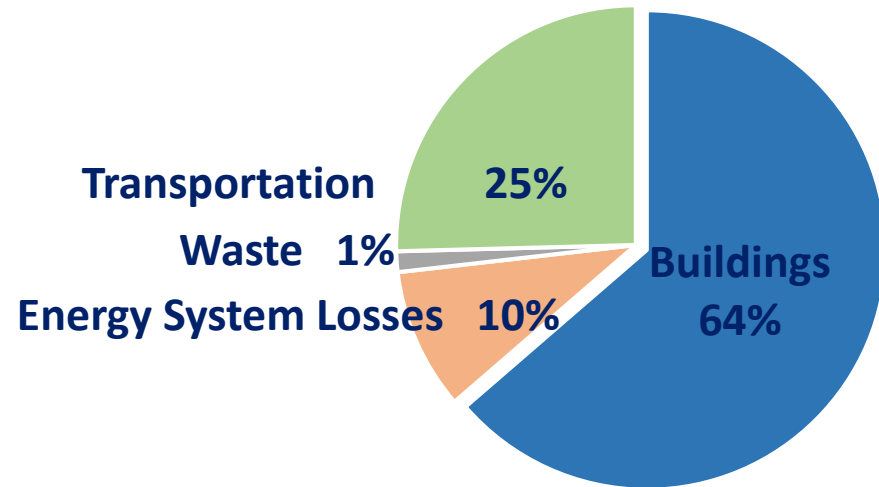


# Newton's 2020-2024 Climate Action Plan



*Image from Newton Mothers Out Front*

**Wednesday, October 2, 2019**

# Newton's 5-Year Climate Action Plan

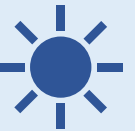
**Long-Term Goal: Carbon Neutral by 2050**

**Approach: Use less** = conservation and high-efficiency

**Green the rest** = produce and use clean energy

**Municipal leverage: 6 areas of action**

- A. Municipal Implementation
- B. Clean & Renewable Energy
- C. Green Transportation & Streetscapes
- D. New Construction & Major Renovations
- E. Existing Buildings
- F. GHG Emissions Associated w/ Consumption & Disposal



# Changes

- Added an executive summary
- Added top 10 strategies
- Added top 20 actions
- Added metrics
- Added figures
- Added “demographic” information

# The Top 10 Strategies and Top 20 Actions

## Establishing Teams and Partnerships

**Strategy 1.** Create a City implementation team, develop appropriate municipal planning and budgeting processes, and ensure regular Plan evaluations and updates (A.1.)

**Action 1.** Transform the existing Major Projects and Infrastructure Cluster into the Major Projects, Infrastructure, and Climate Change Cluster to oversee implementation of this Plan. (A.1.1.)

**Action 2.** Develop more concrete estimates of costs and fiscal benefits for each action in this plan and incorporate funding categories or appropriate metrics in the CIP prioritization process to reflect the priorities of this plan and other related plans (such as the Climate Change Vulnerability Assessment and Transportation Plan). (A.1.2.)

**Strategy 2.** Work with partners to build awareness and drive action (A.2.)

**Action 3.** Develop an Energy Coach Role. (A.2.2.)

**Action 4.** In collaboration with the Utilities, work with the largest energy users in the City to reduce their GHG emissions. (A.2.3.)

**Action 5.** Work with the Newton-Needham Chamber of Commerce and the NCCE to explore possible structures for a "Green Ribbon Commission" and implement the preferred model. (A.2.4.)

