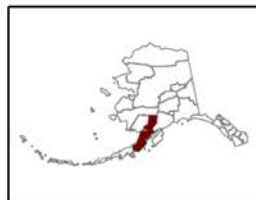
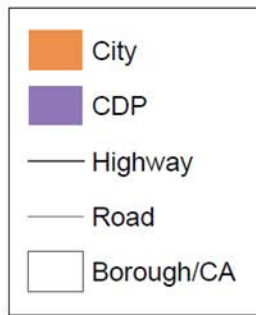


Lake & Peninsula Borough



CDP = Census Designated Place
 CA = Census Area



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

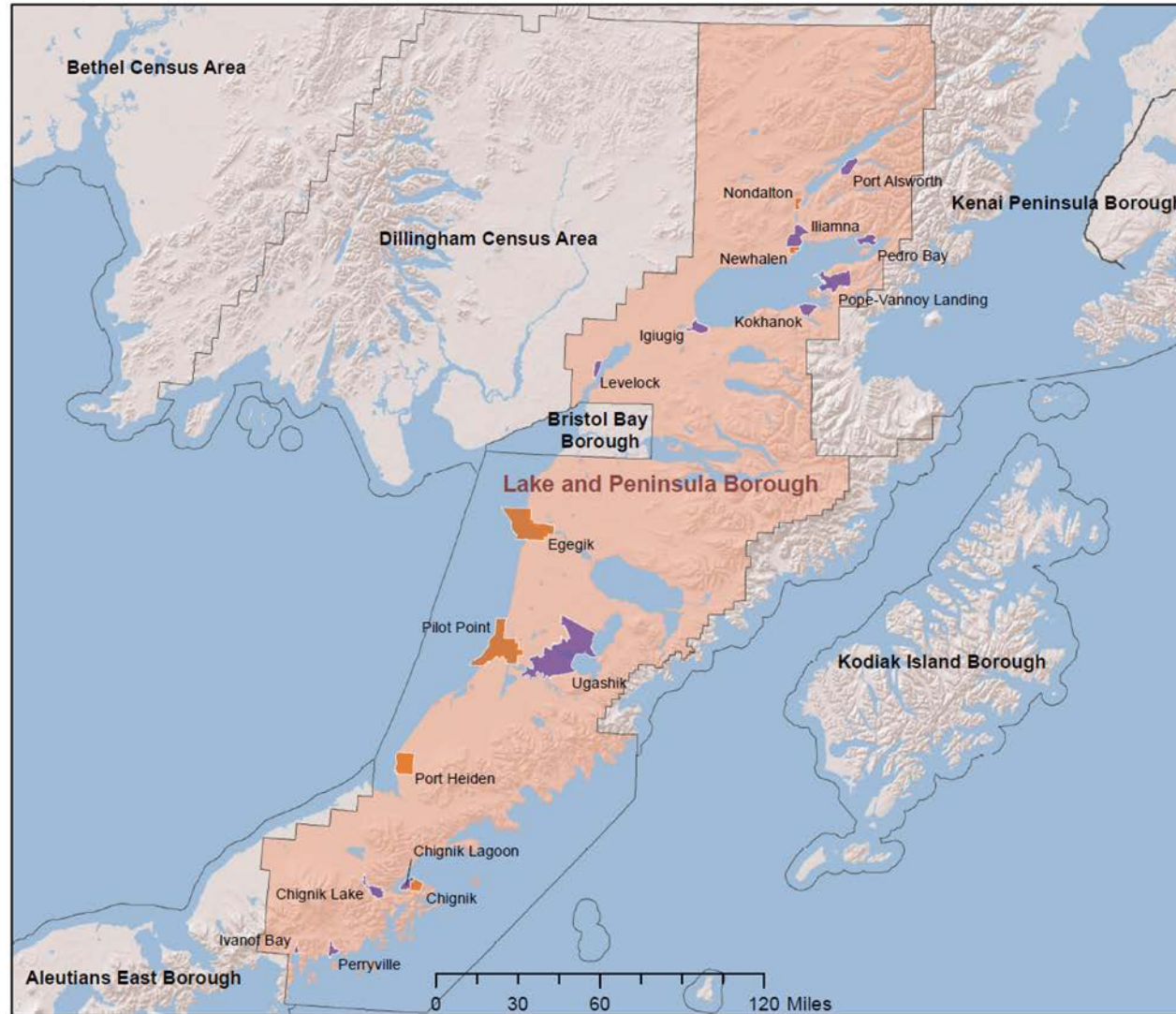


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Regional and Statewide Housing Characteristics

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.

