



GWSA IAC Meeting

October 23, 2018

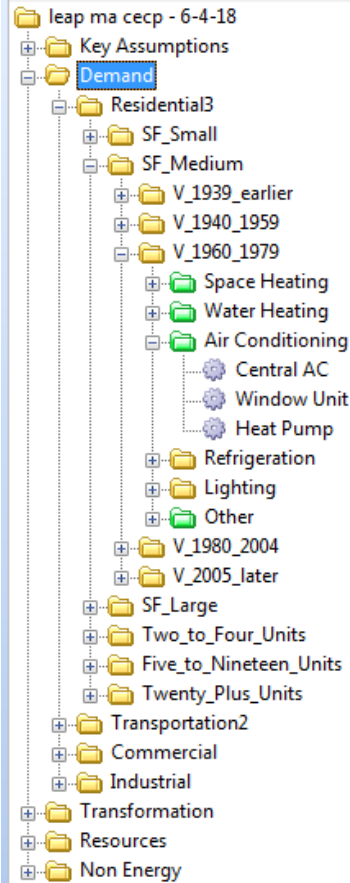


Agenda

- Review draft meeting minutes of August 30, 2018
- Agency updates
- Discuss LEAP reference case for the buildings and non-energy sectors
- Report out by the IAC's Buildings working group
- Discuss initial draft of IAC work plan for 2019
- Wrap up, next steps

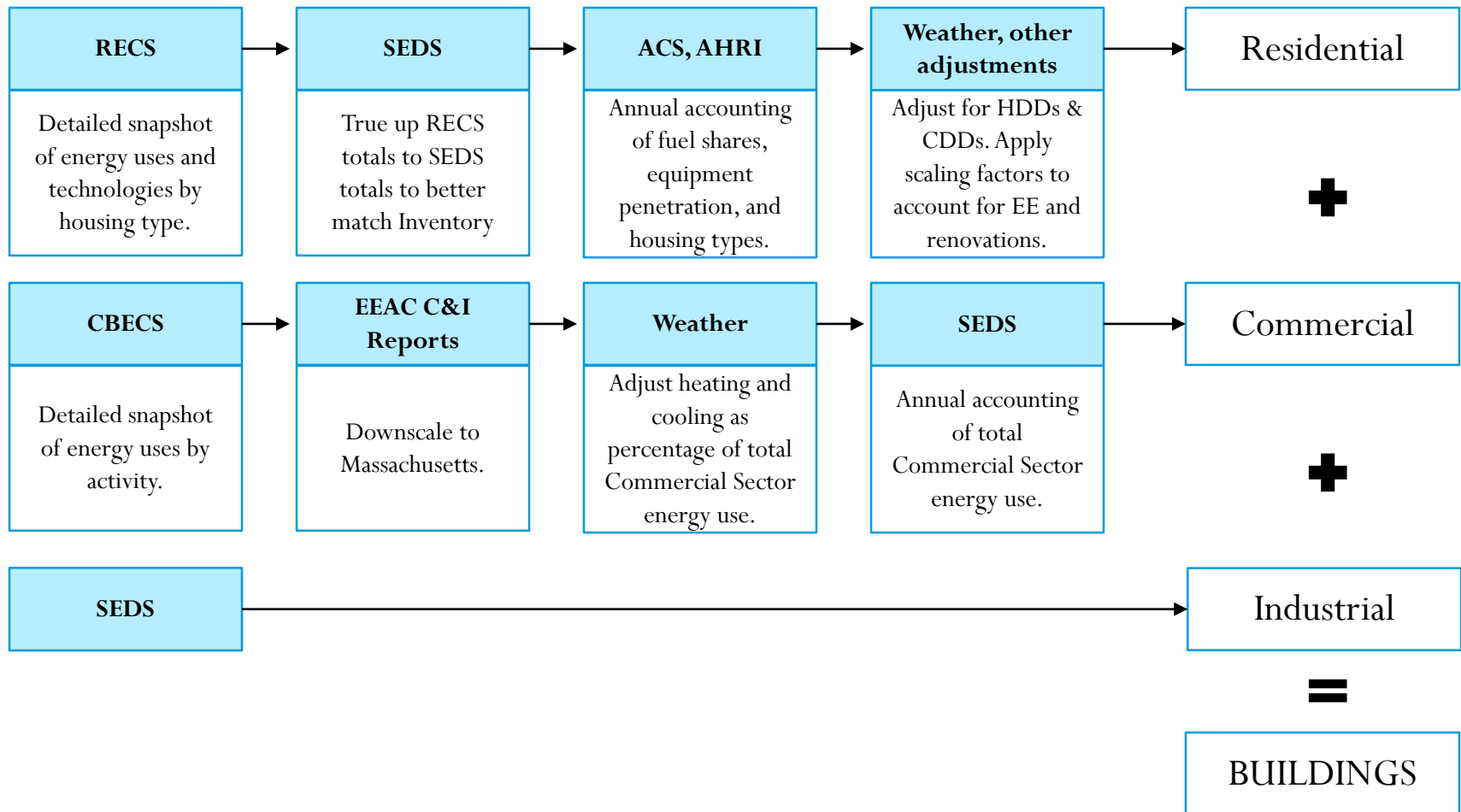
Buildings & Non-Energy Projections: Reference Case

LEAP: A quick primer



- Not a model – an energy accounting tool
 - Variables, data, assumptions, and computations are kept in open-source transparent manner.
 - Sums up demand across a tree-like structure
 - Can get very complicated very fast.
 - Lots of places for inputs and interactions.
 - “Transformation” spins up energy supply module to meet demand.