# The Top 10 Strategies and Top 20 Actions

## Use Less

- Strategy 3.** Increase rate of biking, walking, telecommuting, shared rides, and use of shuttles and public transit, while reducing single-occupancy vehicle trips (C.4.)
- Action 6.** Work with City Council to develop a Transportation Demand Management (TDM) program to reduce single-occupancy vehicle trips through amendments to the Zoning Ordinance. (C.4.1.)
  - Action 7.** Work with City Council to reduce or eliminate the minimum parking requirement in the Zoning Ordinance and set a maximum on parking allotments. (C.4.2.)
  - Action 8.** Create and encourage the use of safe bicycle and pedestrian facilities for commuters and residents. (C.4.3.)
- Strategy 4.** Advocate for a more energy-efficient and climate-smart building code (D.1.)
- Action 9.** Register and educate all eligible representatives to ensure strong City participation in the vote on the International Energy Conservation Code (IECC) to increase base building efficiency and support electrification and other carbon reduction strategies, and advocate to the Board of Building Regulations and Standards (BBRS) for a net zero Stretch Code. (D.1.1.)

# The Top 10 Strategies and Top 20 Actions

## Use Less (cont'd)

- Strategy 5.** Work with City Council to adopt Zoning Ordinance amendments that require and/or incentivize high-efficiency performance and/or net-zero new construction – within the next 12 months (D.3.)
- Action 10.** Work with City Council to amend the Zoning Ordinance to require new construction and major renovations seeking a Special Permit maximize energy efficiency and the use of renewable energy, including thermal energy. (D.3.1.)
- Action 11.** Work with City Council to require that all new construction and major renovations analyze the costs, benefits, and GHG impacts of maximizing energy efficiency; utilizing electric heating, cooling, and hot water; and using renewable energy, including thermal energy. (D.3.2.)
- Action 12.** Work with City Council to adopt Zoning Ordinances that encourage additional, appropriate low-carbon, housing near public transportation. (D.3.5.)

# The Top 10 Strategies and Top 20 Actions

## Green the Rest

**Strategy 6.** Increase the amount of electricity provided by New England renewable energy resources (B.1.)

**Action 13.** Encourage residents and businesses to opt up to 100% renewable energy through Newton Power Choice. (B.1.1.)

**Action 14.** Support Green Newton's efforts to implement the Newton Solar Challenge for residents and businesses which encourages the installation of rooftop solar. (B.2.1.)

**Strategy 7.** Ensure that municipal infrastructure and operations are as "green" as possible (C.1.)

**Action 15.** Install EV charging stations in village centers, school facilities, and other priority municipal sites, primarily through the Make Ready and GreenSpot programs. (C.1.3.)

**Strategy 8.** Incentivize residents to switch to EVs with a goal of having 10% of all vehicles on the road be EV, BHEV, ZEM, PHEV+ by 2024 (C.2.)

**Action 16.** Continue to work with partners (such as Make Ready) to install EV charging stations on private properties throughout the City. (C.2.3.)

**Action 17.** Support local non-profits and for-profits such as Green Newton, the NCCE, and Newton-Needham Chamber of Commerce, the Transportation Advisory Group (TAG), Safe Routes to School, the utilities, and local businesses efforts in education, events (such as test drives and Tour du Newton), and literature dissemination. (C.3.1.\*)

# The Top 10 Strategies and Top 20 Actions

## Green the Rest (cont'd)

**Strategy 9.** Transition to electric and thermal heating and cooling in residential and commercial buildings (E.2.)

**Action 18.** Work with City Council to adopt an ordinance requiring residential and commercial building owners to disclose to potential buyers electric, gas and heating oil bills for the previous 12 months, and explore the possibility of listing energy performance in the Assessor's database. (E.3.2.\*)

**Strategy 10.** Consider initiatives to engage businesses and residents in reducing GHG emissions resulting from corporate operations and individual activities (F.1.)

