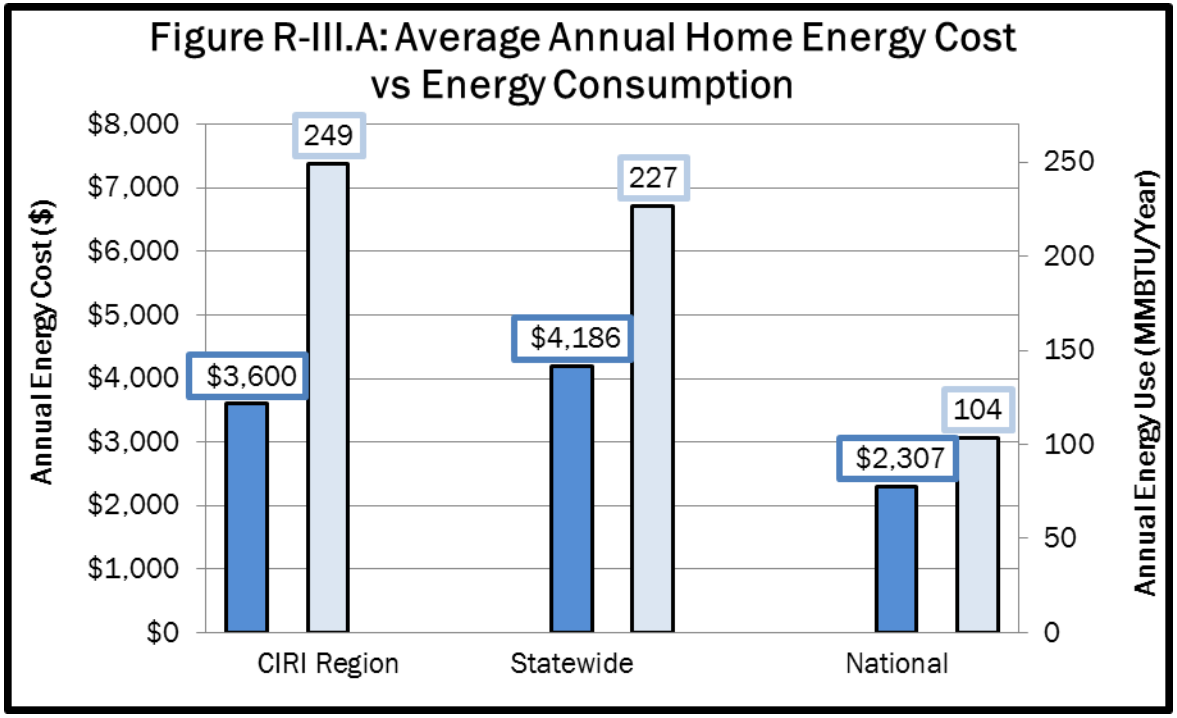


[16] U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey 5-year estimates*.

Energy[17]

Single-family Units

Single-family homes in the CIRI region consume an average of 249 million BTUs per year in energy, the third highest energy consumption in the state. This average annual energy consumption is 1.1 times the statewide average of 227 million BTUs and 2.4 times the national average.



Energy costs for single-family homes in the CIRI region average $3,599 annually. This is the lowest in the state. CIRI energy costs are 86 percent of the statewide average and 1.6 times the national average.

With an average footprint of 2,194 square feet, single-family homes in the CIRI region are larger 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 CIRI region averages 124,222 BTUs per square foot, the third lowest in the state. This is 55 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 CIRI region averages $1.64, the lowest in the state. This is 71 percent of the statewide average of $2.31 per square foot and 1.7 times the national average of $0.95 per square foot.

