Business Opportunities in Advancing Sustainable Lifestyles in Greater Boston

Workshop UMass SERC and SCORAI:
May 16, 2019

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Background and Context

- Paris Agreement on Climate Change (2016)
- Sustainable Development Goals (SDG12: Responsible Consumption and Production)
- C40 (Sustainable Cities) report on Consumption-based inventories (2018) and follow-up
- In US: Green New Deal (2019): climate, jobs, and equity)
- Globally: climate youth movement; in US Sunrise movement (2019)

Cities and Urban areas

- In big cities many problems conflate

- Cities are also engines for innovation

- Business has pivotal role

Three-prong strategy to address consumption

- Business: innovation of new sustainable products and services; create sustainable livelihoods and work-life balance for workers

- Governance and policy: create conditions, infrastructures, and incentives to innovate and to change to less material lifestyles

- Individual consumers: educate, inform, experiment with alternative lifestyles, change social norms towards immaterial well-being

Intergovernmental Panel on Climate Change, IPCC

To avoid the worst consequences of global warming, by 2050 almost all uses of fossil fuels and GHG emissions must be eliminated

Newton Citizens Climate Action Plan:

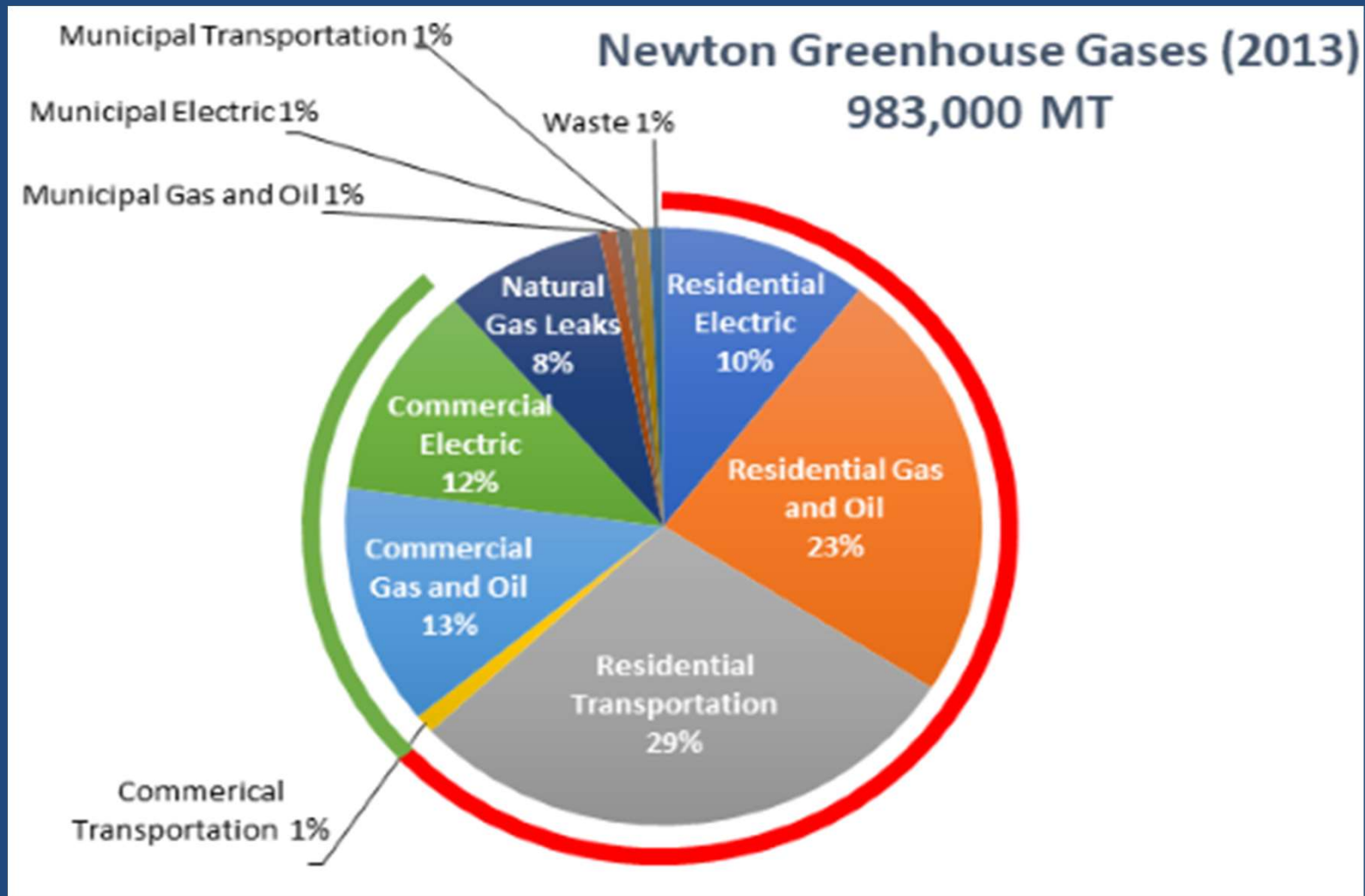Acting Now to Secure Our Sustainable Future
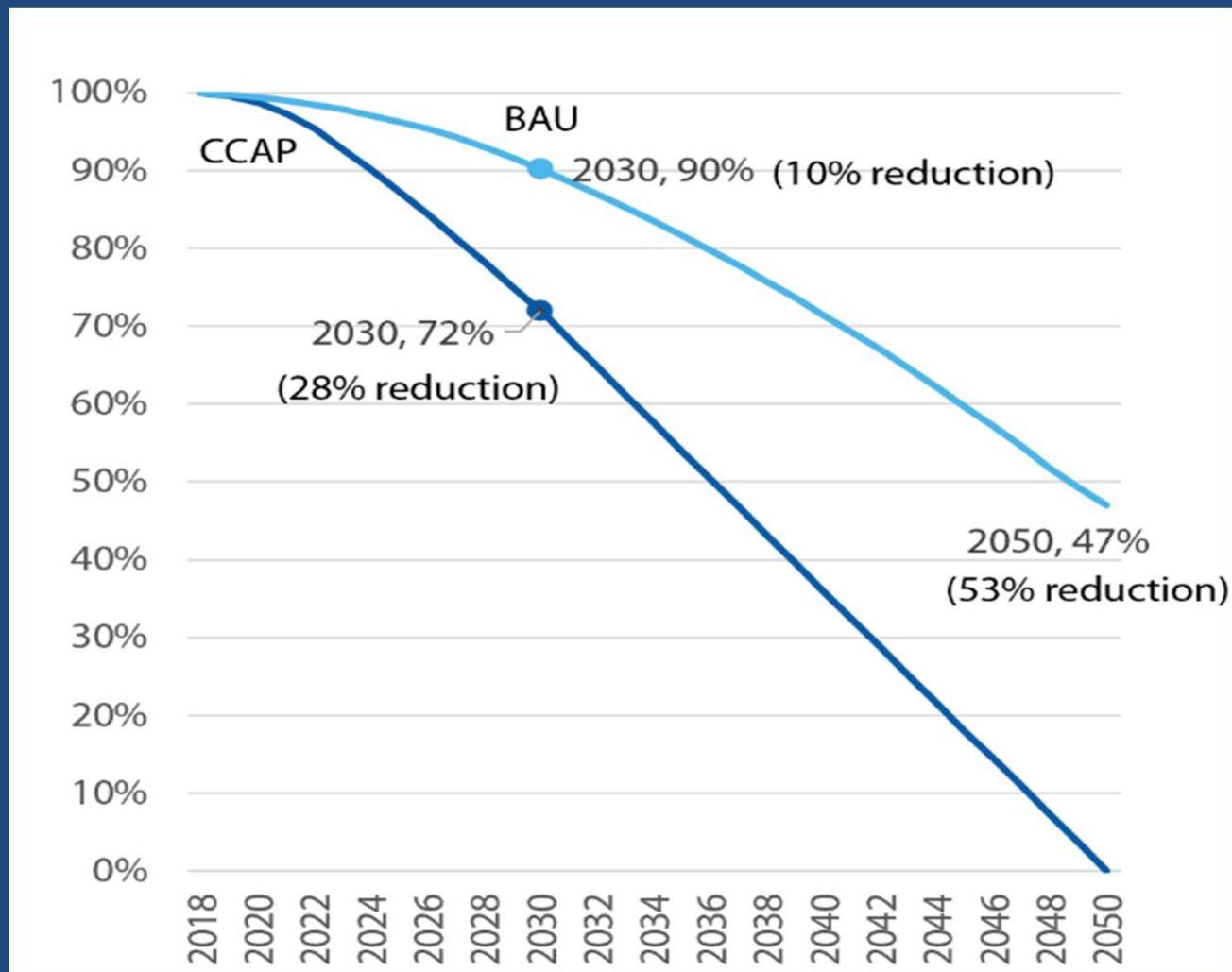
Newton Citizens Commission on Energy

