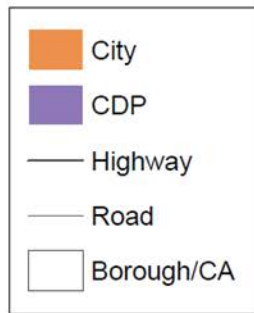


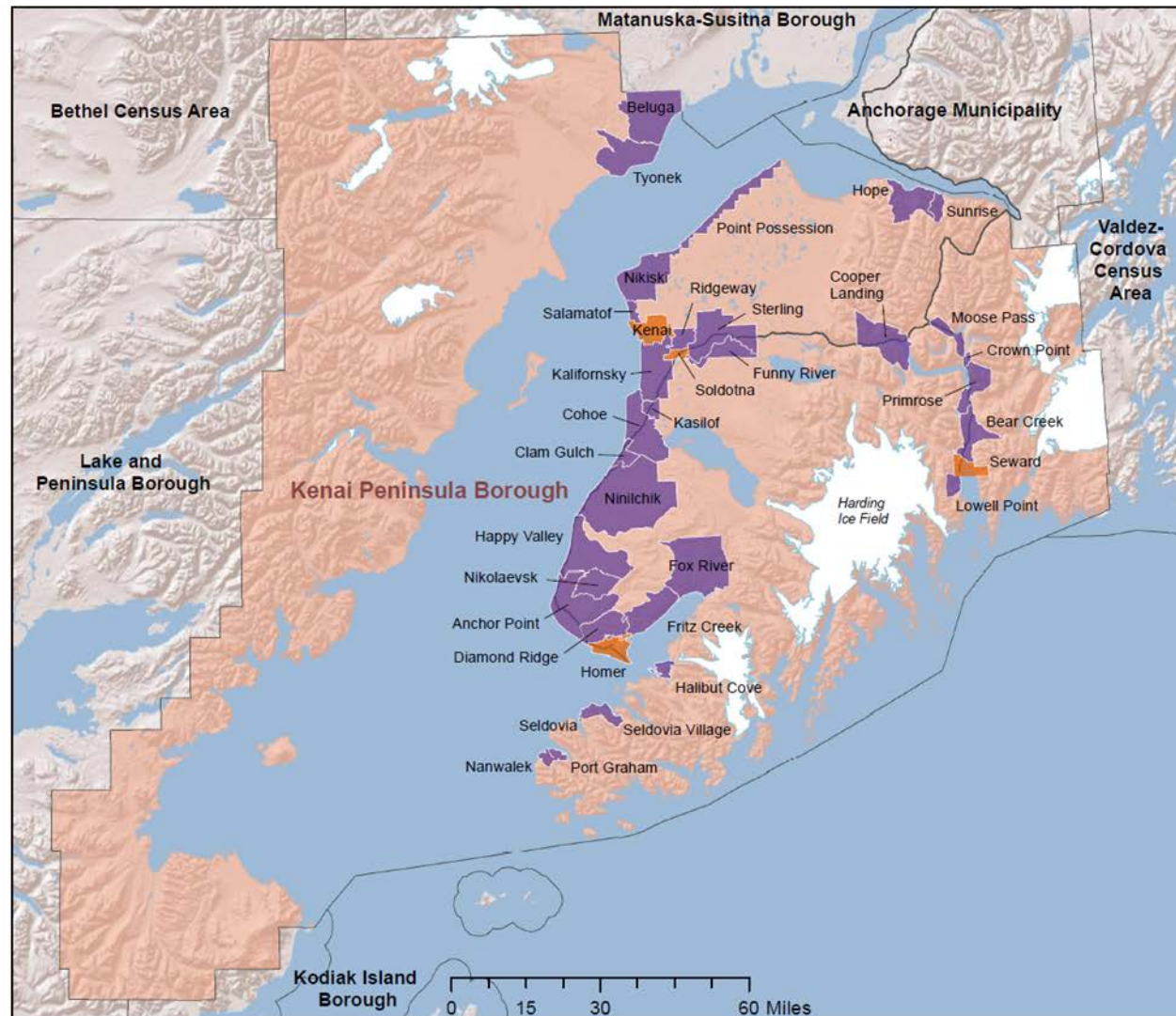
# Kenai Peninsula Borough



CDP = Census Designated Place  
CA = Census Area



Map Prepared by:  
Alaska Department of Labor  
& Workforce Development  
  
September 2011  
  
Source: US Census  
2010 TIGERline



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## Regional and Statewide Housing Characteristics

This census area summary only includes the highlights of housing characteristics at the census area 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 2017 Alaska Housing Assessment.