**Action 19.** Work with the Economic Development Director and the Newton-Needham Chamber of Commerce to explore incentive programs for businesses to reduce GHG emissions associated with consumption and disposal. (F.1.1. )

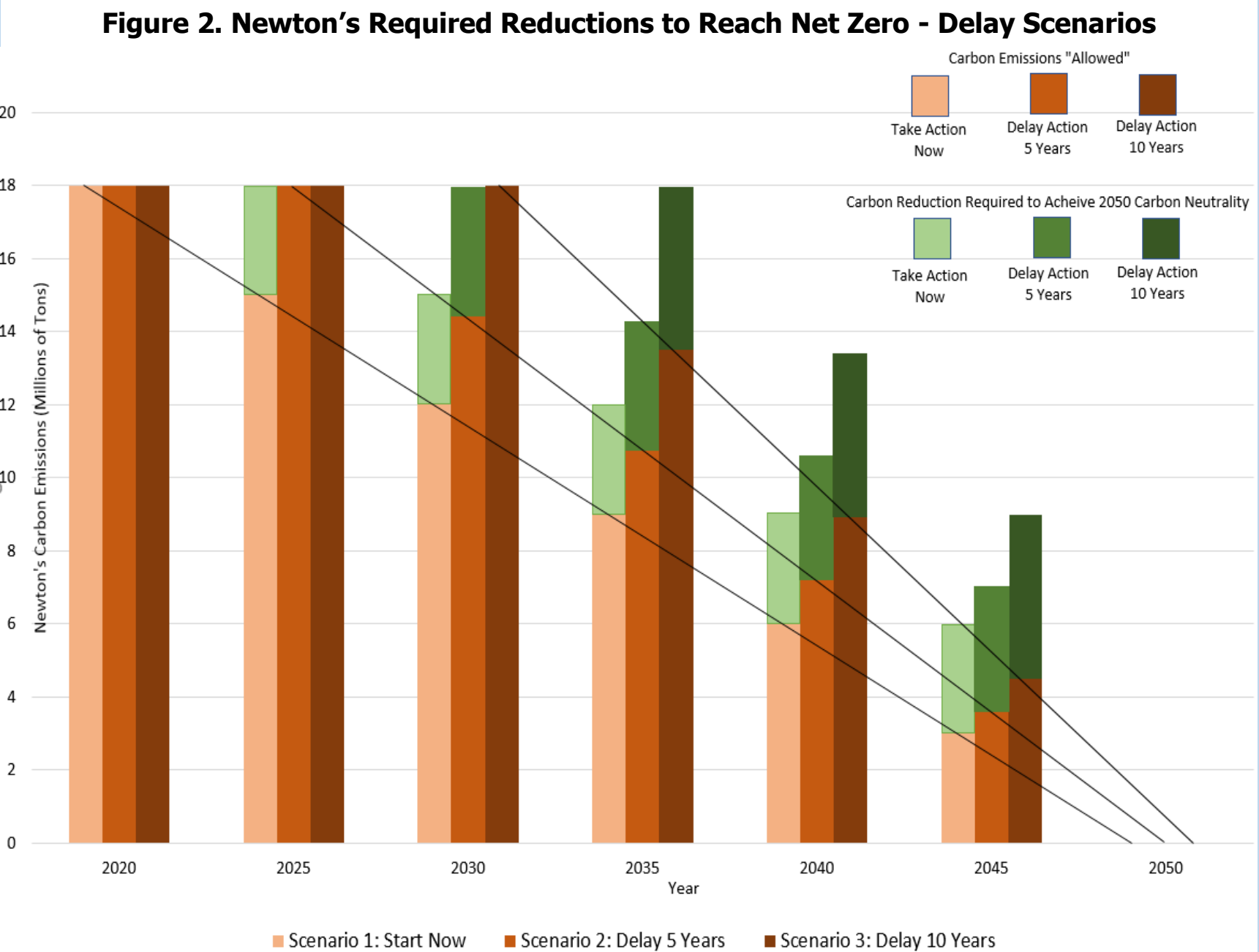
**Action 20.** Explore adoption of a voluntary program that would allow contributions to a municipal program to help offset GHGs produced by air travel. (F.1.2.)