The home heating index (HHI) in the CIRI region for the average single-family homes is 8.84 BTUs/ft2/HDD. This is the sixth lowest in the state. The HHI for the CIRI region is approximately the same as the statewide average. The normalized cost of energy, in

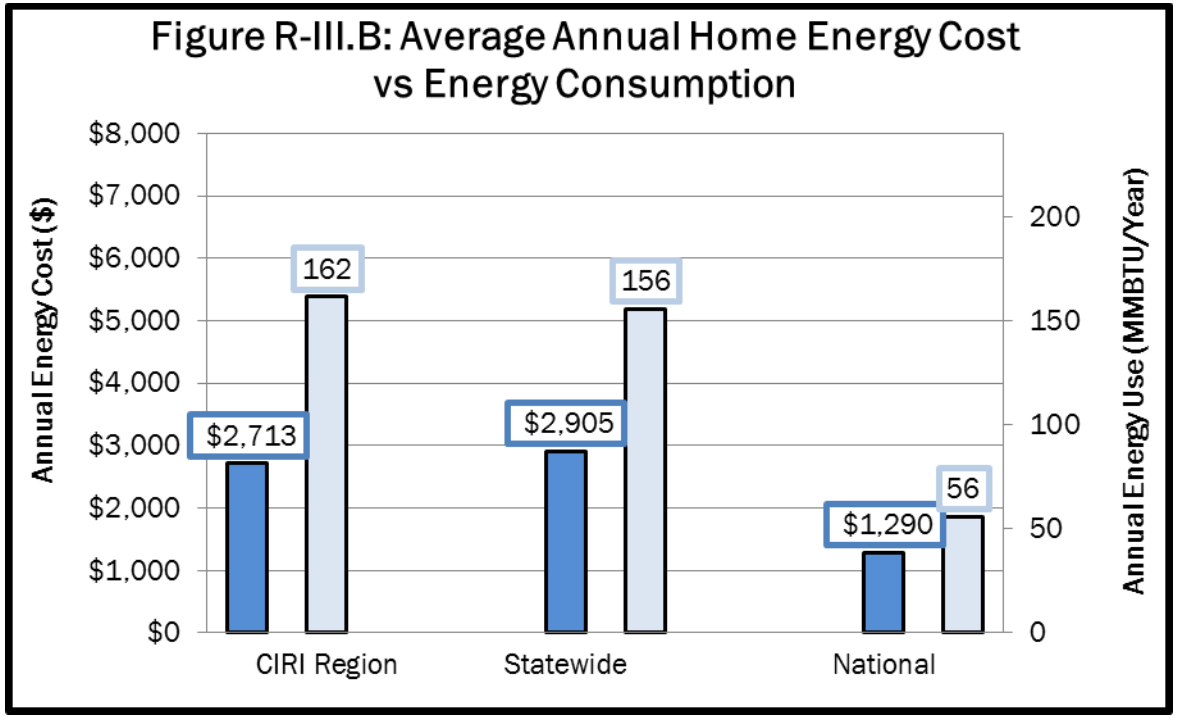
[17] See Appendix C: Methodology for details.

terms of dollars per million BTUs, for a single-family home in the CIRI region averages $10.46, the lowest in the state. This is 66 percent of the statewide average of $15.80 per million BTUs and 47 percent of the national average of $22.27 per million BTUs.

Multifamily units

Multifamily housing units in the CIRI region consume an average of 161 million BTUs per year in energy, the second highest energy consumption in the state. This average annual energy consumption is approximately the same as the statewide average of 156 million BTUs and 2.4 times the national average.

Energy costs for multifamily housing units in the CIRI region average $2,713 annually. This is the second lowest in the state. CIRI energy costs are 93 percent of the statewide average and 2.1 times the national average.



With an average footprint of 1,296 square feet, multifamily housing units in the CIRI region are approximately the same as the statewide average of 1,284 square feet. Nationally the average unit in multifamily housing is 930 square feet.