Lake and Peninsula Borough Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Lake and Peninsula Borough is 1,668, a decrease of 9 percent from 2000.

Housing Units: There are currently 1,367 housing units in the Lake and Peninsula Borough. Of these, 510 are occupied, 43 are for sale or rent, and the remaining 944 are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the Lake and Peninsula Borough is 1,028 square feet and uses 134 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 Lake and Peninsula Borough is \$4,530. This is approximately 1.1 times the statewide average and twice the national average.

Overcrowding: An estimated 60 (12 percent) of occupied units are either overcrowded (7 percent) or severely overcrowded (5 percent). This is nearly four times the national average, and makes this census area the eighth most overcrowded census area in the state.

Drafty Homes and Ventilation: Approximately 316 (60 percent) of occupied homes in the Lake and 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 169 occupied housing units (32 percent) in the Lake and 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 100 (20 percent) of households in the Lake and 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 currently no registered beds in senior housing facilities in the Lake and Peninsula Borough. Currently the Alaska Department of Labor and Workforce Development estimates there are 152 seniors in the census area and projects an increase to 274 by 2030.

Housing Issues: There are an estimated 347 homes built before the 1980s in the Lake and Peninsula Borough that have not been retrofitted through a state program in the past 10 years. Approximately 40 (8 percent) homes in the Lake and Peninsula Borough lack complete kitchens and approximately 86 (17 percent) lack complete bathrooms.

Lake and Peninsula Borough Housing Need Highlights

Housing needs in the Lake and Peninsula Borough include lack of senior housing and high rates of overcrowding.

Housing Gap: The overcrowding rate in the Lake and Peninsula Borough is 12 percent, four times the national average.¹ The rate of new construction appears sufficient to meet the low projected population growth; however, it is insufficient to produce enough new units to alleviate overcrowded conditions.²

Affordable Housing Need: The Lake and Peninsula Borough has one of the lowest two-bedroom fair market rents in the state, and one of the highest average renter wages at \$23.12 per hour. This likely contributes to the lower rate of cost-burdened households, which is less than the statewide average (20 percent versus 30 percent).^{3, 4} Conversely, the borough has one of the lowest area median incomes in Alaska.

Senior Housing Needs: There are no registered beds in senior housing facilities in the Lake and Peninsula Borough.⁵ With the senior population projected to nearly double by 2030,⁶ increasing available senior housing should ensure adequate assisted and independent living facilities for the projected population.

Retrofit Needs: The Lake and Peninsula Borough has the highest percentage of participation in an energy program, with an estimated 51 percent of occupied housing units being retrofitted through the Weatherization Assistance Program and an additional 4 percent being certified to meet AHFC's Building Energy Efficiency Standard (BEES).⁷ Opportunities remain to reduce energy use through efficiency retrofits, with an estimated 10 percent of occupied housing units being inefficient, using at least four times more energy than a new home built to BEES. Sixty percent of homes are estimated drafty based on their air-tightness levels.

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

² See Appendix C: Methodology for details.

³ 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

⁴ U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

⁵ 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.

Lake and Peninsula Borough Summary

Community

The Lake and Peninsula Borough census area rests at the junction of mainland Alaska and the Aleutian chain. The census area lies in the Bristol Bay Native Corporation ANCSA region. The average home size in the census area is 1,026 square feet.

The ratio of dependents, including those under 16 and over 65, relative to the working age population in the Lake and Peninsula Borough is lower than the statewide average and lower than the national ratio.⁸ The Lake and 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 lower than the national average. The Lake and Peninsula Borough region is projected to see the ratio of senior age dependents to working age dependents increase by 1.9 times by 2030.

There are currently no registered dedicated beds in senior housing in the Lake and Peninsula Borough.⁹ Currently the Alaska Department of Labor and Workforce Development estimates there are 152 seniors in the census area and projects that there will be 274 senior citizens by 2030.¹⁰ In the Lake and Peninsula Borough no senior citizens are in assisted care housing, whereas statewide 2.8 percent of senior citizens are 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 dependent age (0 to 15) population indicate that in the Lake and Peninsula Borough 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.