# Metrics

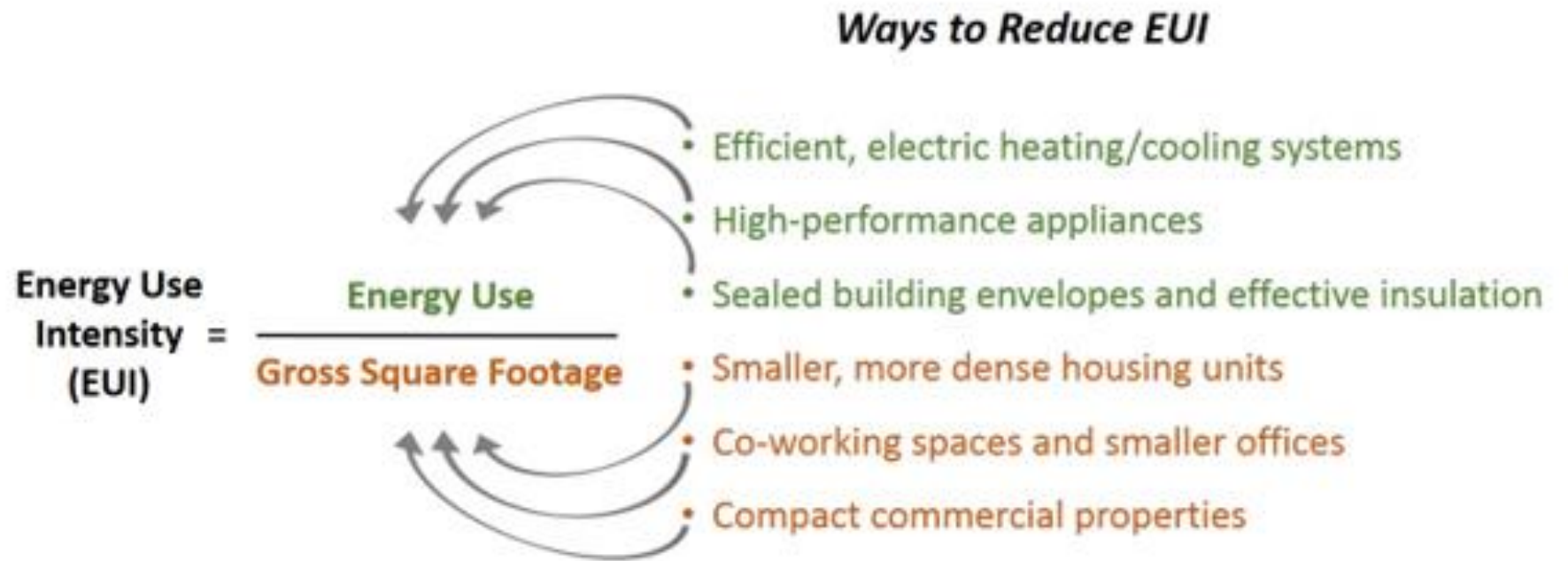
	Critical Interim (2025) Goals	2050 Goals
<b>B. Clean Energy</b>		
Percent renewables as Newton Power Choice base	100%	100%
Percent of residents opted up to 100% NPC match	15%	n.a.
<b>C. Transportation</b>		
Percent reduction in vehicle miles traveled	5%	20%
Percent of private cars in Newton that are electric	10%	100%
<b>D. New Construction</b>		
Percent of all-electric buildings	100%	100%
<b>E. Existing Residential Buildings</b>		
Number of home energy assessments/year	4000	n.a.
Number of insulation installations/year	800	all homes are insulated
Number of heat pump installations/year	450	all homes have heat pumps
Percent reduction in total energy consumption	3%	20%
Percent of all-electric buildings	5%	100%
<b>F. Existing Commercial Buildings</b>		
Percent reduction in total energy consumption	15%	50%
<del>Percent of new units with HERS ≤40</del>	<del>??%</del>	<del>??%</del>