May 2019

Is it feasible for Newton to achieve the IPCC goal?

Newton GHG Emission Inventory

Newton Greenhouse Gases (2013)
983,000 MT

Municipal Transportation 1%
Municipal Electric 1%
Municipal Gas and Oil 1%
Waste 1%
Natural Gas Leaks 8%
Residential Electric 10%
Commercial Electric 12%
Residential Gas and Oil 23%
Commercial Gas and Oil 13%
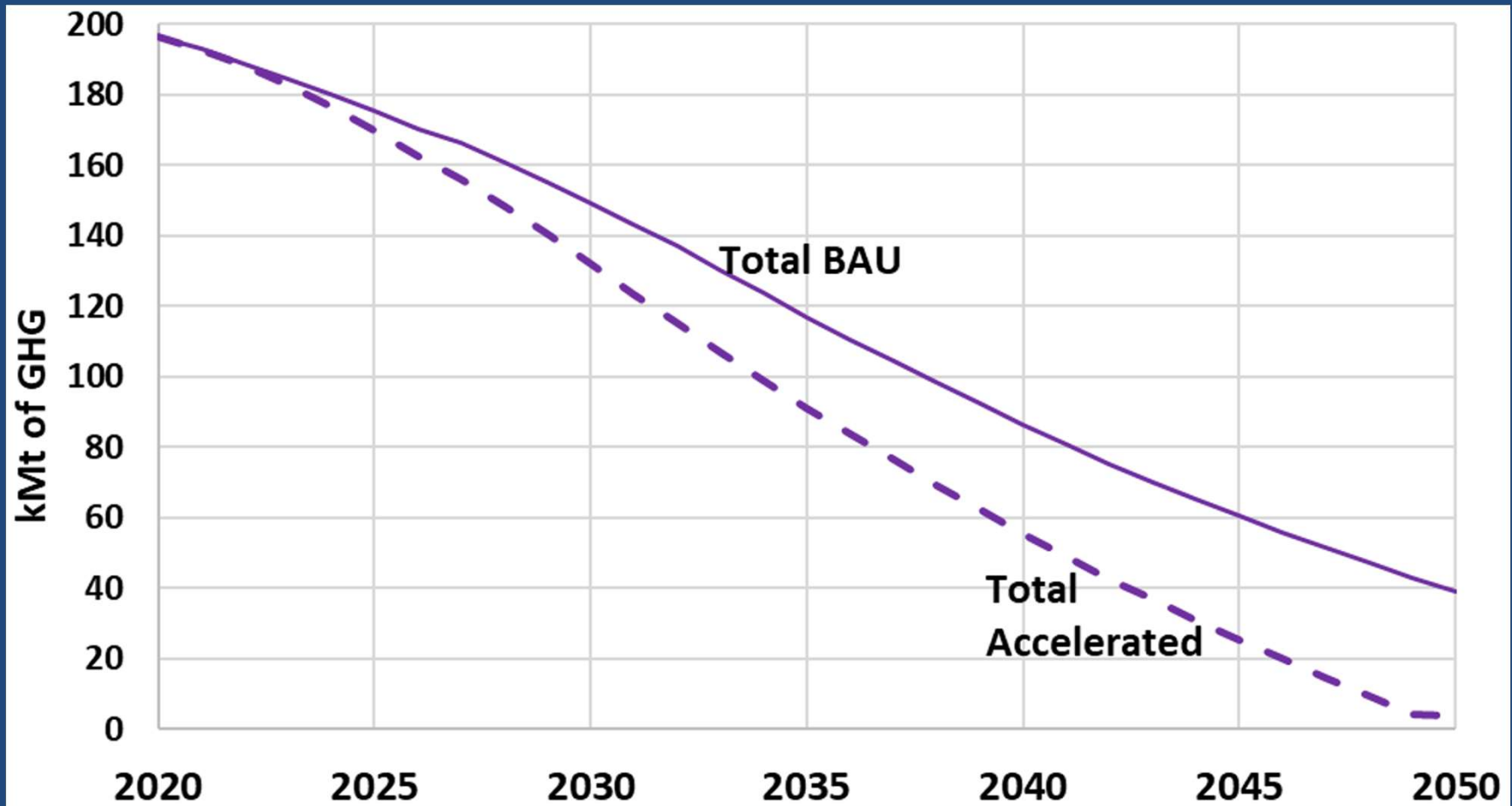Residential Transportation 29%
Commerical Transportation 1%