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

⁹ 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.

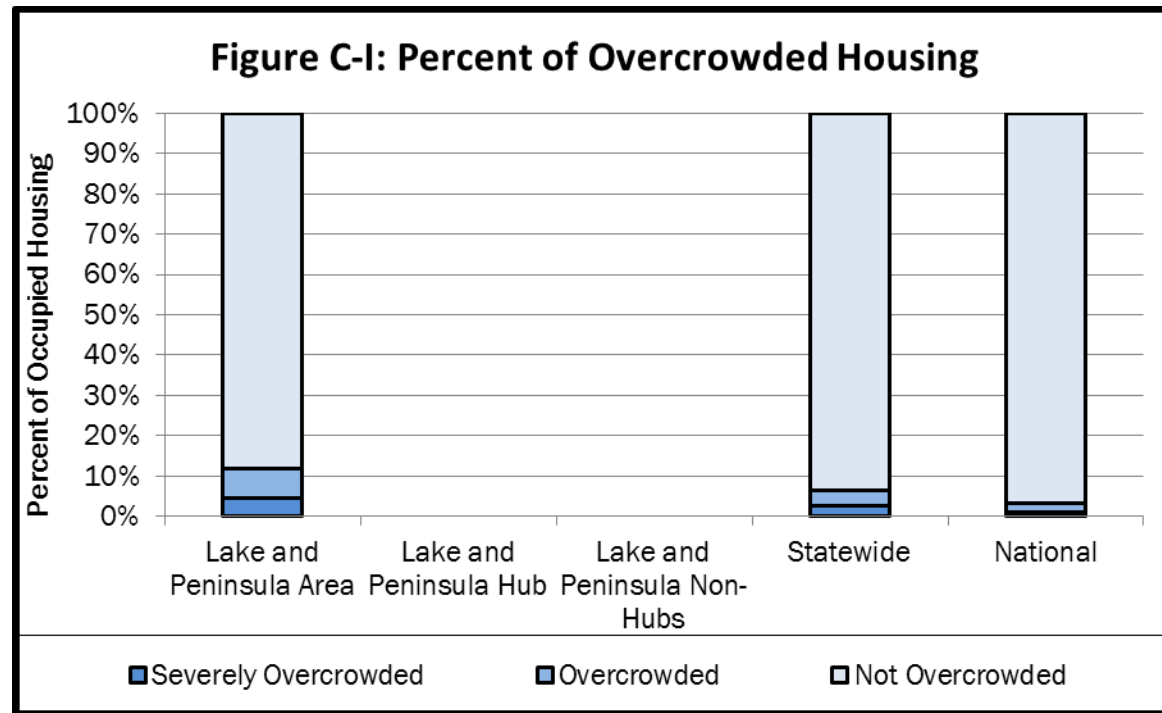
¹¹ Ribbe, M., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., ... Jonnson, P. (1997). "Nursing Homes in 10 Nations: A Comparison Between Countries and Settings." *Age and Ageing*. 26(S2), 3-12.

Overcrowding¹²

The Lake and Peninsula Borough is the eighth most overcrowded census area in Alaska. Approximately 12 percent of households are overcrowded in the census area as a whole. The rate of overcrowding in the Lake and Peninsula Borough is nearly 1.8 times the statewide average (6.4 percent) and approximately 3.6 times more than the national average (3.3 percent).

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 3 percent of housing units in the Lake and Peninsula Borough are available for sale or rent. Additionally, 63 percent of housing units in the Lake and Peninsula Borough are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