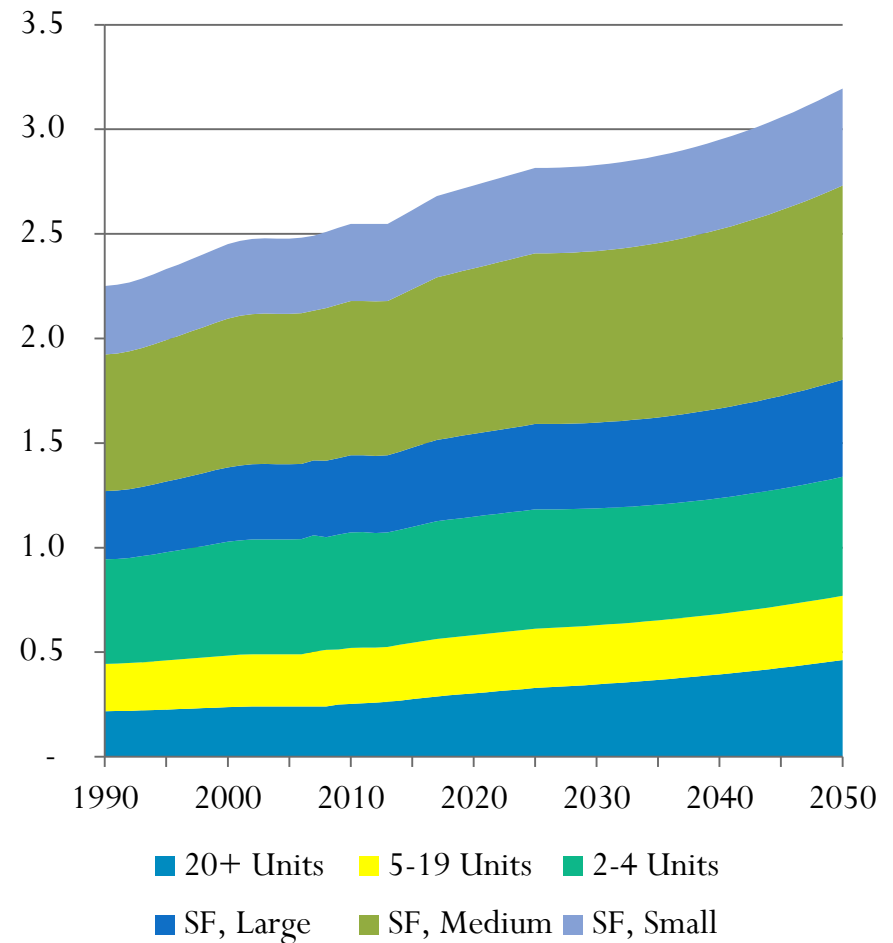
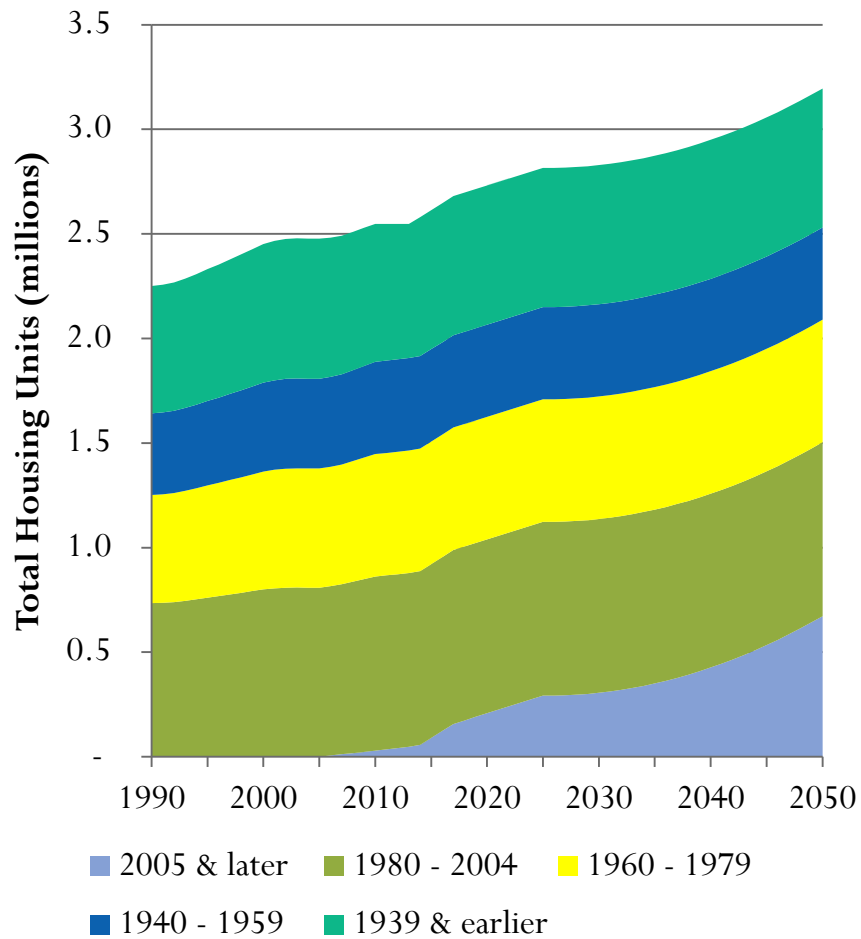
LEAP: Buildings Sector Methodology



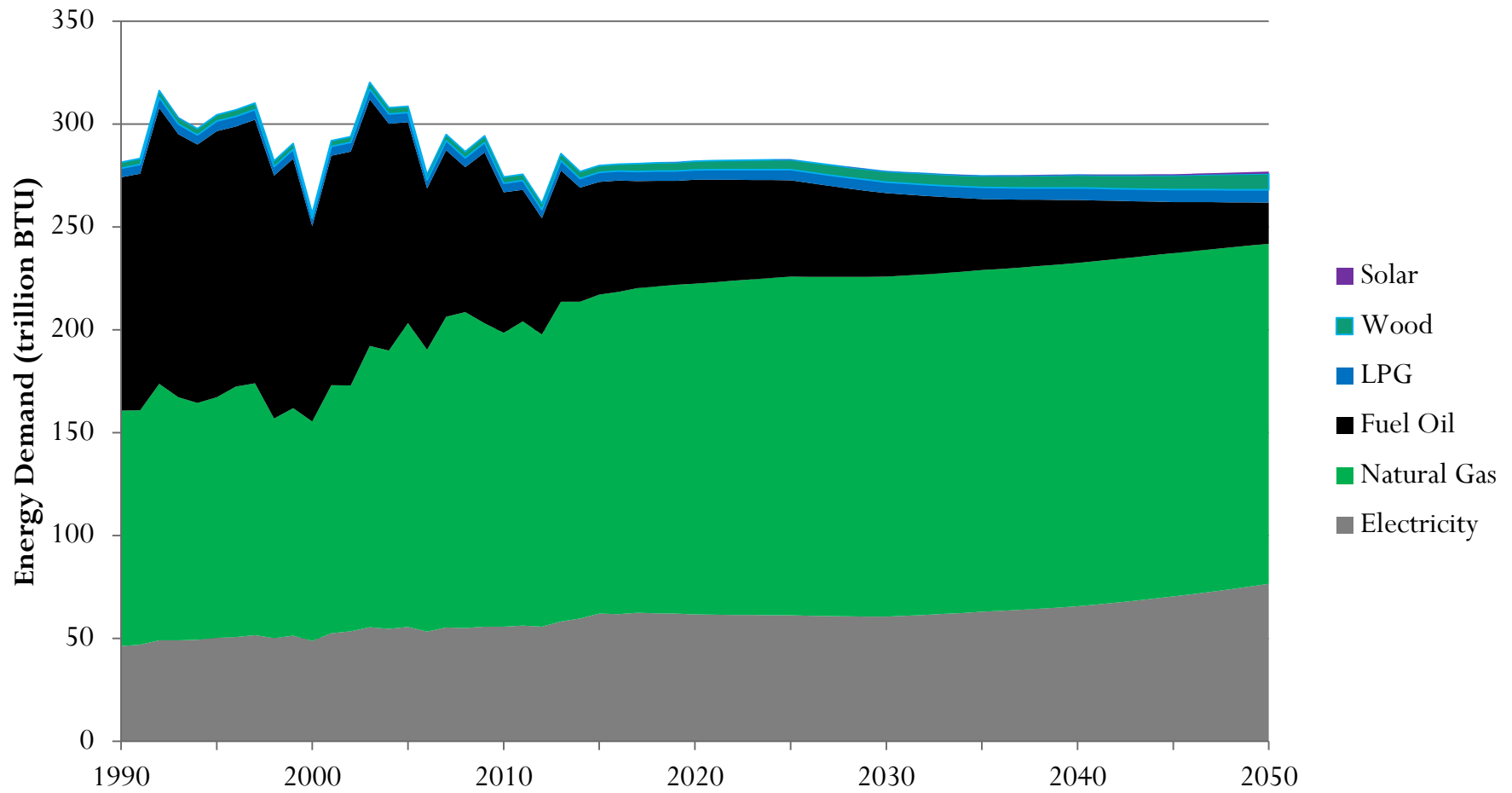
Major Assumptions and Drivers in Buildings Sector (Reference Case)

Residential	New housing stock 135,000 new housing units by 2025, then slower housing production through 2050.	Retrofits Modest decrease in Useful Energy Intensity (reflecting weatherization and envelope retrofits).	Weather Range of weather forecasts influence total demand for heating and cooling.	Technology penetration Projected by use type (see next slide)
Commercial	Recent trends? Primary fuel use has declined since 1990, but electricity use has increased.	Parameterize by GSP? Sq. ft.? Significant build-out of commercial space in Boston, but not elsewhere.	Weather Range of weather forecasts influence total demand for heating, cooling, and refrigeration.	Technology penetration Projected by use type (see next slide).
Industrial	Recent trends? Overall decline in primary fuel consumption.	Specific known uses For example, MassDEP tracks certain activities that require permits or reporting.		