# New Figures

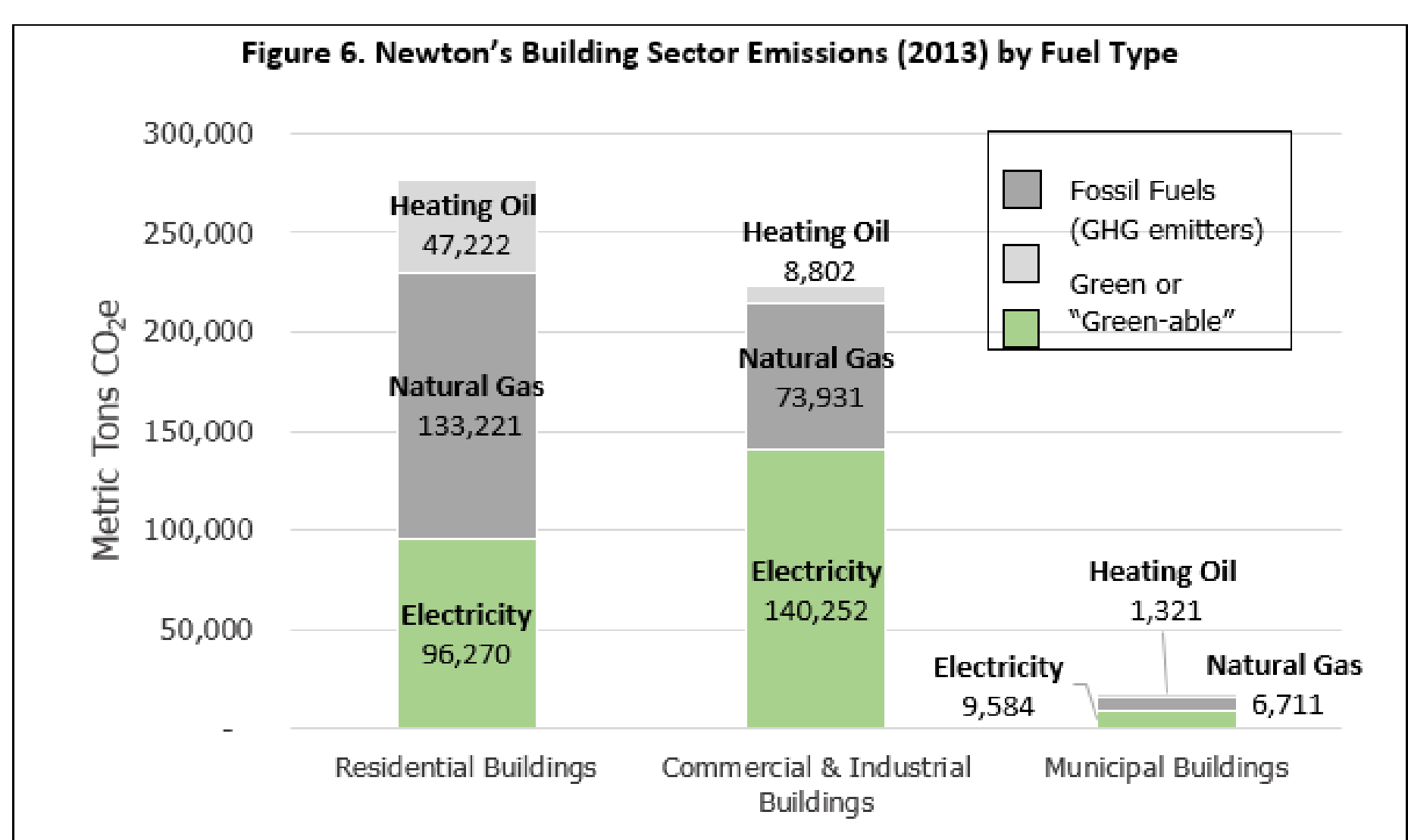


# New Figures

Figure 5. How to Calculate Energy Use Intensity (EUI) and Ways to Reduce EUI