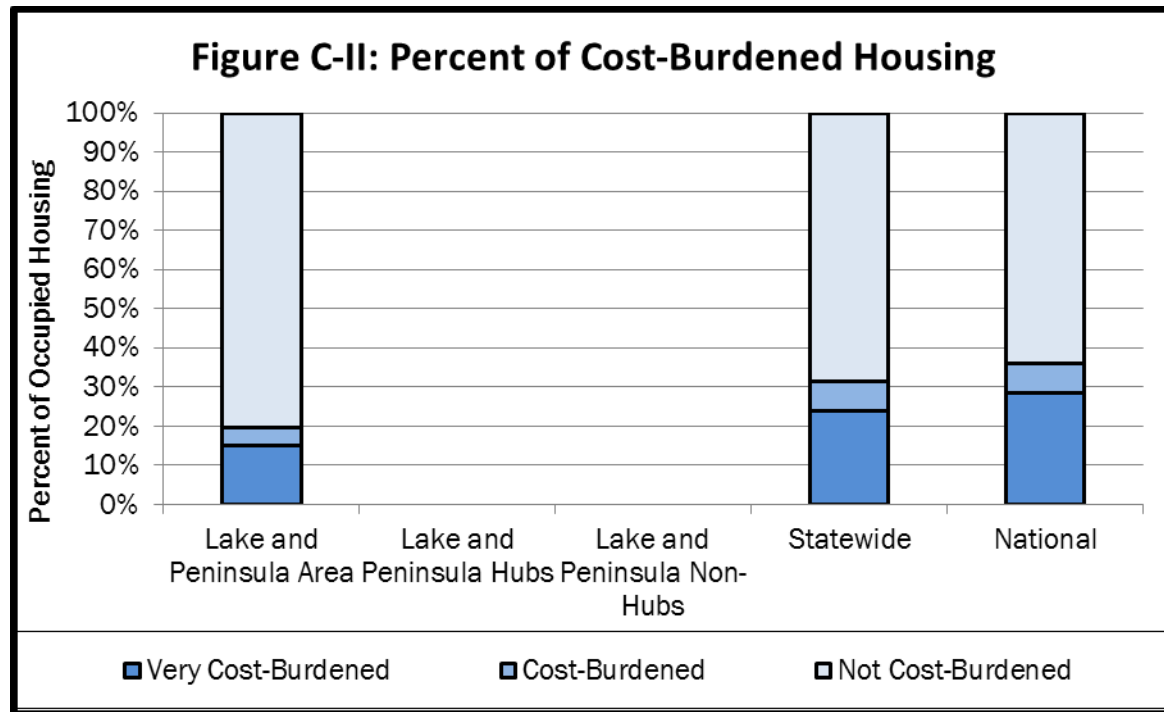


¹² U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

Affordability¹³

According to estimates from the U.S. Census American Community Survey (ACS), 20 percent of households in the Lake and 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 Lake and Peninsula Borough is approximately 54 percent of the national average (36 percent).

The median household income in the Lake and Peninsula Borough is \$47,143. This is lower than the statewide median of \$71,829. The national median is \$53,482.



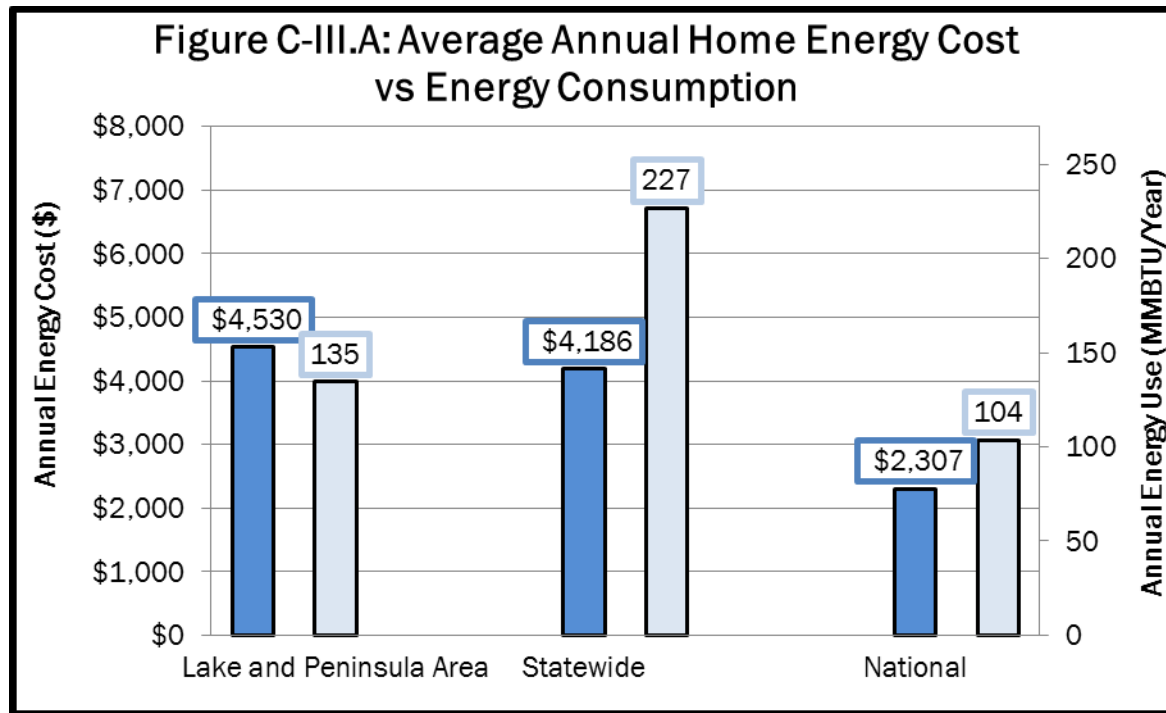
¹³ U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

