

FIRST MEETING
of the
VERMONT CLIMATE
ACTION COMMISSION
AUGUST 15, 2015

VERMONT
GREENHOUSE GAS
EMISSIONS
INVENTORY
UPDATE
1990-2013

Jeff Merrell
VT ANR - DEC - AQCD

IT'S 2017 ... WHY DO WE ONLY HAVE DATA THROUGH 2013?

- Many different data sources with different release dates...
- Wide variety of complex methodologies, and time-consuming calculations...
- First GHG update where all years 1990-2013 needed to be recalculated (new Global Warming Potentials)...

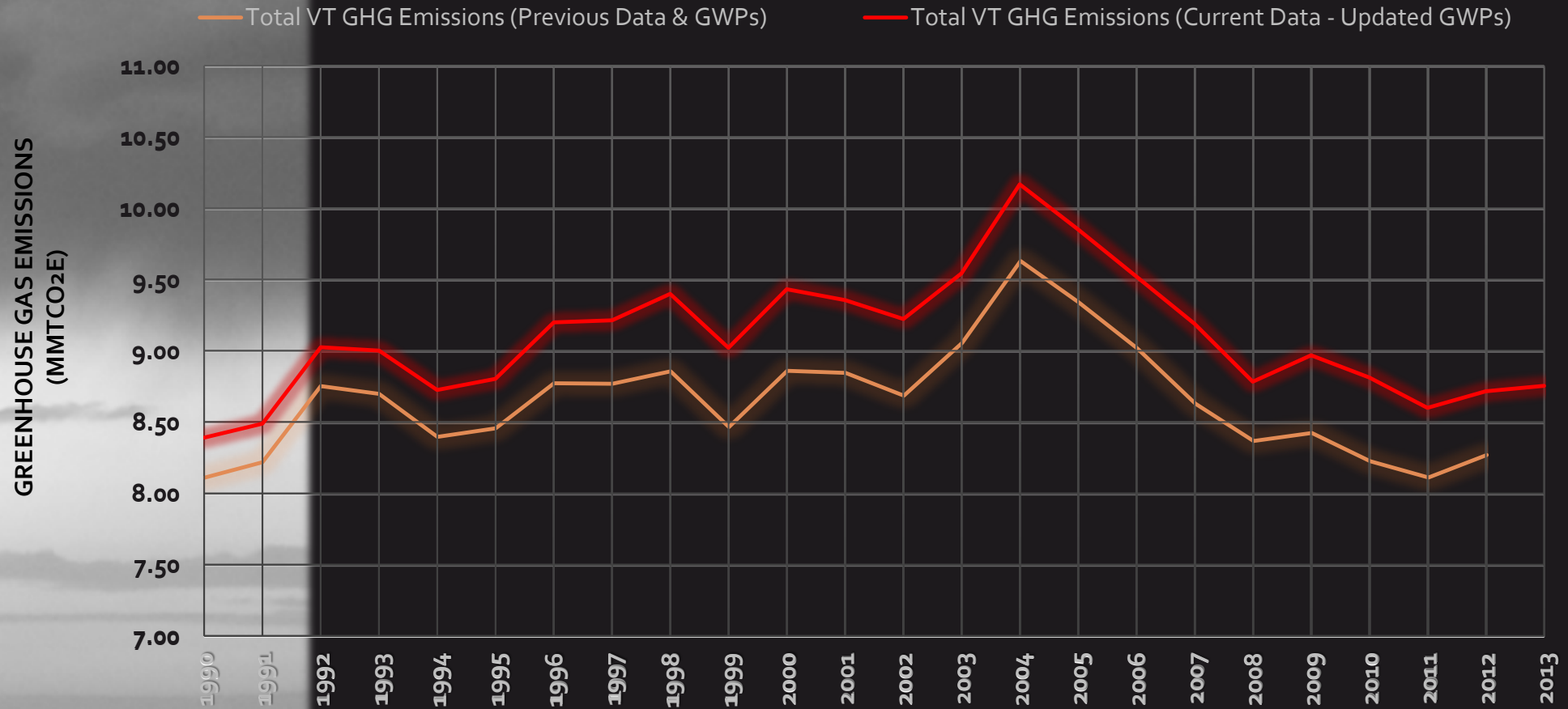
THE GOOD NEWS

- Calculations for the 1990-2014 update are underway...