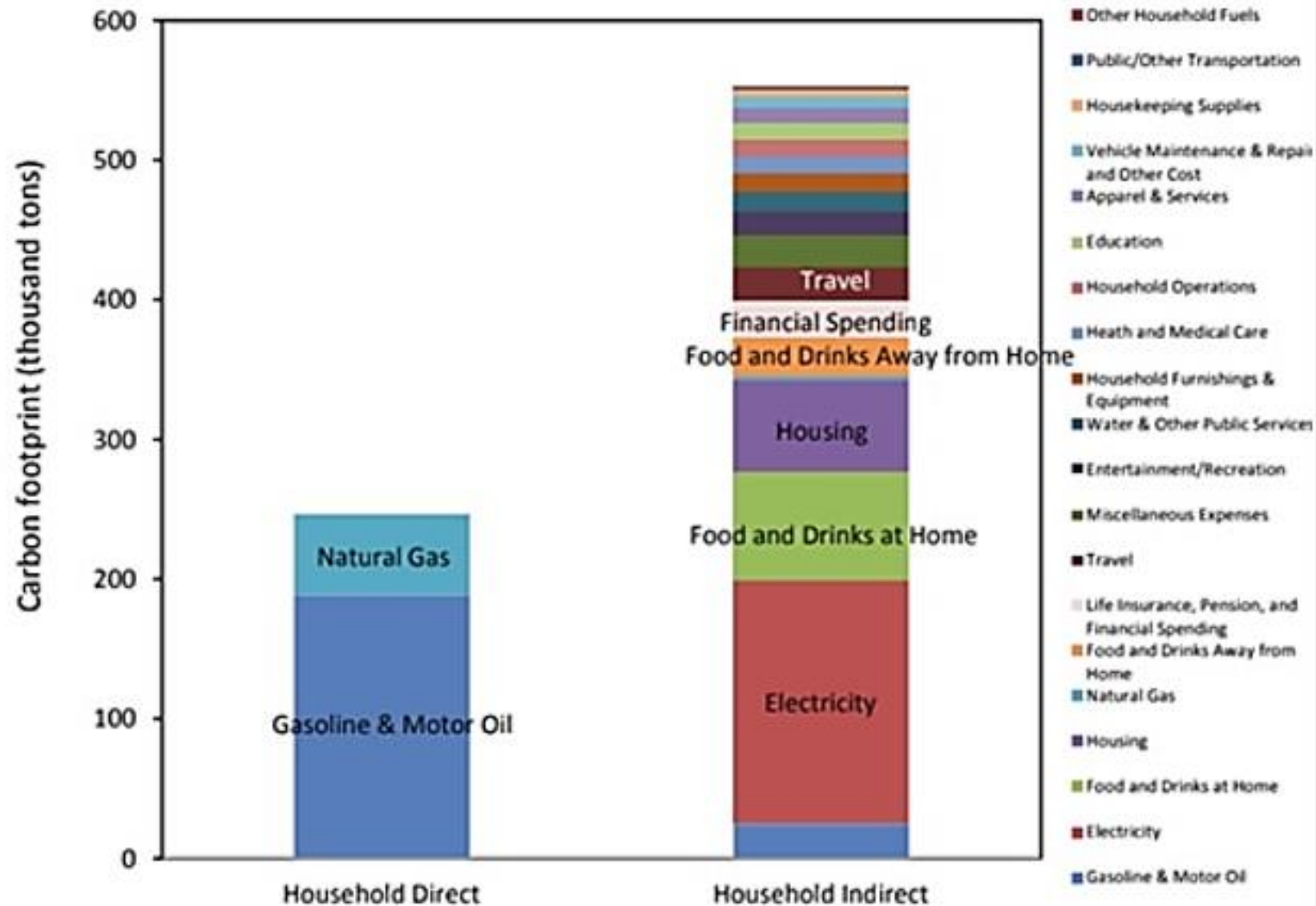
# New Figures



# New Figures

Figure 7. Illustration of the Scale of the Contribution of "Hidden" GHG Emissions<sup>6</sup>