Reduction of GHG emissions in residential sector

Impact of Electric Vehicle Adoption Rate on GHG Emissions

**BUT** Newton Inventory does not count indirect emissions from making goods

Embodied energy in building materials, house content, leisure → GHG emissions

- Manufacturing cement, bricks, plastics, countertops, fixtures, foam insulation......
- Manufacturing appliances, furniture, curtains,
- Processing wood
- Mining -- smelting metals
- Transport
- Etc.

Consumption-based emissions are
41% greater than Sector-based emissions
(Oregon 2015)
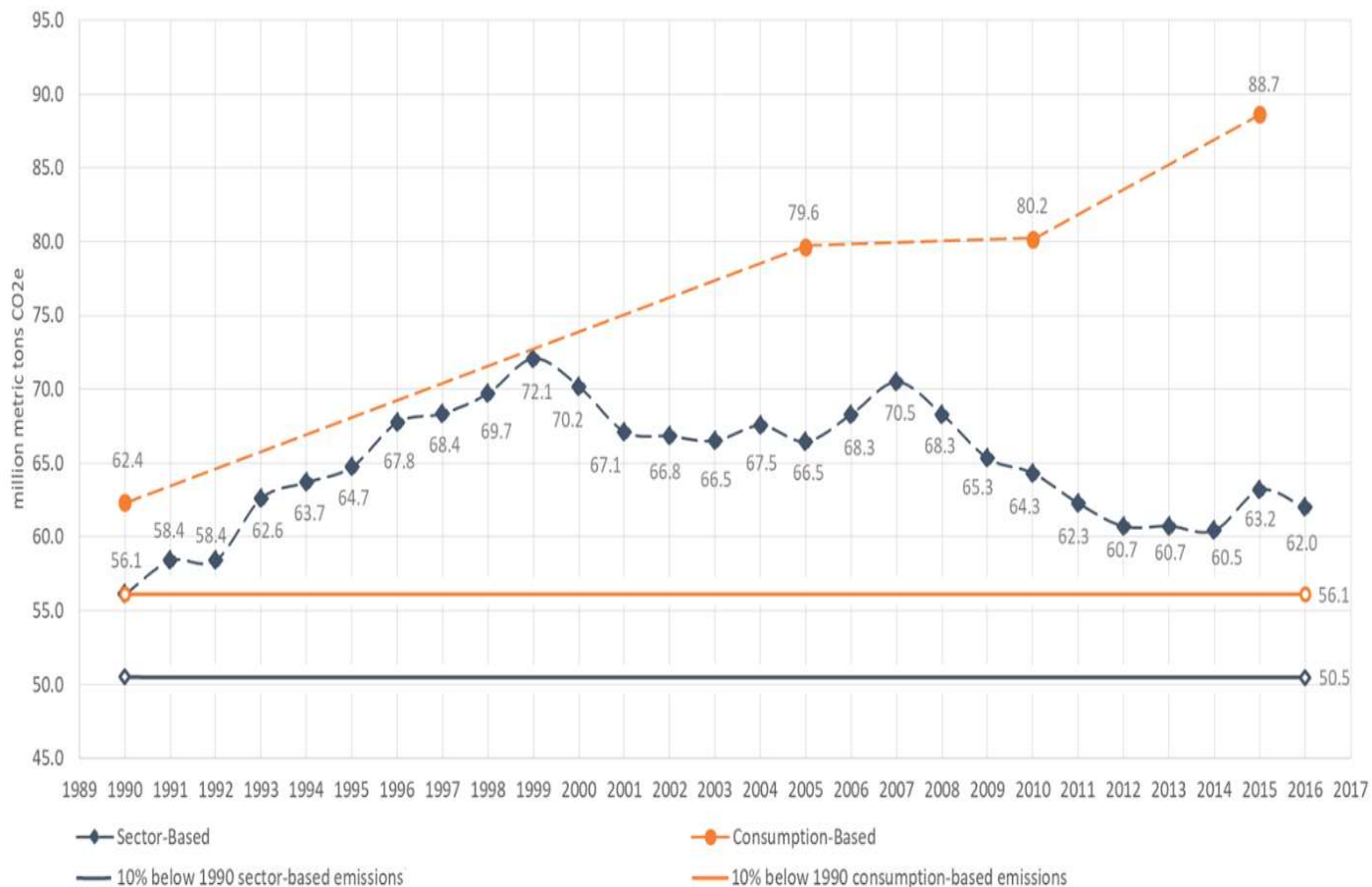
Oregon: Household consumption: 80% of GHG emissions
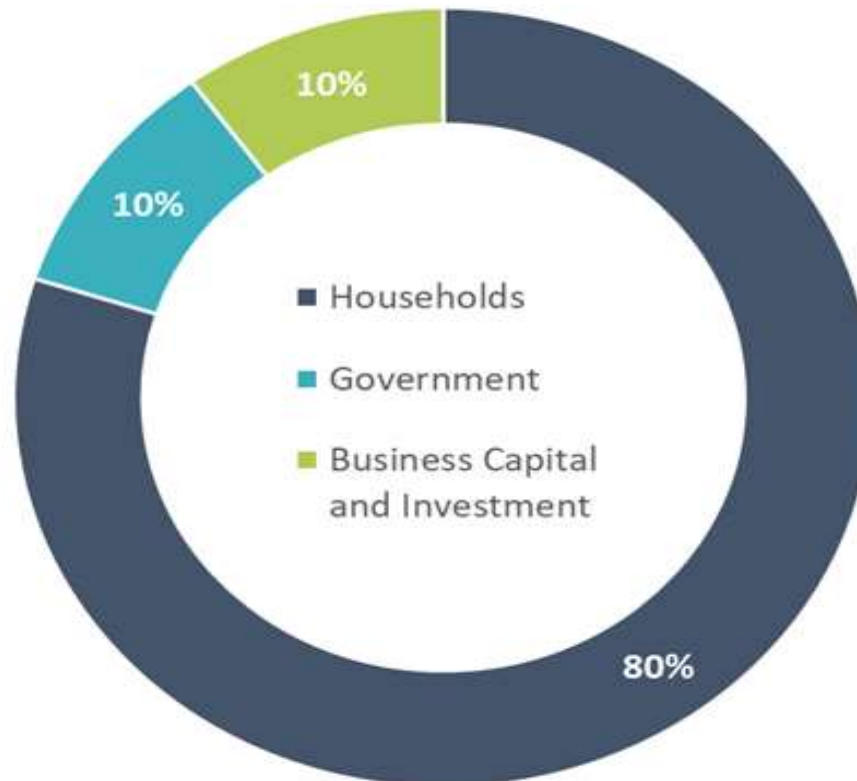
Income determines carbon footprint: Oregon (metric tons CO₂e/household)