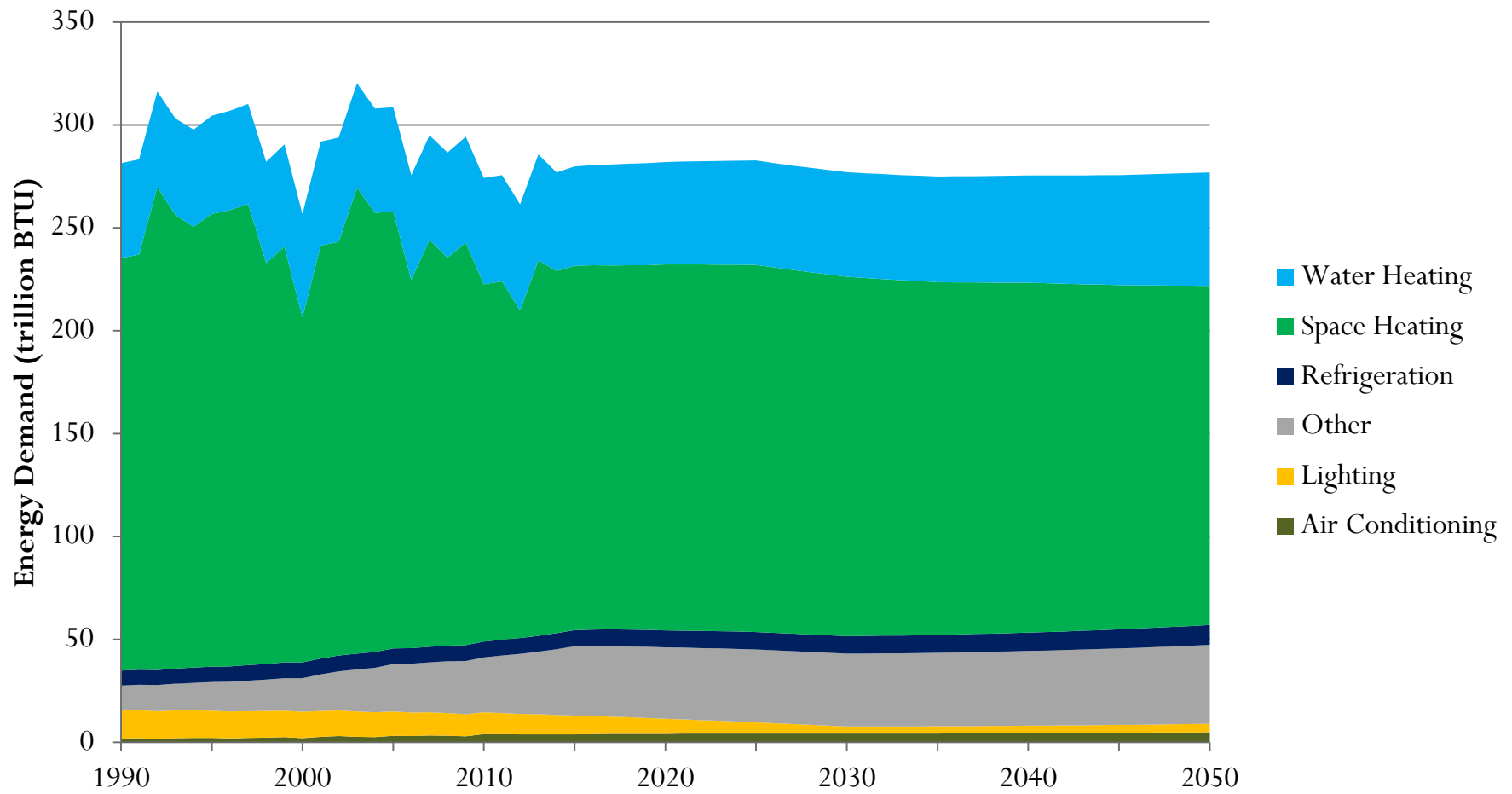
Housing Production (Reference Case)



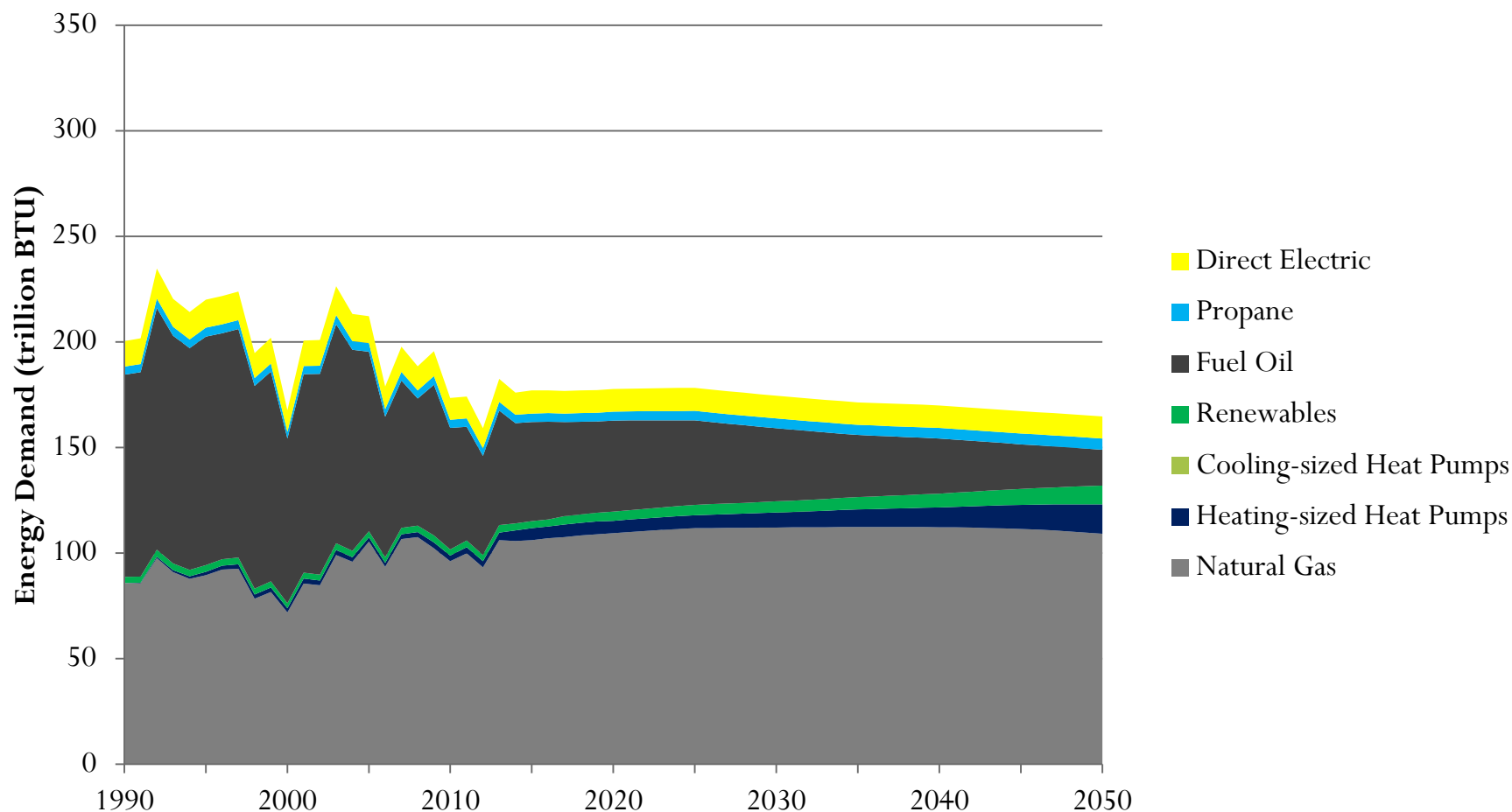
Total Residential Fuel Use (Reference Case)