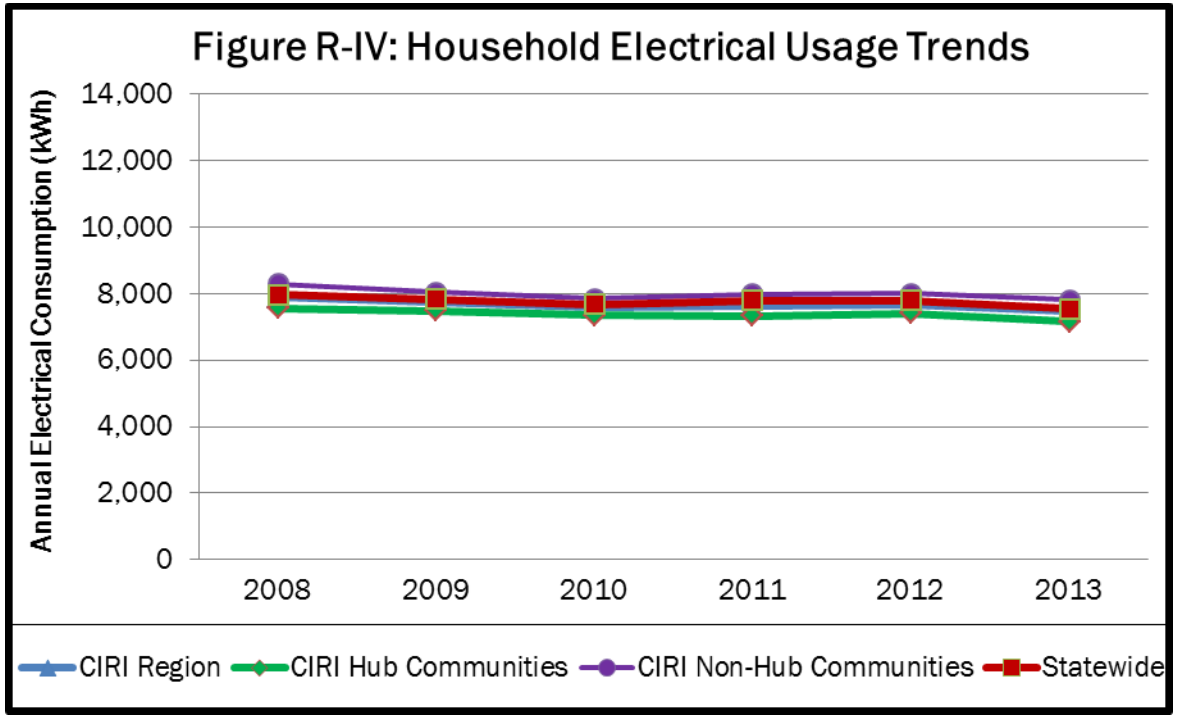
The energy use intensity (EUI), or annual energy used per square foot for a unit in multifamily housing in the CIRI region averages 132,140 BTUs per square foot, the second highest in the state. This is approximately the same as the statewide average of 128,000 BTUs per square foot and 2.2 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a unit in multifamily housing in the CIRI region averages $2.09, the second lowest in the state. This is 92 percent of the statewide average of $2.27 per square foot and 1.5 times the national average of $1.39 per square foot.

The home heating index (HHI) in the CIRI region for the average multifamily housing unit is 8.65 BTUs/ft2/HDD. This is the highest in the state. The HHI for the CIRI region is approximately the same as the statewide average. The normalized cost of energy, in terms of dollars per million BTUs, for a unit in multifamily housing in the CIRI region averages $10.36, the second lowest in the

state. This is 81 percent of the statewide average of $12.79 per million BTUs and 45 percent of the national average of $23.12 per million BTUs.

Regional Residential Electrical Use Trends[18]

In 2013 the average household in the CIRI region consumed 7,458 kWh of electricity annually. This is approximately 5 percent less than in 2008. Hub communities in the region averaged 7,162 kWh per year. This is a decrease of 5 percent over the same period. In contrast, non-hub communities averaged 7,803 kWh in 2013, a decrease of 6 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[19]

Approximately 4,845 (3 percent) of the occupied homes in the CIRI 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 35 percent of all homes in the CIRI region fit these two criteria. This is lower than the statewide average of 39 percent.