Energy¹⁴

Single-family Units

Single-family homes in the Lake and Peninsula Borough consume an average of 134 million BTUs per year, the fourth lowest energy consumption in the state. This average annual energy consumption is 59 percent of the statewide average of 227 million BTUs and 1.3 times the national average.

Energy costs for single-family homes in the Lake and Peninsula Borough average \$4,530 annually. This is the 12th highest in the state. Lake and Peninsula Borough energy costs are 1.1 times the statewide average and twice the national average.



With an average footprint of 1,028 square feet, single-family homes in the Lake and Peninsula Borough 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 Lake and Peninsula Borough averages 142,000 BTUs per square foot, the ninth highest in the state. This is 1.1 times the statewide average of 128,000 BTUs per square foot and 3.3 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the Lake and Peninsula Borough averages \$4.41, the sixth highest in the state. This is 1.9 times the statewide average of \$2.31 per square foot and 4.6 times the national average of \$0.95 per square foot.

The home heating index (HHI) in the Lake and Peninsula Borough for the average single-family home is 9.23 BTUs/ft²/HDD. This is the 14th highest in the state. The HHI for the Lake and Peninsula Borough is higher than the statewide average of 8.83 BTU/ft²/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the Lake and

¹⁴ See Appendix C: Methodology for details.

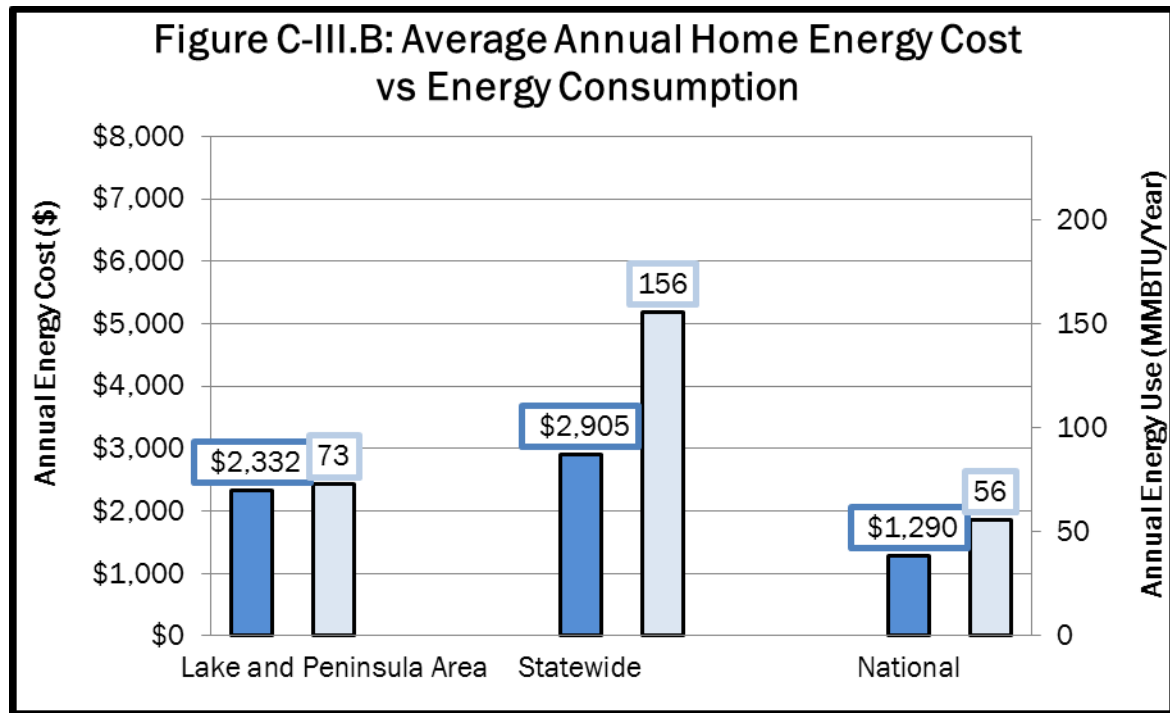
Peninsula Borough averages \$29.31, the sixth highest in the state. This is 1.9 times the statewide average of \$15.80 per million BTUs and 1.3 times the national average of \$22.27 per million BTUs.