THE LESS GOOD NEWS

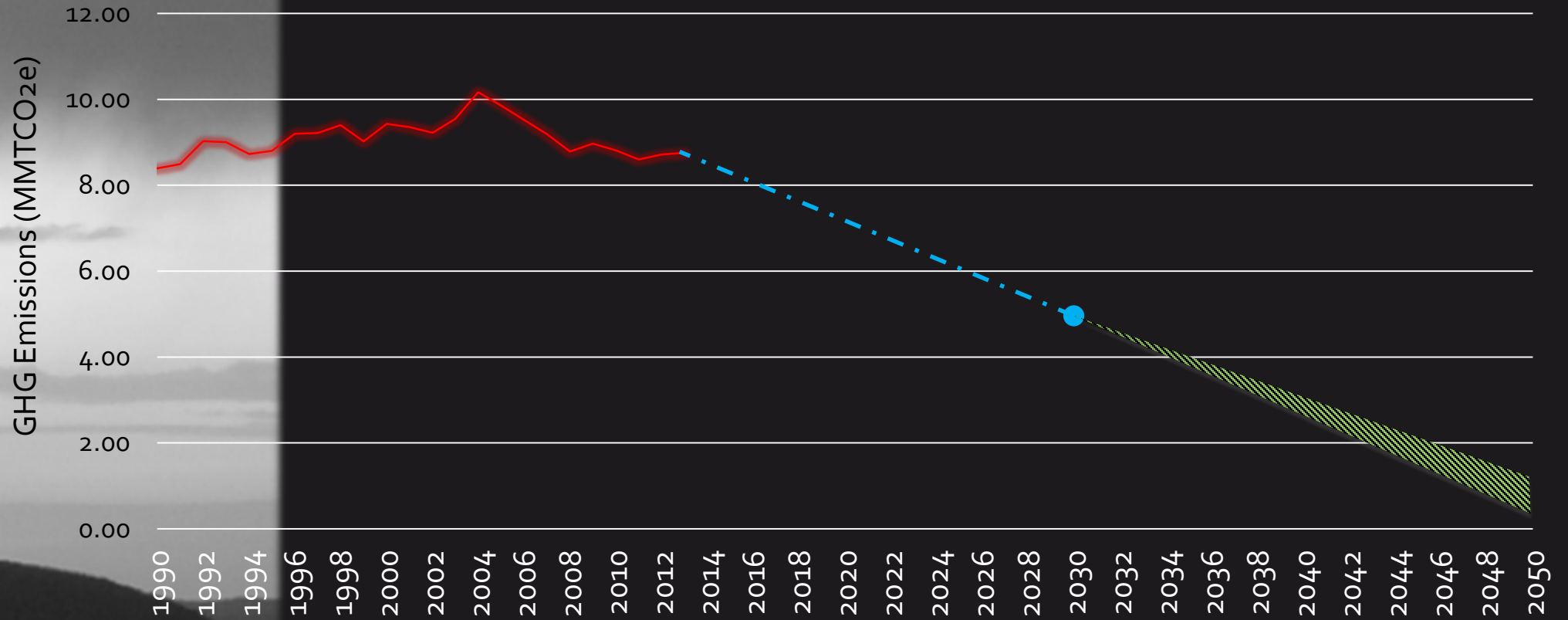
- Fate of key EPA data and tools for GHG emissions estimates are uncertain... so future updates could be further hindered.
-