## Kenai Peninsula Borough Dashboard

**Population:** The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Kenai Peninsula Borough is 57,763, an increase of 16 percent from 2000.

**Housing Units:** There are currently 25,801 housing units in the Kenai Peninsula Borough. Of these, 21,559 are occupied, 1,064 are for sale or rent and the remaining 8,015 are seasonal or otherwise vacant units.

**Energy and Energy Costs:** The average home in the Kenai Peninsula Borough is 2,006 square feet and uses 222 million BTUs of energy annually, close to the statewide average of 227 million BTUs per year. Using AKWarm estimates, the average annual energy cost for homes in the Kenai Peninsula Borough is \$4,178. This is approximately equivalent to the statewide average and 1.8 times the national average.

**Overcrowding:** An estimated 862 (4 percent) of occupied units are either overcrowded (3 percent) or severely overcrowded (1 percent). This is approximately equivalent to the national average and makes this census area the eighth least overcrowded census area in the state.

**Drafty Homes and Ventilation:** Approximately 5,463 (28 percent) of homes in the Kenai Peninsula Borough are drafty, exceeding seven air changes per hour at 50 Pascals (ACH50). The statewide average is 36 percent. In contrast, there are an estimated 11,512 occupied housing units (59 percent) in the Kenai Peninsula Borough that are relatively airtight and lack a continuous ventilation system. These homes are at higher risk of issues with moisture and indoor air quality.

**Affordability:** On average, approximately 5,808 (27 percent) of households in the Kenai Peninsula Borough are cost-burdened, spending more than 30 percent of total household income on housing costs, including rent, utilities and energy. Statewide 31 percent of households are cost-burdened.

**Senior Housing:** There are an estimated 385 beds in senior housing facilities in the Kenai Peninsula Borough. Currently the Alaska Department of Labor and Workforce Development estimates there are 8,594 seniors in the census area and projects an increase to 14,880 by 2030.

**Housing Issues:** There are an estimated 7,756 homes built prior to the 1980s in the Kenai Peninsula Borough that have not been retrofitted through a state program in the past 10 years. Approximately 886 (4 percent) homes in the Kenai Peninsula Borough lack complete kitchens and approximately 1,175 (5 percent) lack complete bathrooms.

## Kenai Peninsula Borough Housing Need Highlights

The primary housing need faced by the Kenai Peninsula census area is for senior housing. A secondary need is to address ventilation in local homes.

**Housing Gap:** There are 25,801 housing units in the census area, and 70 percent are occupied.<sup>1</sup> Approximately 4 percent are for sale or rent, and remaining units are occupied seasonally or recreationally. An estimated 4 percent of occupied units are overcrowded or severely overcrowded. This is approximately the same as the national average, making the census area one of the least overcrowded in the state.

**Affordable Housing Need:** The average annual energy cost for homes in the Kenai Peninsula Borough is \$4,178. This is the 12th lowest in Alaska but still almost twice the national average.<sup>2</sup> This contributes to the approximately 27 percent of households that are cost-burdened, meaning they spend more than 30 percent of their income on housing.<sup>3</sup> This is lower than the national average of 36 percent of cost-burdened households.

**Senior Housing Needs:** There are 385 beds in senior housing facilities in the census area, with 111 dedicated to assisted-care living.<sup>4</sup> The senior population is 8,594 and is projected to increase to 14,880 by 2030.<sup>5</sup> There is a large need to ensure adequate assisted and independent living facilities for the projected population.