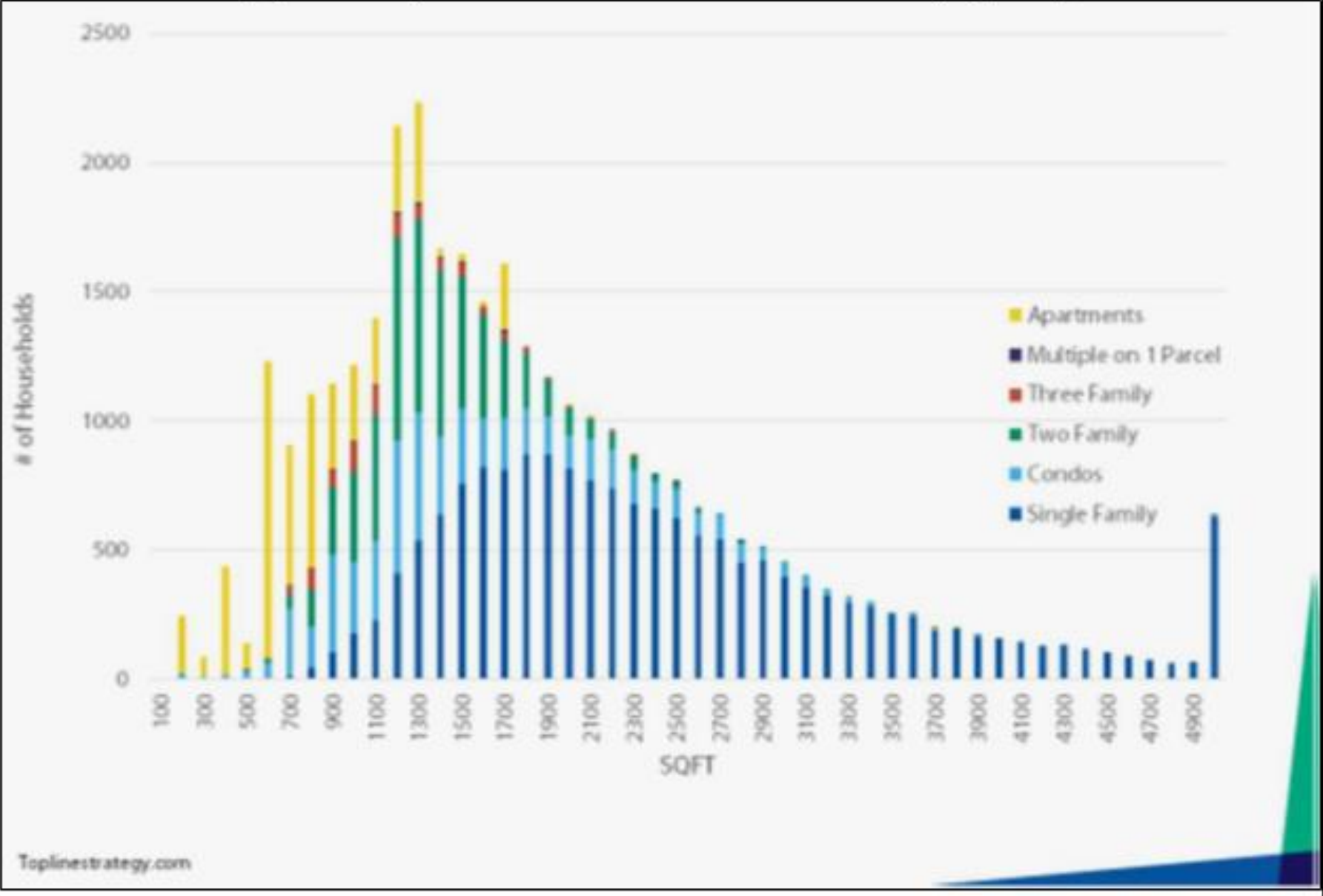
## St. Louis Park household carbon footprint: direct and indirect