VERMONT'S GREENHOUSE GAS EMISSIONS

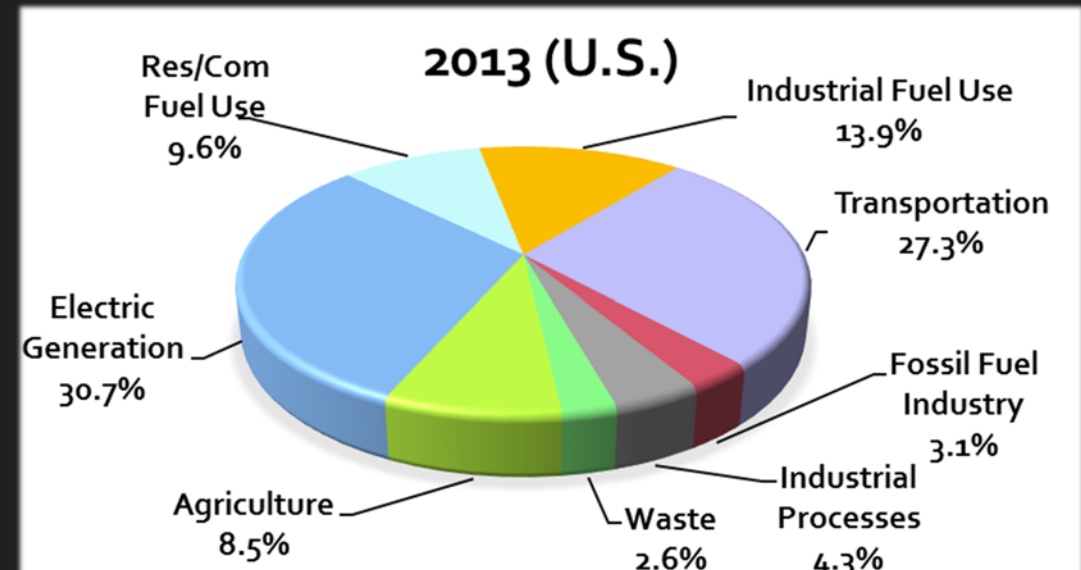
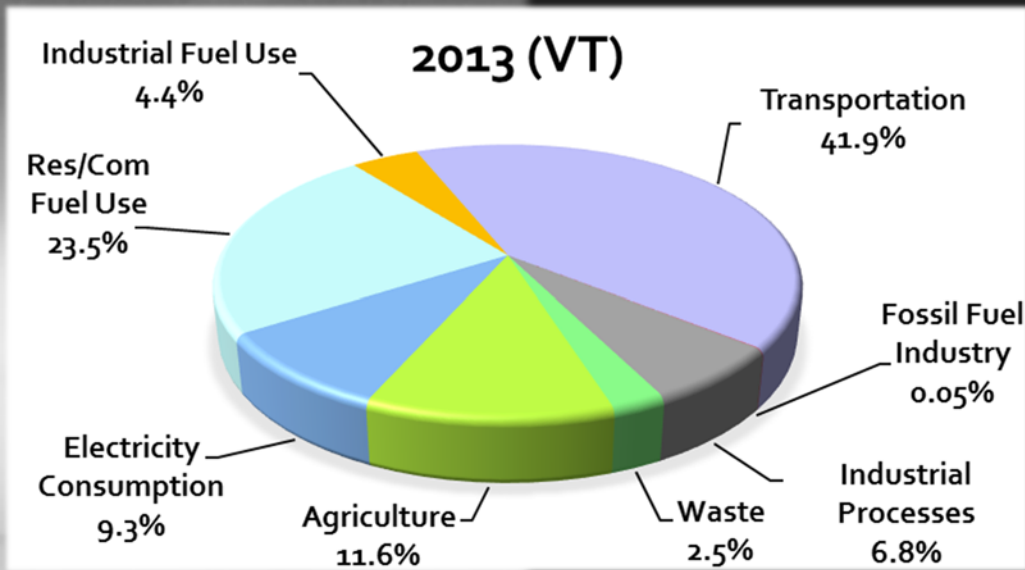


VERMONT GHG REDUCTION GOALS:

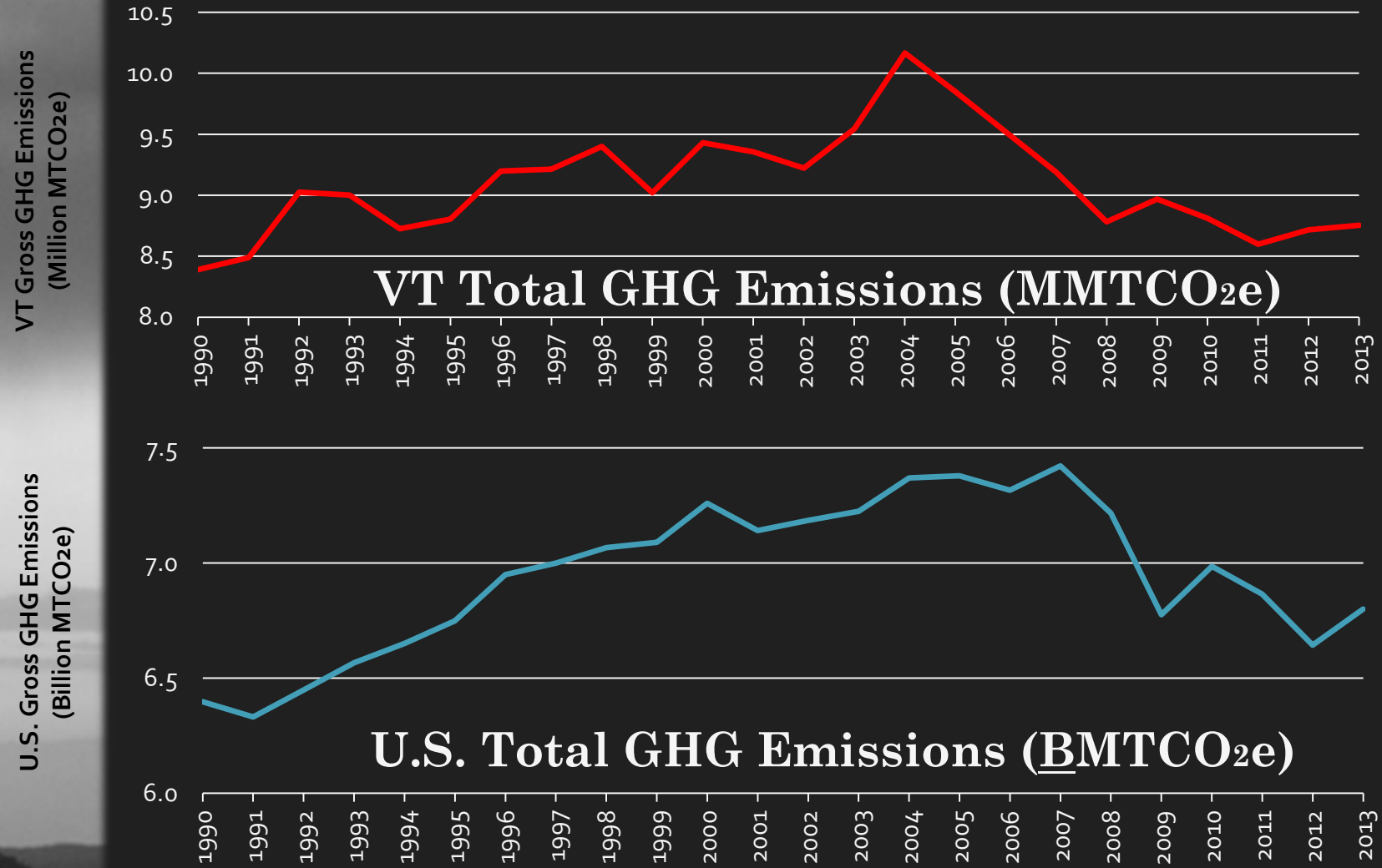
- At least 40% below 1990 levels by 2030
- 80% to 95% below 1990 levels by 2050