Multifamily Units

Multifamily housing units in the Lake and Peninsula Borough consume an average of 73 million BTUs per year, the fourth lowest energy consumption in the state. This average annual energy consumption is 47 percent of the statewide average of 156 million BTUs and 1.3 times the national average.

Energy costs for multifamily housing units in the Lake and Peninsula Borough average \$2,331 annually. This is the fourth lowest in the state. Lake and Peninsula Borough energy costs are 80 percent of the statewide average and 1.8 times the national average.

With an average footprint of 768 square feet, multifamily housing units in the Lake and 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 Lake and Peninsula Borough averages 95,000 BTUs per square foot, the sixth lowest in the state. This is 74 percent of the statewide average of 128,000 BTUs per square foot and 1.6 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a multifamily housing unit in the Lake and Peninsula Borough averages \$3.04, the eighth highest in the state. This is 1.3 times the statewide average of \$2.27 per square foot and 2.2 times the national average of \$1.39 per square foot.

The home heating index (HHI) in the Lake and Peninsula Borough for the average multifamily housing unit is 5.38 BTUs/ft²/HDD. This is the ninth lowest in the state. The HHI for the Lake and Peninsula Borough is lower than the statewide average of 8.28 BTU/ft²/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a unit in multifamily housing in the Lake and

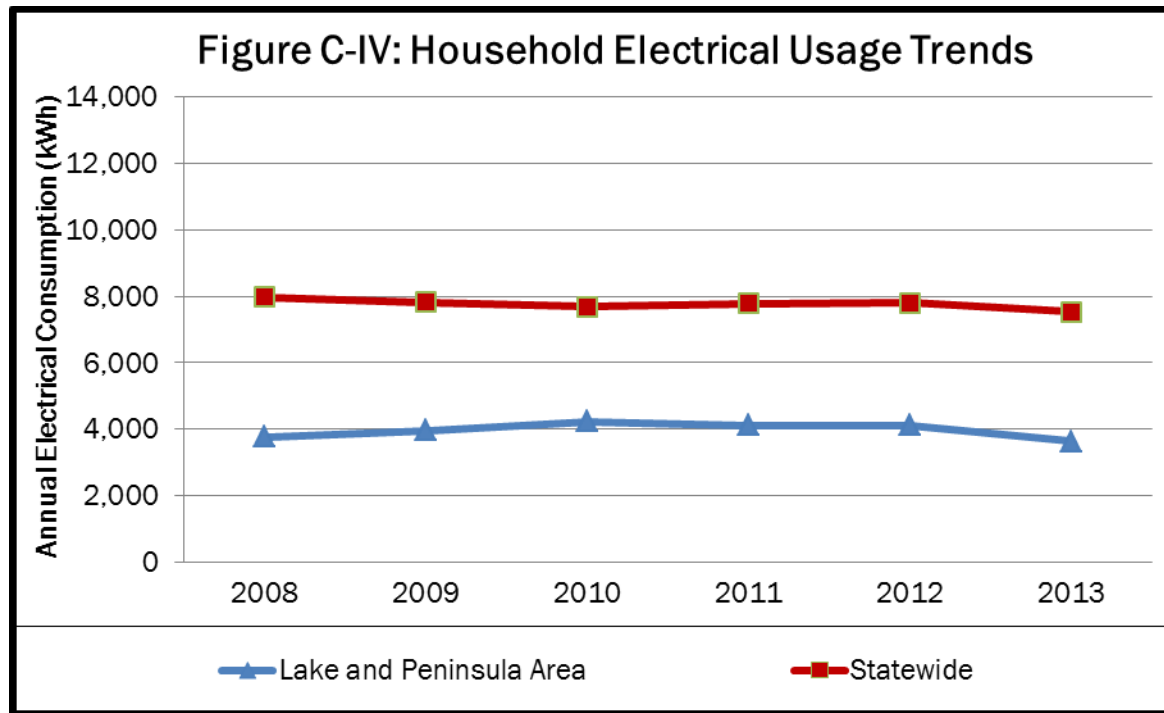
Peninsula Borough averages \$25.19, the 10th highest in the state. This is twice the statewide average of \$12.79 per million BTUs and 1.1 times the national average of \$23.12 per million BTUs.