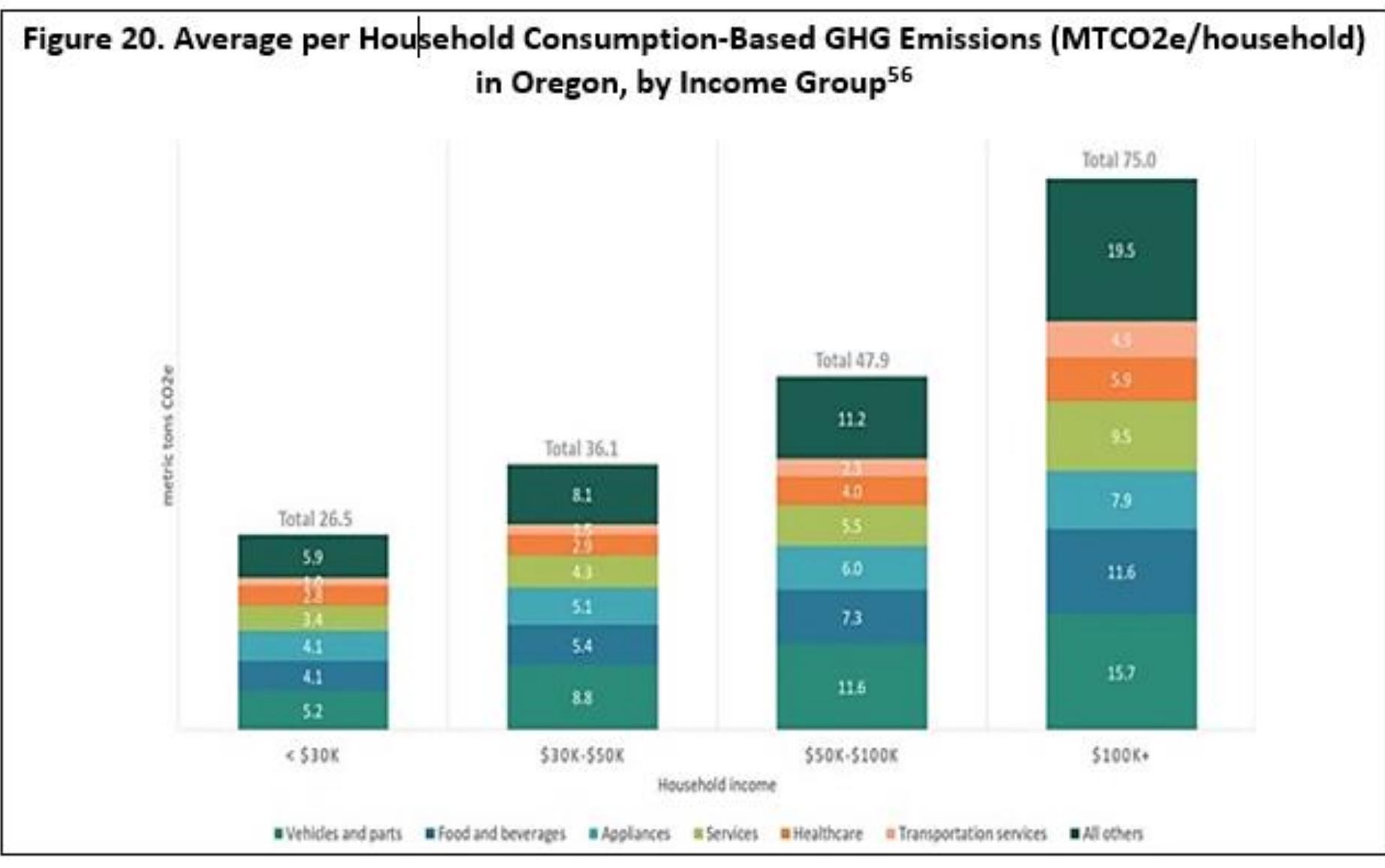
# New Figures

### Figure 15. Newton's Households (by type) Divided by Size (in sq. feet)

(Figure courtesy of the Newton Citizens Climate Action Plan (May 2019))



# New Figures



# Discussion

- Questions ?
- Comments ?
- Next Steps:
  - Continued discussion
  - ZAP Public Hearing, possibly Nov. 13.