**Retrofit Needs:** Approximately 4 percent of occupied homes in the Kenai Peninsula Borough are estimated to be inefficient, using around four times more energy than if they had been built to the level of AHFC's Building Energy Efficiency Standard (BEES).<sup>6</sup> This is less than the statewide average of 6 percent of inefficient homes. Thirty-one percent of homes were built before 1980 and have not been retrofitted. These homes are all candidates for a potential retrofit. The majority of occupied homes are at risk of indoor air quality issues with only 21 percent having continuous mechanical ventilation or a heat recovery ventilator. Approximately 29 percent of occupied homes are drafty, and an estimated 59 percent of occupied homes have the opposite problem: being airtight

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<sup>1</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

<sup>2</sup> U.S. Energy Information Administration, Independent Statistics and Analysis. (2016). Residential Energy Consumption Survey (RECS): 2009. Retrieved from <https://www.eia.gov/consumption/residential/data/2009/index.php>

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

<sup>4</sup> AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

<sup>5</sup> Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). *Alaska Population Projections 2015 to 2045*. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

<sup>6</sup> See Appendix C: Methodology for details.

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but lacking continuous mechanical ventilation. This is the third highest percentage of airtight homes with no continuous mechanical ventilation in the state.

## Kenai Peninsula Borough Summary

### Community

The Kenai Peninsula Borough census area lies on the coast of southcentral Alaska and is bisected by Cook Inlet. Communities in the census area lie on the coast or along the banks of the Kenai River. The census area lies in the Cook Inlet Native Corporation ANCSA region. The average home size in the census area is 1,890 square feet.

The ratio of dependents, including those under 16 and over 65, relative to the working age population in the Kenai Peninsula Borough is lower than the statewide average and lower than the national ratio.<sup>7</sup> The Kenai Peninsula Borough 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 higher than the statewide average and higher than the national average. The Kenai Peninsula Borough 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 385 dedicated beds in senior housing in the Kenai Peninsula Borough, with 111 of those dedicated to assisted-care living.<sup>8</sup> Currently the Alaska Department of Labor and Workforce Development estimates there are 8,594 seniors in the census area and projects that there will be 14,880 senior citizens by 2030.<sup>9</sup> In the Kenai Peninsula Borough 1.3 percent of senior citizens are in assisted-care housing. This is lower than the statewide rate of 2.8 percent of senior citizens in assisted care housing. Nationally, approximately 3.5 percent of senior citizens are in senior living facilities.<sup>10</sup>

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

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<sup>7</sup> 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 Five-year Estimates*.

<sup>8</sup> AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

<sup>9</sup> Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). Alaska Population Projections 2015 to 2045. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

<sup>10</sup> 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.