Historical Household Electricity Usage¹⁵

In 2013 the average household in the Lake and Peninsula Borough consumed 3,636 kWh of electricity annually. This is approximately 4 percent less than in 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 49 (10 percent) of the occupied homes in the Lake and 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 30 percent of all homes in the Lake and Peninsula Borough fit these two criteria. This is 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 Condition¹⁷

Ventilation

Approximately 22 percent of the occupied homes in the Lake and Peninsula Borough region have heat recovery or continuous mechanical ventilation systems installed. This is the 11th highest in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems, with or without heat recovery.

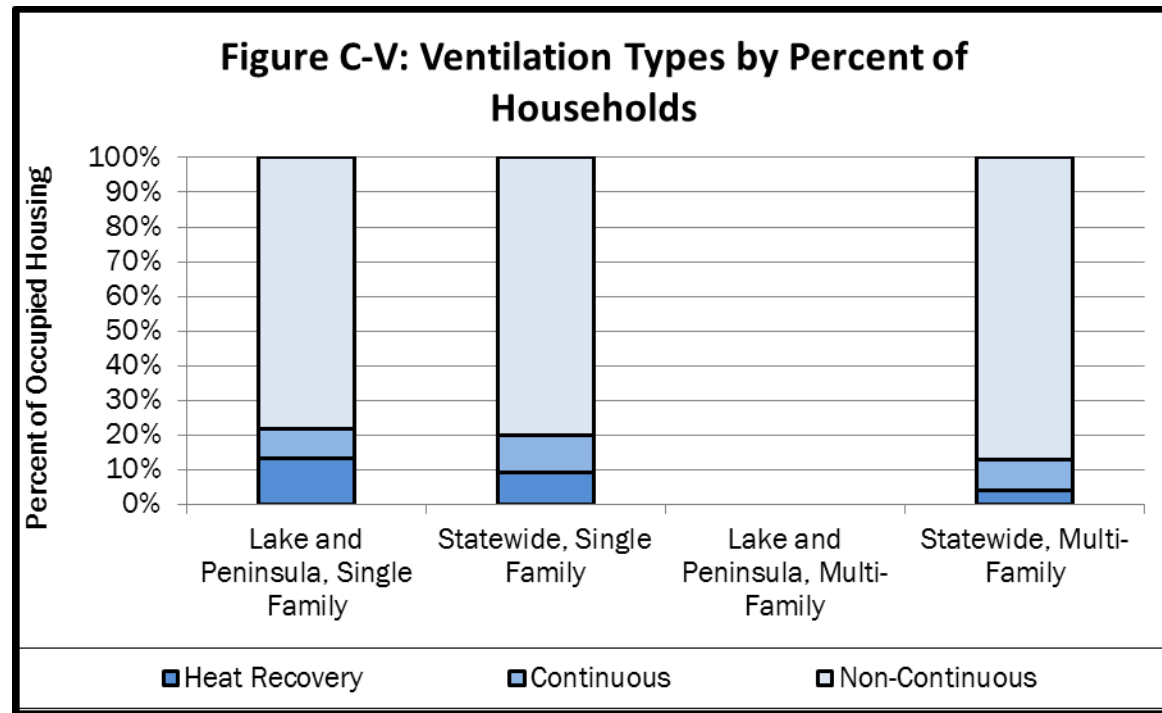
Indoor Air Quality

A tight home with no or inadequate ventilation has an increased risk of issues with indoor air quality or moisture. The Lake and Peninsula Borough has the sixth lowest percentage of housing units in the state that are both relatively airtight and lack continuous mechanical ventilation.

Approximately 123 (24 percent) of the occupied homes in the Lake and Peninsula Borough are estimated to be at moderate risk, with 41 (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 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 208 (41 percent) of the occupied homes in the Lake and Peninsula Borough are estimated to be drafty, with 98 (19 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.