Total Residential Energy Use (Reference Case)

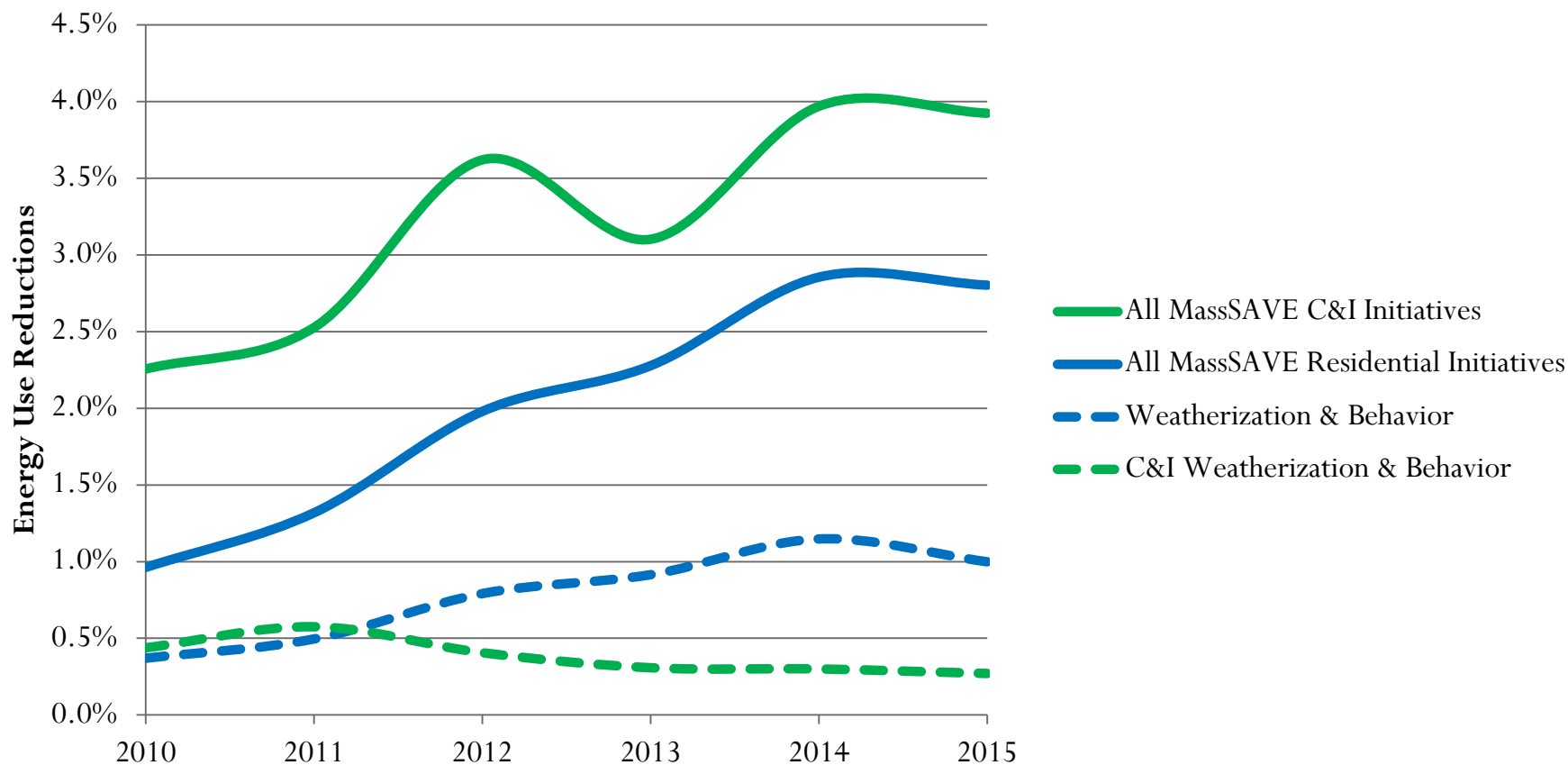


Residential Space Heating Fuel Use (Reference Case)