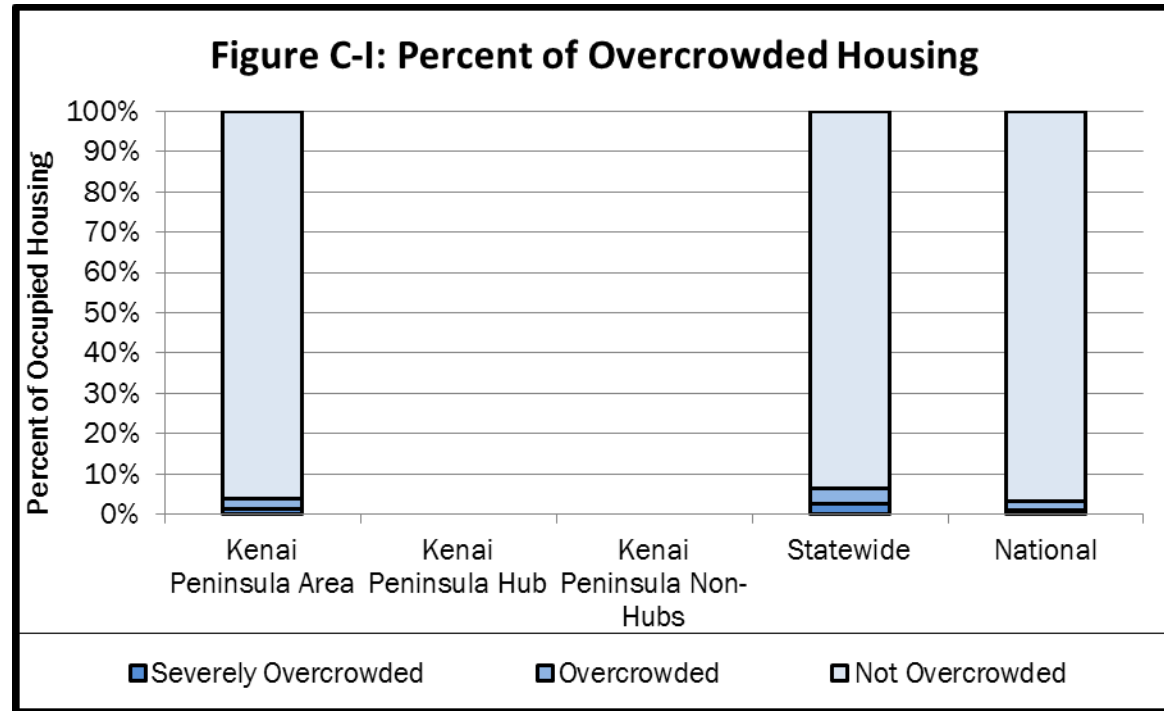
## Overcrowding<sup>11</sup>

The Kenai Peninsula Borough is the eighth least overcrowded census area in Alaska. Approximately 4 percent of the households are overcrowded in the census area as a whole. The rate of overcrowding in the Kenai Peninsula Borough is nearly 63 percent of the statewide average and approximately 1.2 times the national average.

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.

Approximately 4 percent of housing units in the Kenai Peninsula Borough are available for sale or rent.

Additionally, 26 percent of housing units in the Kenai Peninsula Borough are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.



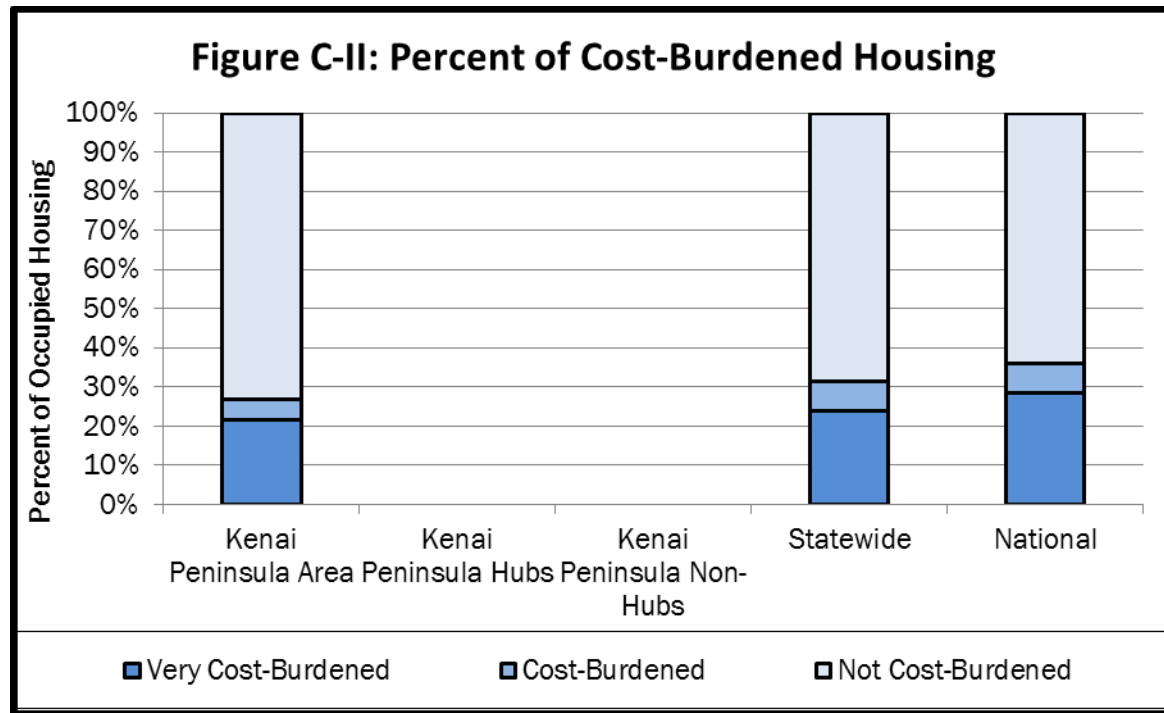
<sup>11</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.