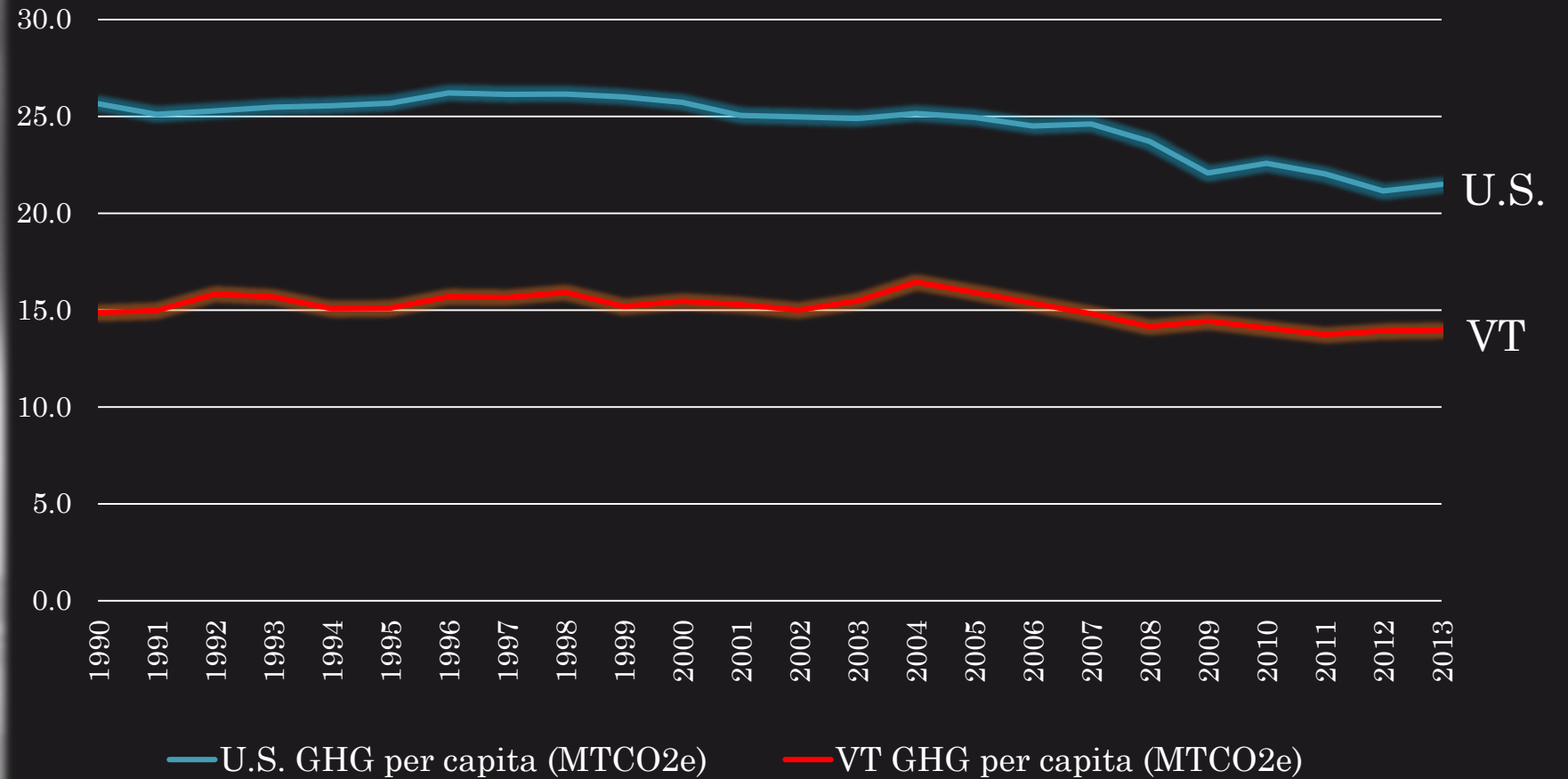
VT & U.S. EMISSIONS by SECTOR (2013)



VT & U.S. EMISSIONS (1990 - 2013)



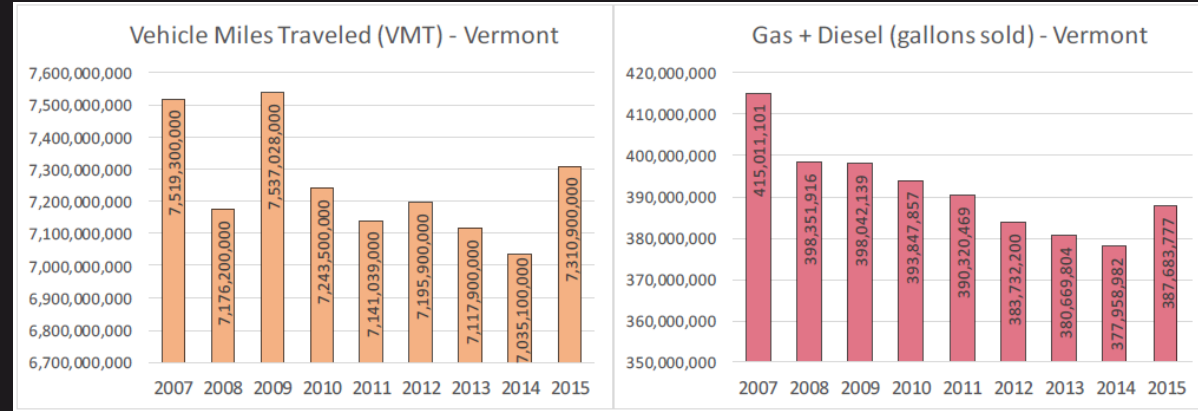
VT & U.S. EMISSIONS per capita (1990 - 2013)