Two GHG Emission Inventories
Consumption-based and Sector-based
### Oregon, 1990–2016

Understanding consumption

- Material goods, services, activities we use/practice in everyday life

- Houses, content, stuff, food, house location/travel, vacation travel, leisure…...etc.

- Consumption is about "normal life", lifestyles aspirations, identifying with certain social groups

- Marketing expands the idea of basic amenities

Homes Have a Lot More Bathrooms

New homes with 2 1/2 bathrooms were the norm in the mid-1980s. Now three bathrooms are demanded.

3 or more

2 1/2

2

1 1/2

40%

30

20

10

0

1975 1980 1985 1990 1995 2000 2005 2010 2015
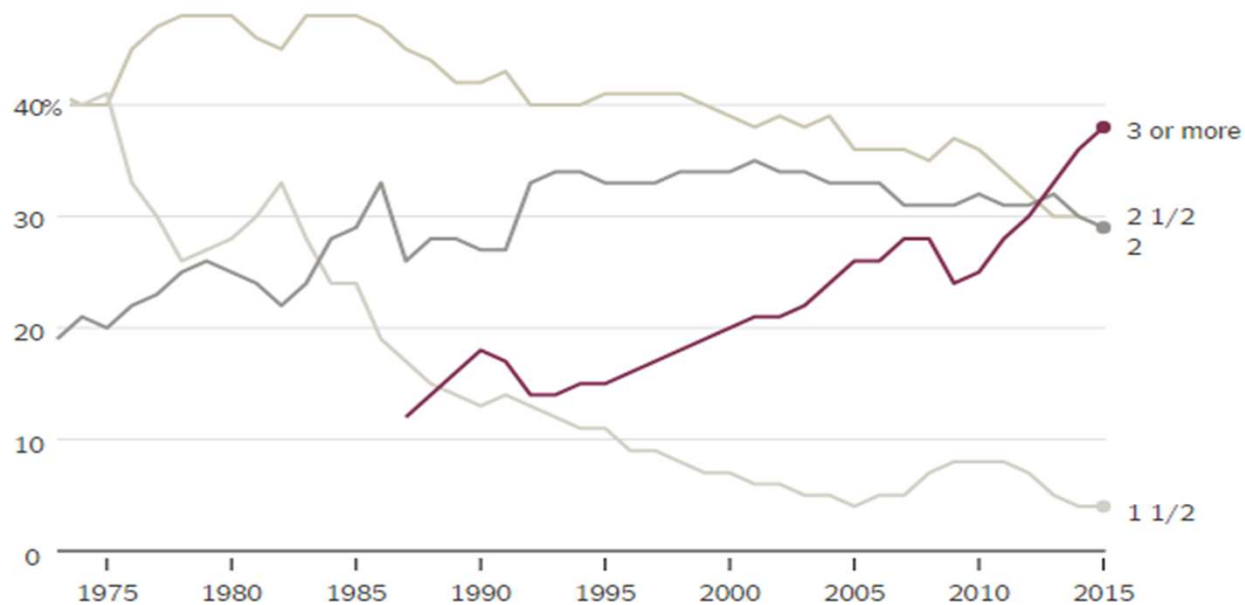
Source: United States Census Bureau: Characteristics of New Housing Survey