## Affordability<sup>12</sup>

According to estimates from the U.S. Census American Community Survey (ACS), 27 percent of households in the Kenai Peninsula Borough are cost-burdened, that is, spend more than 30 percent of their income on housing costs. The rate of cost-burdened households in the Kenai Peninsula Borough is 75 percent of the national average (36 percent).

The median household income in the Kenai Peninsula Borough is \$63,099. This is lower than the statewide median of \$71,829. The national median is \$53,482.



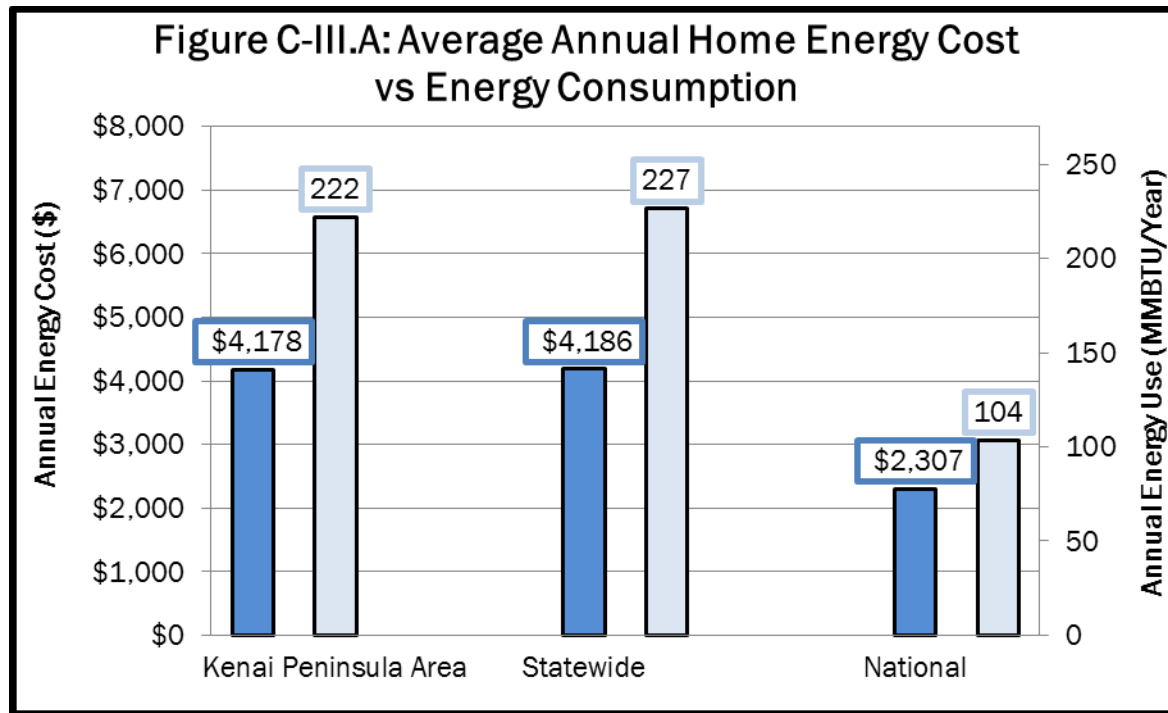
<sup>12</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

## Energy<sup>13</sup>

### Single-family Units

Single-family homes in the Kenai Peninsula Borough consume an average of 222 million BTUs per year, the sixth highest energy consumption of the 30 census areas in the state. This average annual energy consumption is 98 percent of the statewide average of 227 million BTUs and 2.1 times the national average.

Energy costs for single-family homes in the Kenai Peninsula Borough average \$4,178 annually. This is the 12th lowest in the state. Kenai Peninsula Borough energy costs are the same as the statewide average and 1.8 times the national average.



With an average footprint of 2,006 square feet, single-family homes in the Kenai Peninsula Borough 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 Kenai Peninsula Borough averages 122,000 BTUs per square foot, the 11th lowest in the state. This is 95 percent of the statewide average of 128,000 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 Kenai Peninsula Borough averages \$2.08, the fourth lowest in the state. This is 90 percent of the statewide average of \$2.31 per square foot and 2.2 times the national average of \$0.95 per square foot.