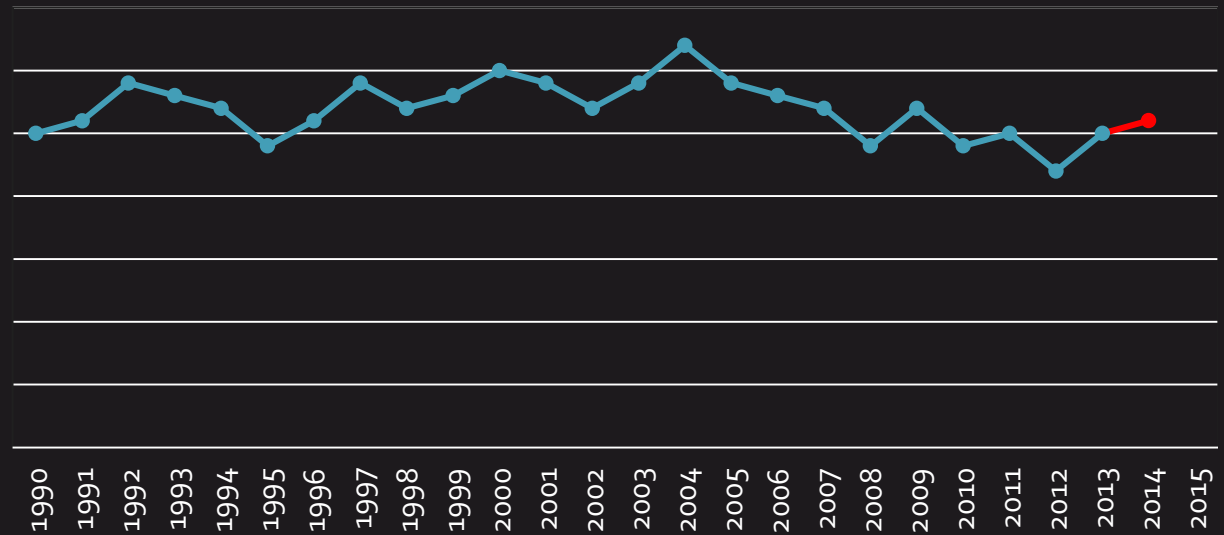
THE IMPORTANT WORK AHEAD...

➤ UNDERLYING DATA FOR KEY SECTORS SUGGEST VT GHG EMISSIONS INVENTORIES WILL SHOW A CONTINUED RISE AFTER 2013...