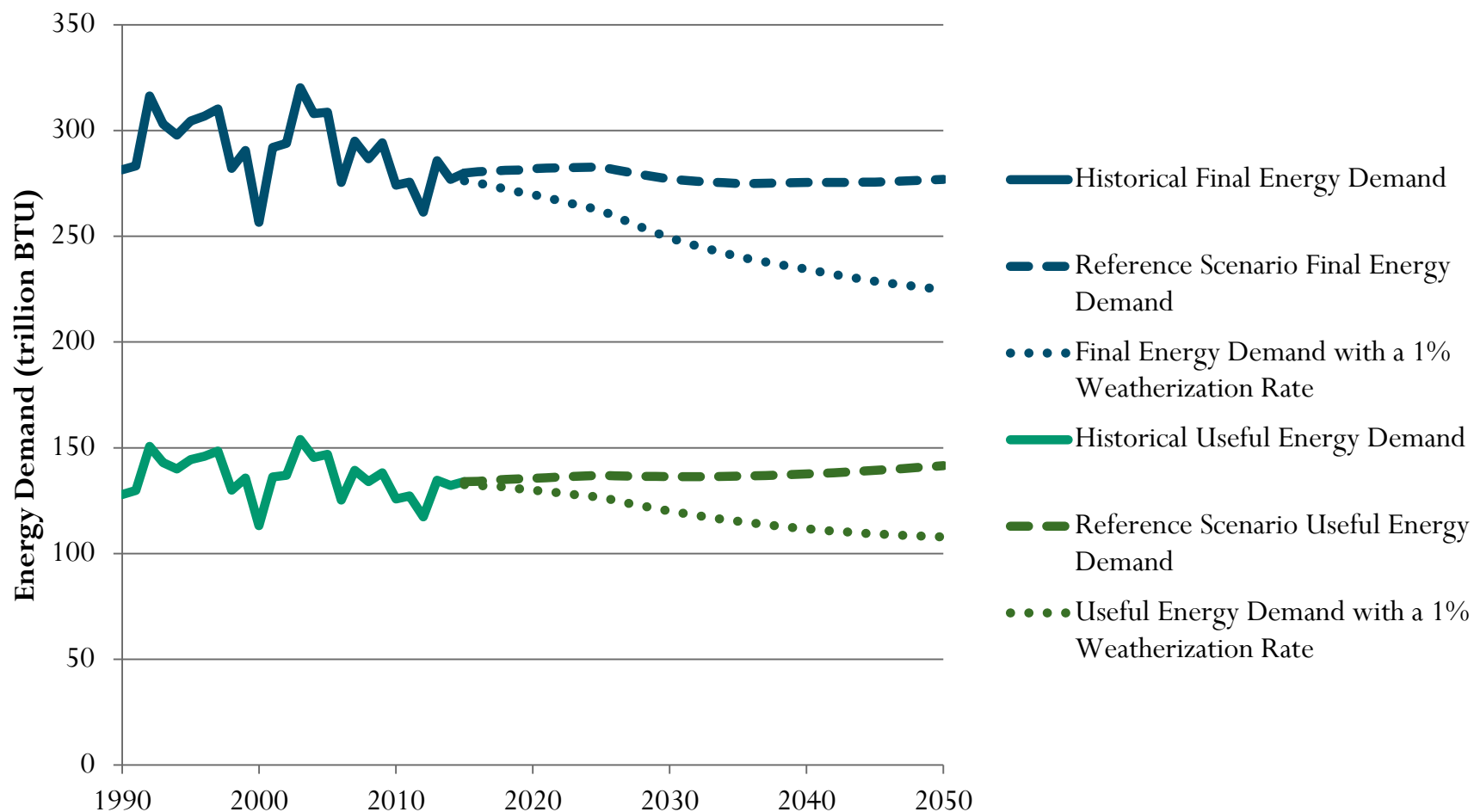


MassSAVE Program Reductions

Energy Reductions as a Percent of Total Annual Demand (by Sector)

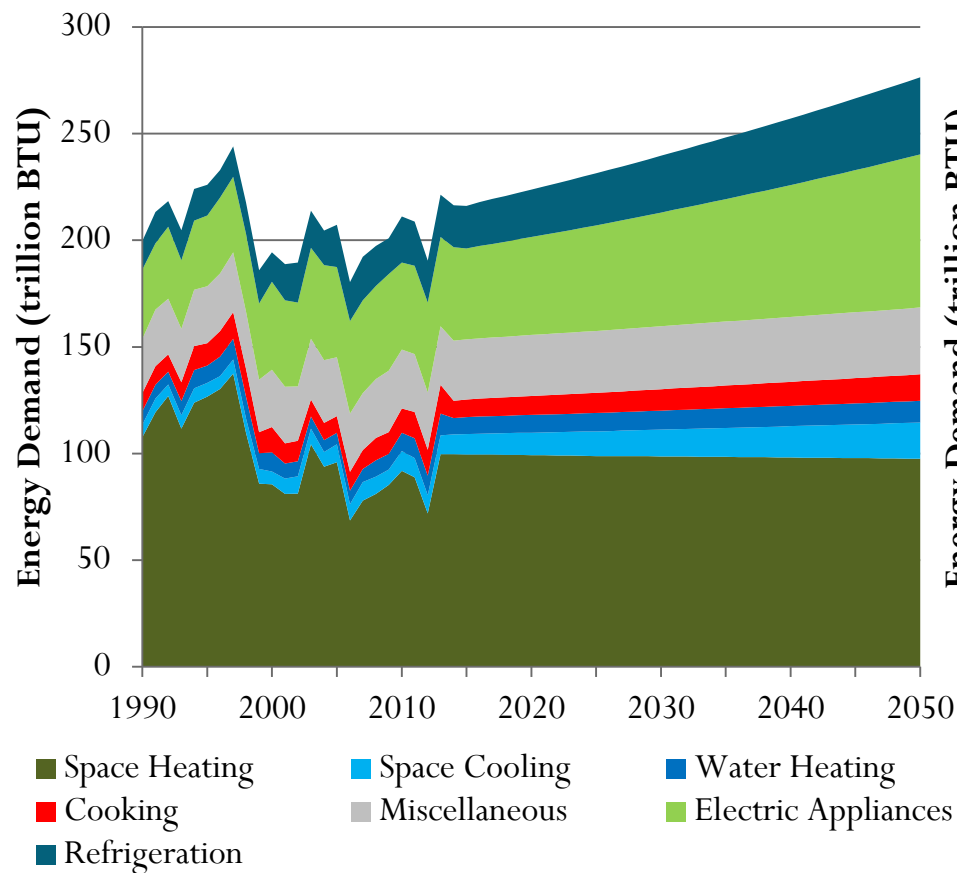


Effects of a 1% 'Weatherization' Rate on Residential Energy Demand

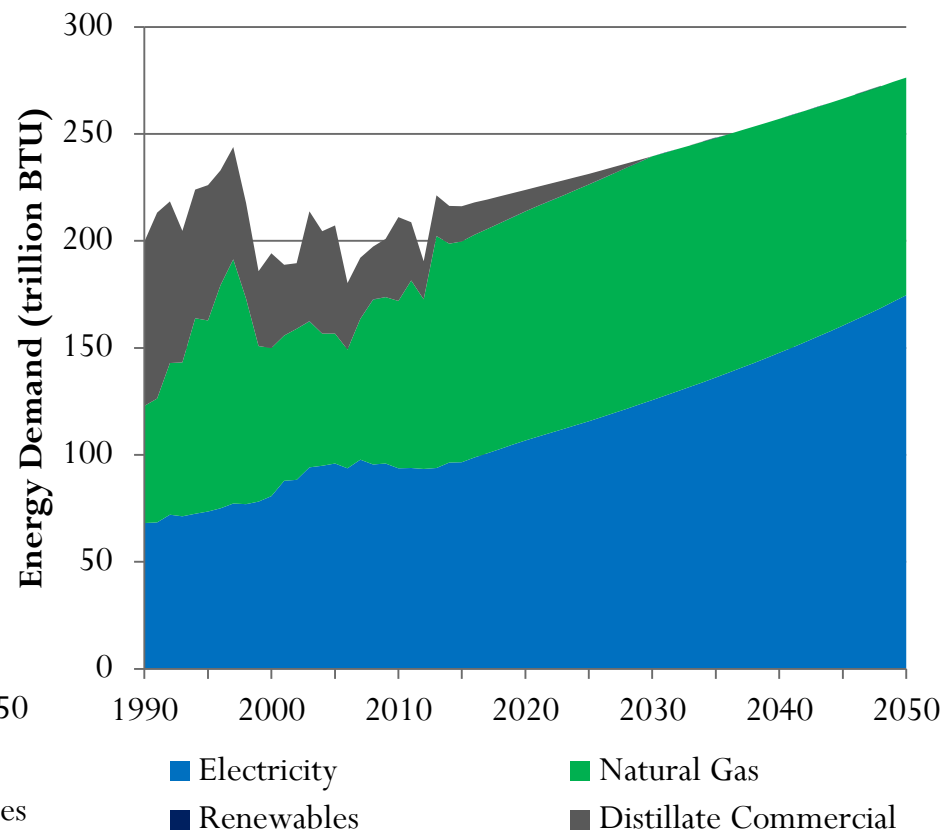


Commercial Energy Use (Reference Case)