The home heating index (HHI) in the Kenai Peninsula Borough for the average single-family home is 8.71 BTUs/ft<sup>2</sup>/HDD. This is the 11th lowest in the state. The HHI for the Kenai Peninsula Borough is approximately the same as the statewide average of

<sup>13</sup> See Appendix C: Methodology for details.

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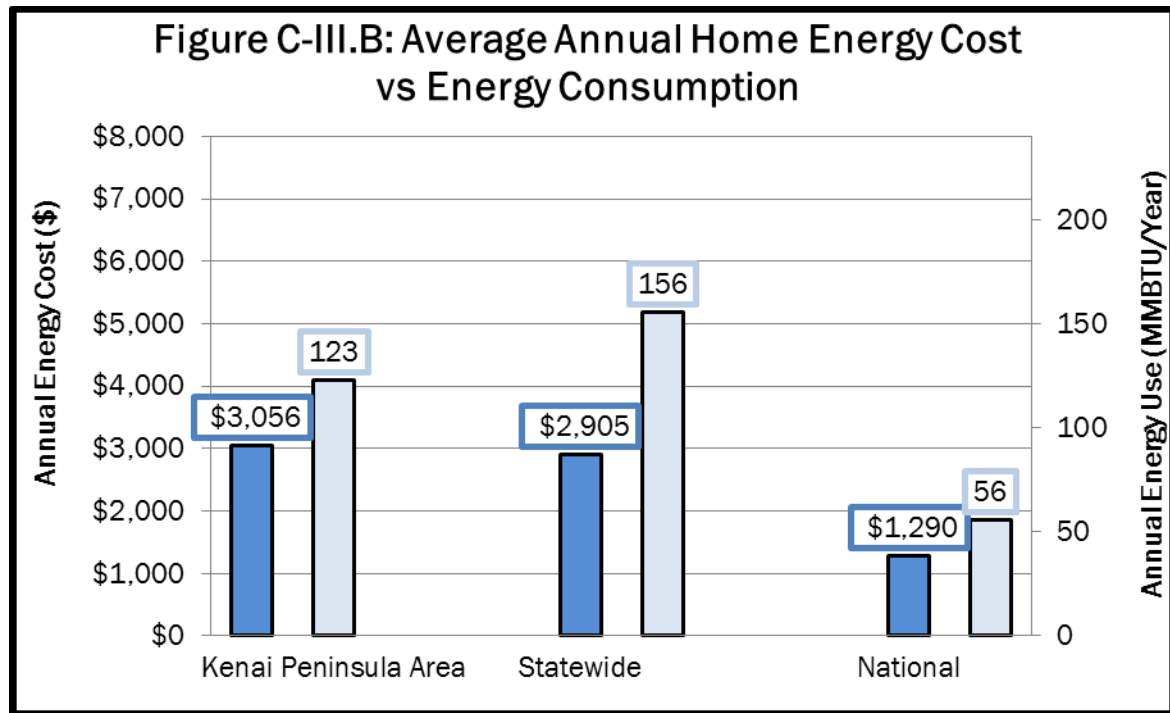
8.83 BTU/ft<sup>2</sup>/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the Kenai Peninsula Borough averages \$13.36, the third lowest in the state. This is 85 percent of the statewide average of \$15.80 per million BTUs and 60 percent of the national average of \$22.27 per million BTUs.

### Multifamily Units

Multifamily housing units in the Kenai Peninsula Borough consume an average of 123 million BTUs per year, the 14th highest energy consumption in the state. This average annual energy consumption is 79 percent of the statewide average of 156 million BTUs and 2.1 times the national average.

Energy costs for multifamily housing units in the Kenai Peninsula Borough average \$3,056 annually. This is the 14th highest in the state. Kenai Peninsula Borough energy costs are 1.1 times the statewide average and 2.4 times the national average.