Transportation



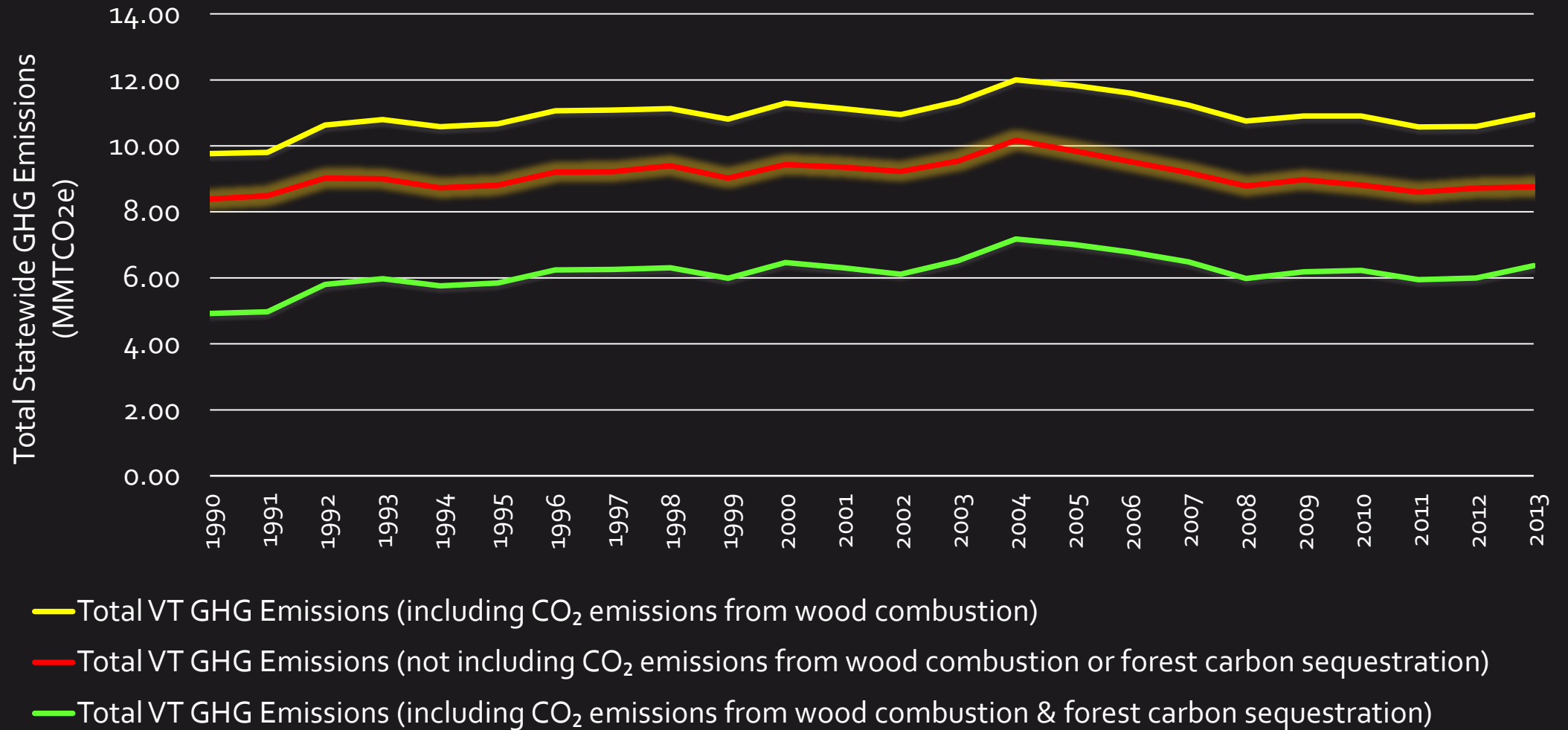
Residential / Commercial / Industrial Fuel Use



BIOGENIC CARBON: Sequestration

- To date, the GHG inventory has focused on gross GHG emissions, and less so on sequestration (i.e., net emissions).
 - CO₂ (but not methane and nitrous oxide) from wood combustion historically has been “zeroed-out”.
 - Ideally, the inventory would account for annual GHG emissions from wood burning, and CO₂ flux /sequestration
- Recent forest carbon flux data from EPA National Inventory Report and the U.S. Forest Accounting Framework.
 - Now able to calculate sequestration / flux values for:
 - *Aboveground biomass, belowground biomass, dead wood, litter, and soil organic carbon*

BIOGENIC CARBON: Emissions & Sequestration



AGENCY OF NATURAL RESOURCES

Department of Environmental Conservation

AIR AND CLIMATE LAND WASTE WATER LEARN MORE, DO MORE

Home

About DEC

Commissioner's Office

Administration and Innovation

Air Quality and Climate

Air Pollutants and Health

Air Quality Forecasts

Air Quality Compliance

Funding Opportunities

Laws and Regulations

Mobile Sources

Monitoring

News

Permits

Planning

Atmospheric Modeling

Climate

State Implementation Plans

Point Source Registration

VERMONT'S GREENHOUSE GAS EMISSIONS



For historical reports documenting Vermont's GHG emissions, please see the following reports at the links below:

- [Greenhouse Gas Emissions Inventory Update \(1990 - 2013\)](#)
- [Greenhouse Gas Emissions Inventory Update \(1990 - 2012\)](#)
- [Greenhouse Gas Emissions Inventory Update \(1990 - 2011\)](#)
- [Greenhouse Gas Emissions Inventory Update \(1990 - 2009\)](#)
- [Greenhouse Gas Emissions Inventory Update \(1990 - 2008\)](#)
- [Greenhouse Gas Inventory and Reference Case Projections - Governor's Commission on Climate Change \(1990 - 2030\)](#)

<http://dec.vermont.gov/air-quality/climate-change>

VERMONT
Greenhouse Gas
Emissions Inventory
Update
1990 - 2013

July 2017



THANK YOU!

...QUESTIONS?

Jeff Merrell:

Jeff.Merrell@Vermont.gov

Collin Smythe:

Collin.Smythe@Vermont.gov