Commercial Energy Use - Activities

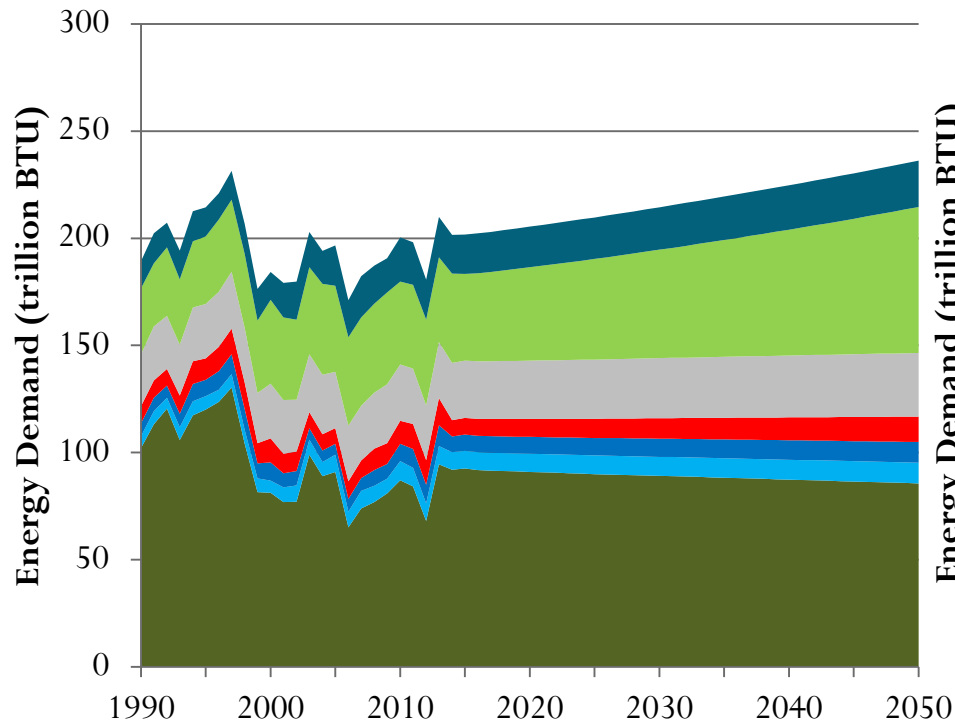


Commercial Energy Use - Fuels

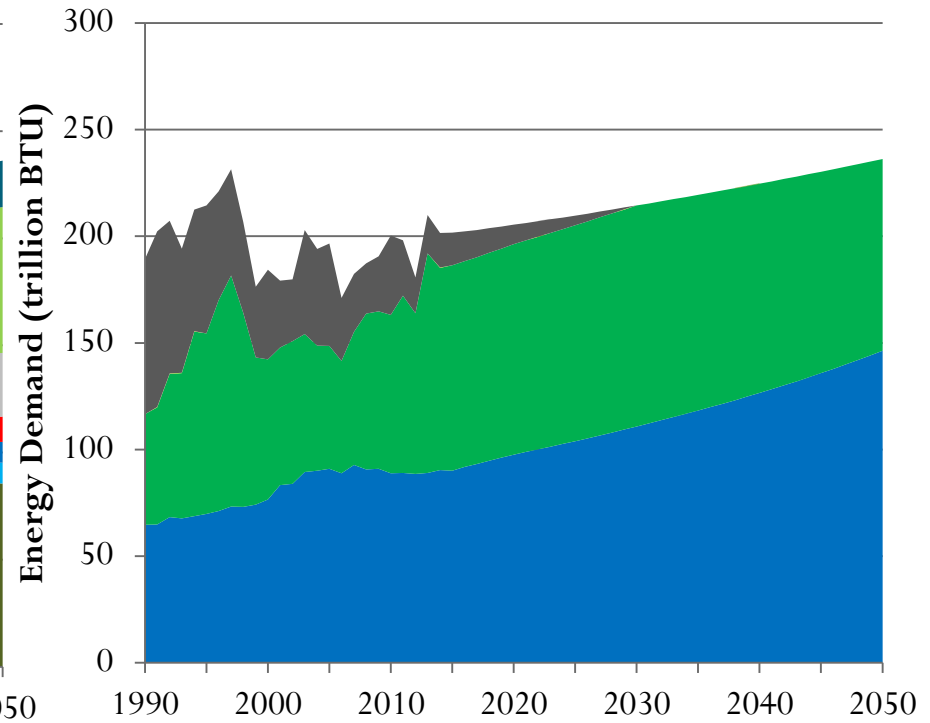


Commercial Energy Use (“Weatherization” Scenario)