With an average footprint of 1,151 square feet, multifamily housing units in the Kenai Peninsula Borough are smaller than 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 multifamily housing unit in the Kenai Peninsula Borough averages 115,000 BTUs per square foot, the 11th highest in the state. This is 90 percent of the statewide average of 128,000 BTUs per square foot and 1.9 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a multifamily housing unit in the Kenai Peninsula Borough averages \$2.66, the 14th lowest in the state. This is 1.2 times the statewide average of \$2.27 per square foot and 1.9 times the national average of \$1.39 per square foot.

The home heating index (HHI) in the Kenai Peninsula Borough for the average multifamily housing unit is 7.32 BTUs/ft<sup>2</sup>/HDD. This is the 13th highest in the state. The HHI for the Kenai Peninsula Borough is lower than the statewide average of 8.28 BTU/ft<sup>2</sup>/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a unit in multifamily housing in the Kenai Peninsula Borough

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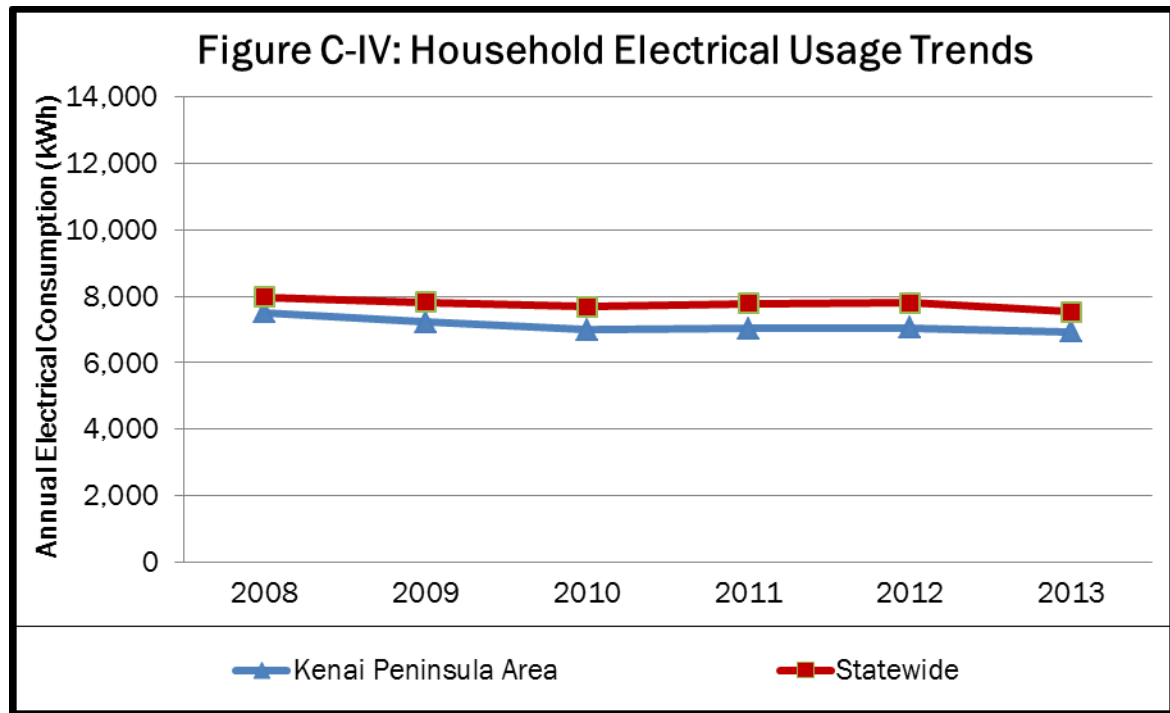
averages \$14.47, the fifth lowest in the state. This is 1.1 times the statewide average of \$12.79 per million BTUs and 63 percent of the national average of \$23.12 per million BTUs.

### Historical Household Electricity Usage<sup>14</sup>

In 2013 the average household in the Kenai Peninsula Borough consumed 6,926 kWh of electricity annually. This is approximately 8% less than in 2008. Statewide, the average household consumed 7,540 kWh of electricity in 2013, a decrease of 5% since 2008.

### Inefficient and Older Homes<sup>15</sup>

Approximately 839 (4 percent) of the occupied homes in the Kenai Peninsula Borough 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, approximately 14,600 (6 percent) of occupied homes are estimated to be 1-star homes.