From *The New York Times* June 3, 2016. http://www.nytimes.com/2016/06/04/upshot/houses-keep-getting-bigger-even-as-families-get-smaller.html?_r=0
Based on the Census Bureau's Annual Survey of American Housing http://www.census.gov/construction/chars/completed.html
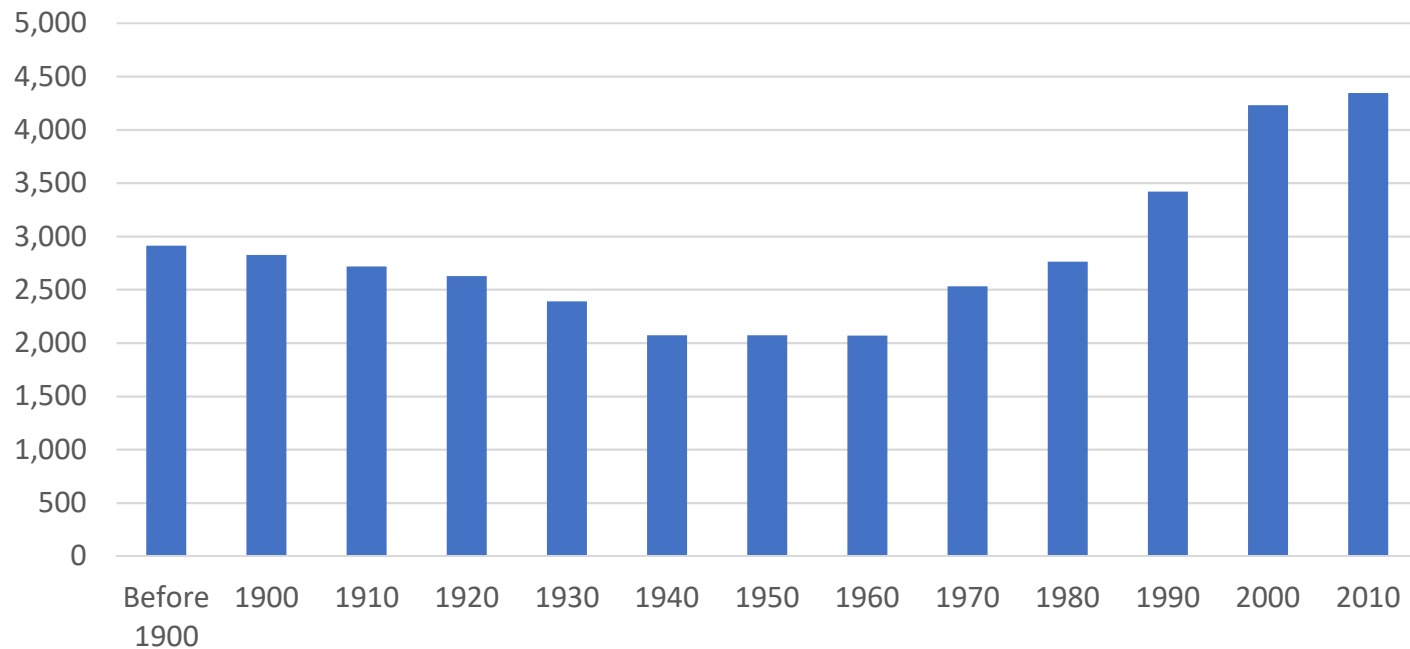The Survey also shows that 31 % of new homes are 3000 square feet or larger

Manufactured needs

How can consumption be reduced?

What business opportunities are in it?

Halt growth in house sizes

Accessory Dwelling Units (up to 800 sq.ft)

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Leisure Actitivies

The rise of "flying shame" points to a blind spot in conscious consumerism

Quartz, April 18, 2019

Workshop Outcomes

- Concrete ideas how business can contribute to sustainable lifestyles in housing, food, transportation, consumer products, and leisure.

- Develop initiatives and metrics to measure progress