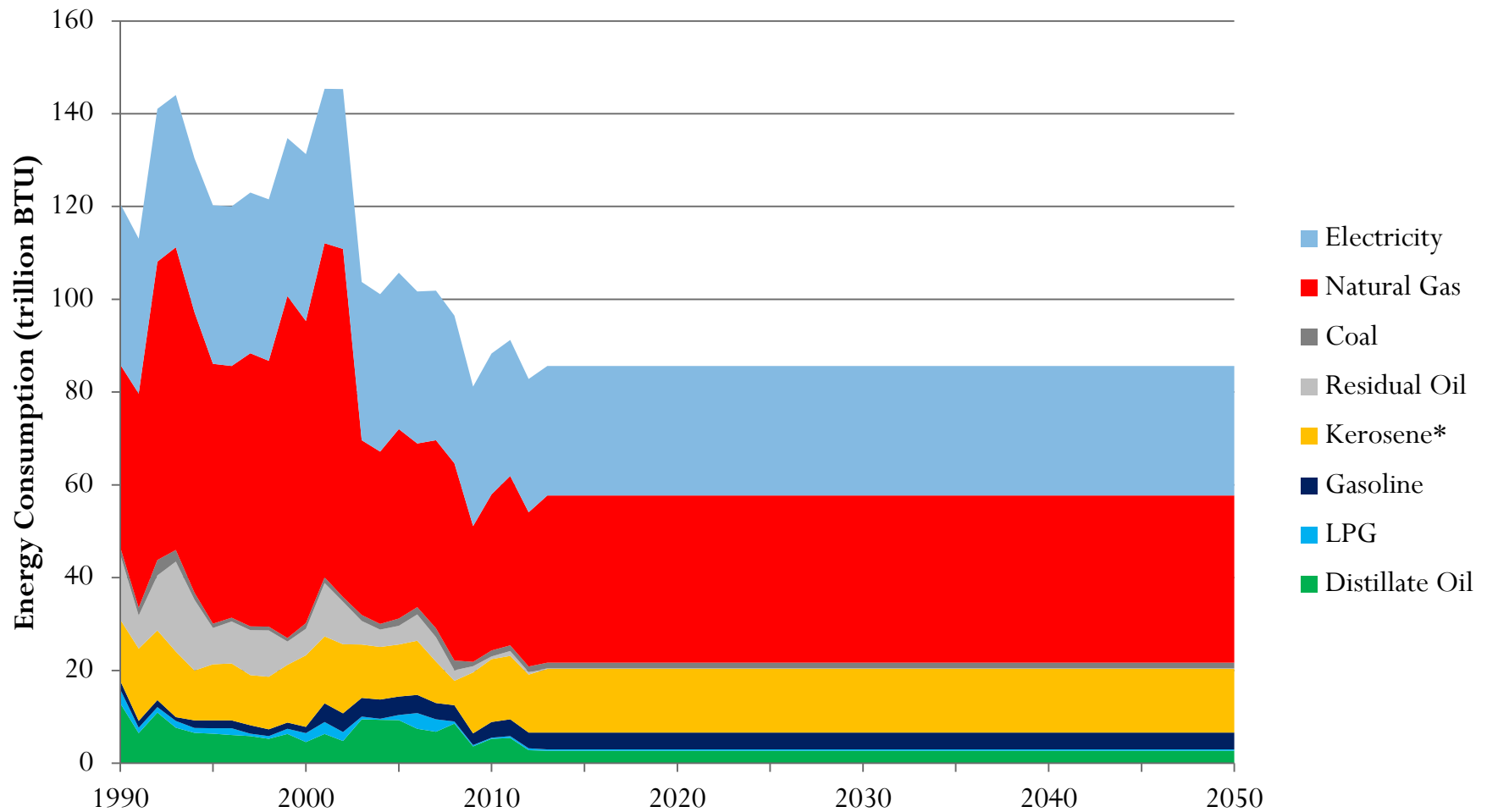
Commercial Energy Use - Activities



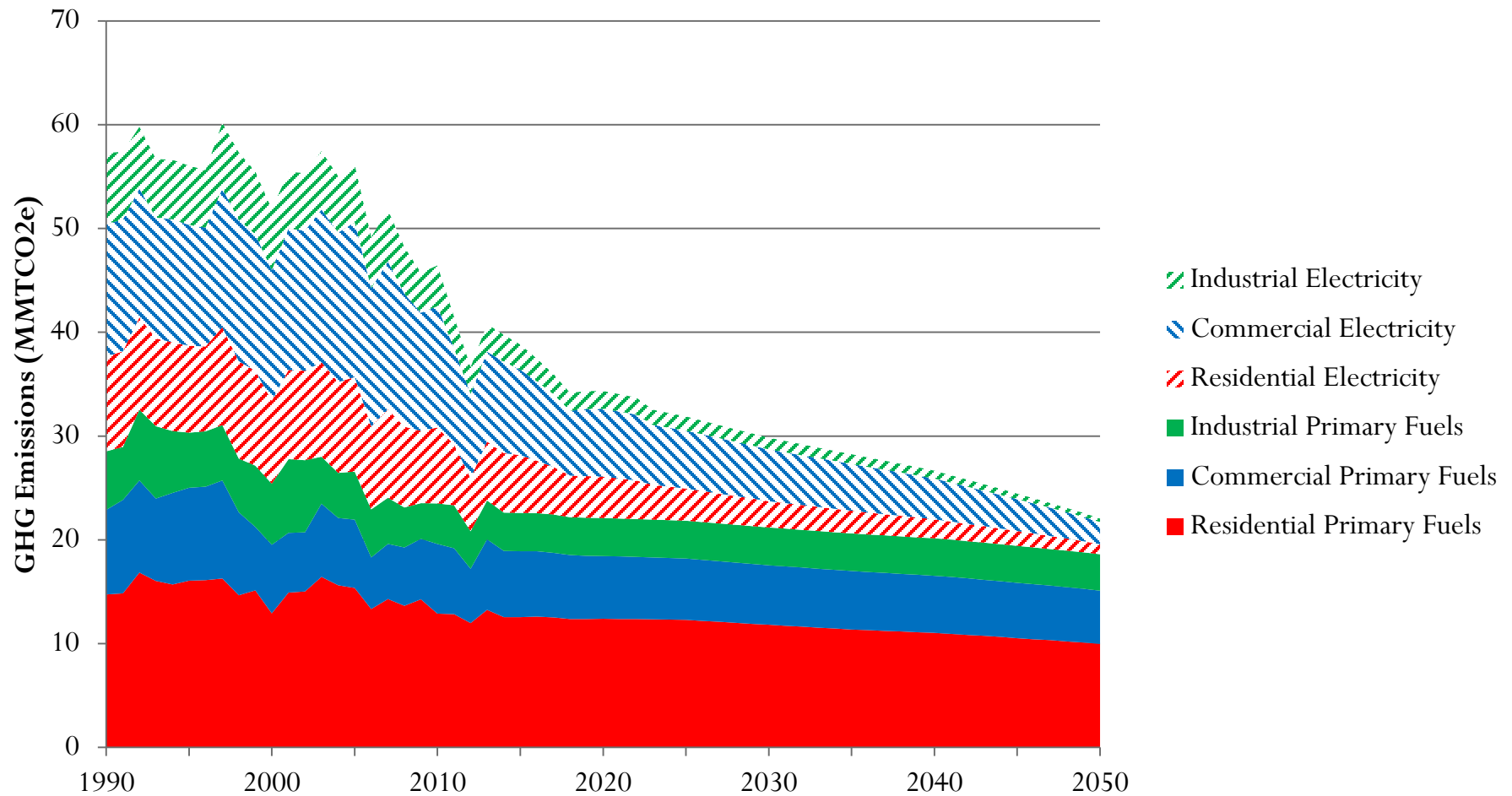
Commercial Energy Use - Fuels



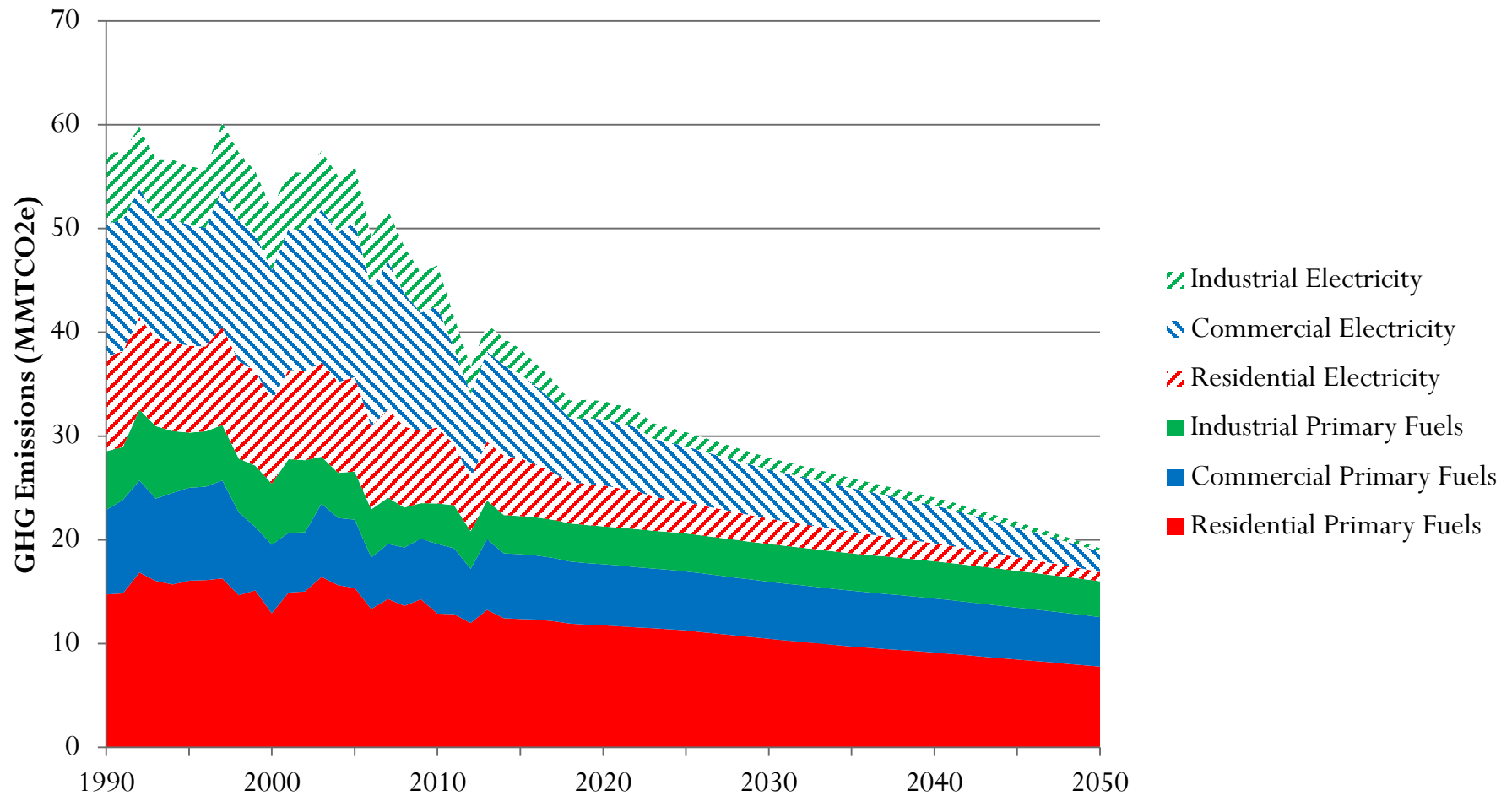
Industrial Fuel Use (Reference Case)



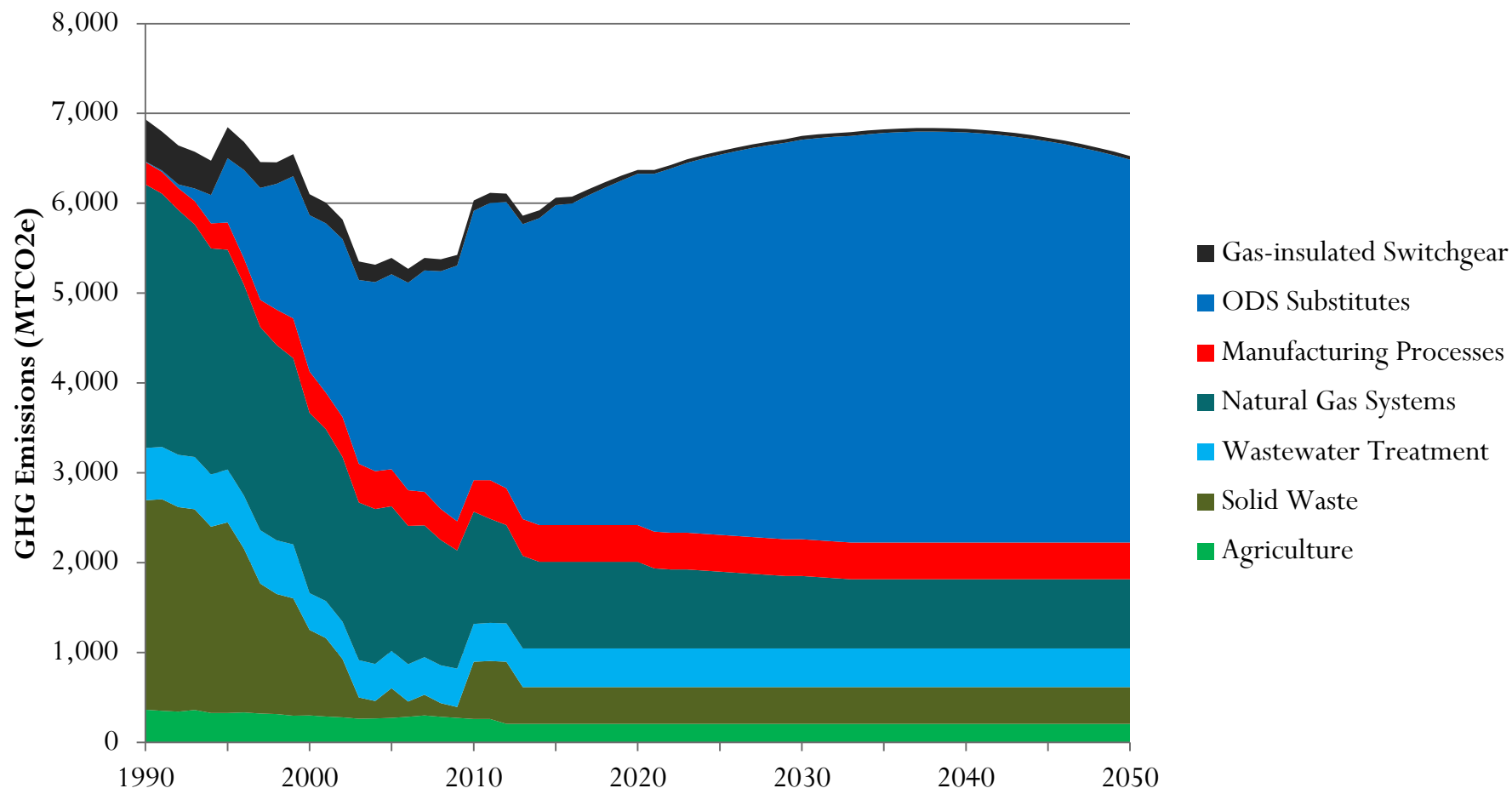
Buildings Sector GHG Emissions (Reference Case)



Buildings Sector GHG Emissions (“Weatherization” Scenario)



Non-Energy Emissions



Buildings working group report-out

IAC work plan for 2019

Initial draft of IAC work plan for 2019

Date	Meeting Focus
December 6, 2018	<ul style="list-style-type: none">• Detailed IAC work plan for 2019• Additional feedback on 10-Year Progress Report• Results and recommendations of the Comprehensive Energy Plan
February 2019	<ul style="list-style-type: none">• Discuss IAC working groups' policy recommendations for the 80x50 study
April 2019	<ul style="list-style-type: none">• IAC adoption of working groups' policy recommendations for the 80x50 study• 80x50 study's final scope with selected consultant team?
June 2019	
August 2019	
October 2019	<ul style="list-style-type: none">• Feedback on some preliminary results of 80x50 study?
December 2019	<ul style="list-style-type: none">• Feedback on some preliminary results of 80x50 study?

IAC feedback

- Role of working groups
 - Discuss of policy recommendations for analysis for 80x50 Study? and inclusion later in 2030 Plan?
 - Other?
- Other topics for future IAC meetings?