Older homes built before 1980 that have not been retrofitted are potentially homes in need. Approximately 31 percent of all homes in the Kenai Peninsula Borough fit these two criteria. This is lower than the statewide average of 39 percent.

<sup>14</sup> 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](http://iser.uaa.alaska.edu/Publications/2013_12-AlaskaEnergyStatistics2011Report_Final_2014-04-30.pdf)

<sup>15</sup> See Appendix C: Methodology for details.

## Housing Condition<sup>16</sup>

### Ventilation

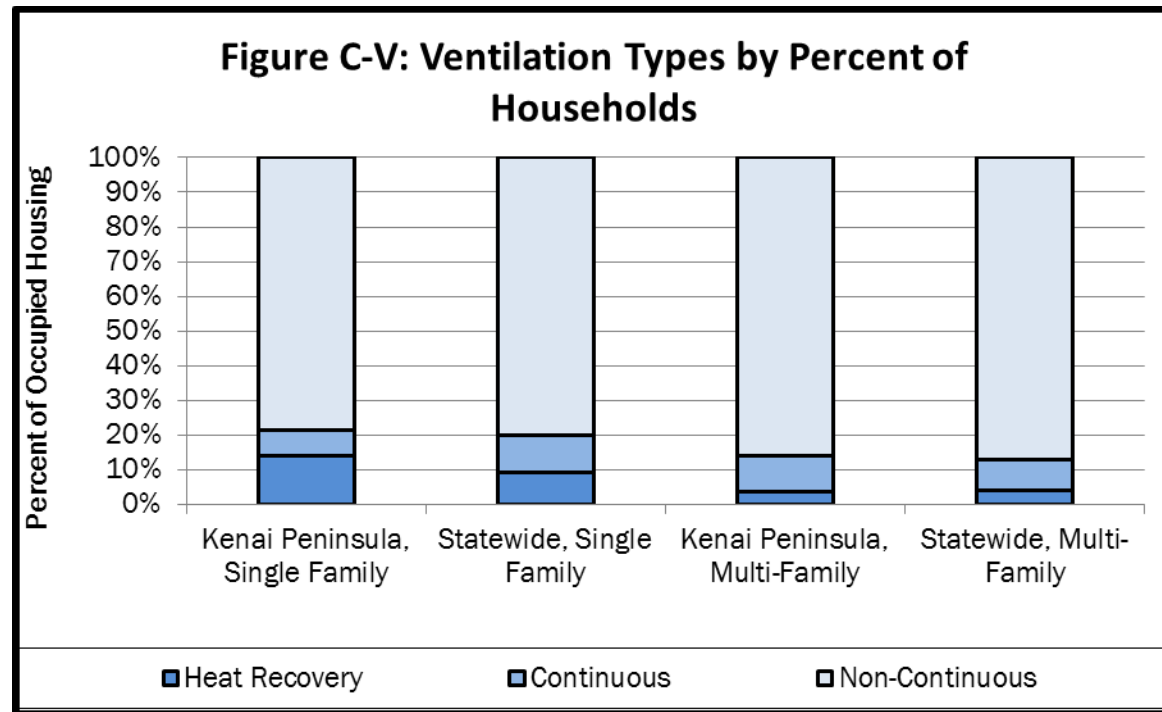
Approximately 21 percent of the occupied homes in the Kenai Peninsula Borough have heat recovery or continuous mechanical ventilation systems installed. This is the 12th highest implementation rate in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems.

### Indoor Air Quality

A tight home with no or inadequate ventilation has an increased risk of issues with indoor air quality or moisture. The Kenai Peninsula Borough has the third highest percentage of housing units in the state that are relatively airtight and lack continuous mechanical ventilation. Approximately 5,811 (27 percent) of the occupied homes in the Kenai Peninsula Borough are estimated to be at moderate risk, with 7,005 (32 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 at high risk.

### Draftiness

Drafty homes were defined as those showing 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 4,050 (19 percent) of the occupied homes in the Kenai Peninsula Borough are estimated to be drafty, with 2,068 (10 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.



<sup>16</sup> See Appendix C: Methodology for details.