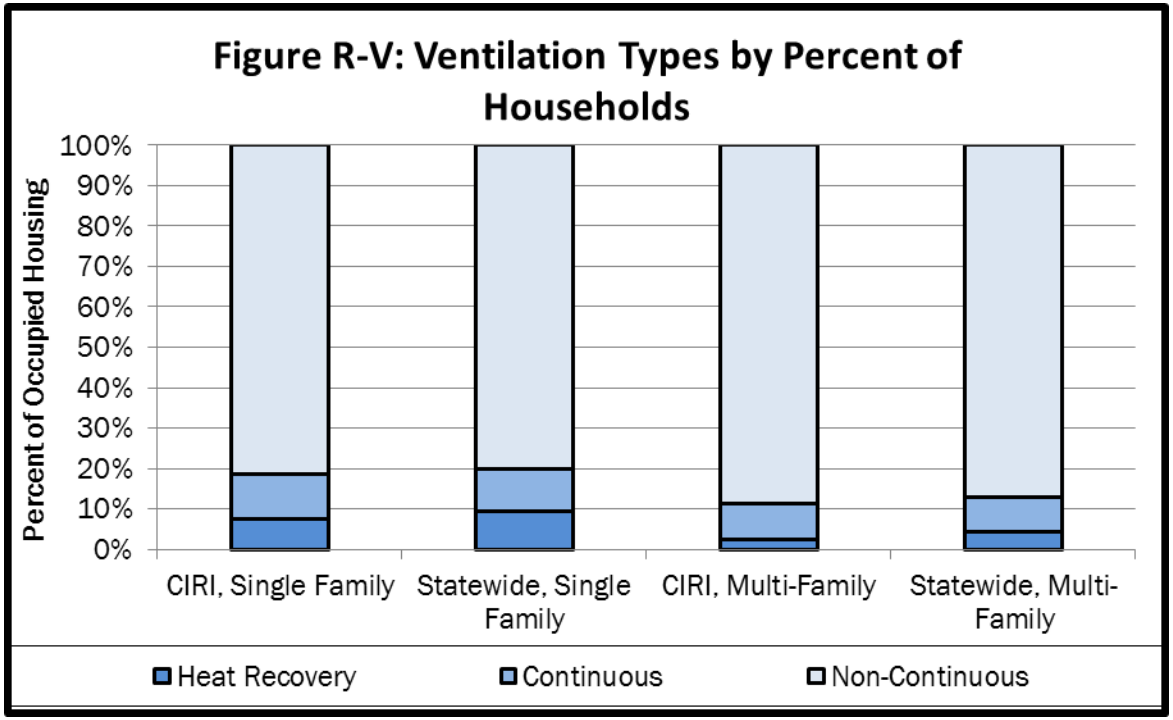
[18] Fay, G., Villalobos Melendez, A. & West. C. (2014). *Alaska Energy Statistics: 1960-2011*. UAA Institute of Social and Economic Research. Retrieved from: http://iser.uaa.alaska.edu/Publications/2013_12-AlaskaEnergyStatistics2011Report_Final_2014-04-30.pdf

[19] See Appendix C: Methodology for details.

Housing Condition [20]

Ventilation

Approximately 19 percent of the occupied homes in the CIRI region have heat recovery or continuous mechanical ventilation systems installed. This is the fifth 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 CIRI region has the second highest percentage of housing units in the state that are relatively airtight and lack continuous mechanical ventilation. Approximately 57,705 (36 percent) of the occupied homes in the CIRI region are estimated to be at moderate risk, with 45,142 (28 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 non-qualitative 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 34,879 (22 percent) of the occupied homes in the CIRI region are estimated to be drafty, with 12,566 (8 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.

[20] See Appendix C: Methodology for details.