



**Maryland**  
Department of  
the Environment

# 2020 GHG Inventory Timeline & Methodology Changes

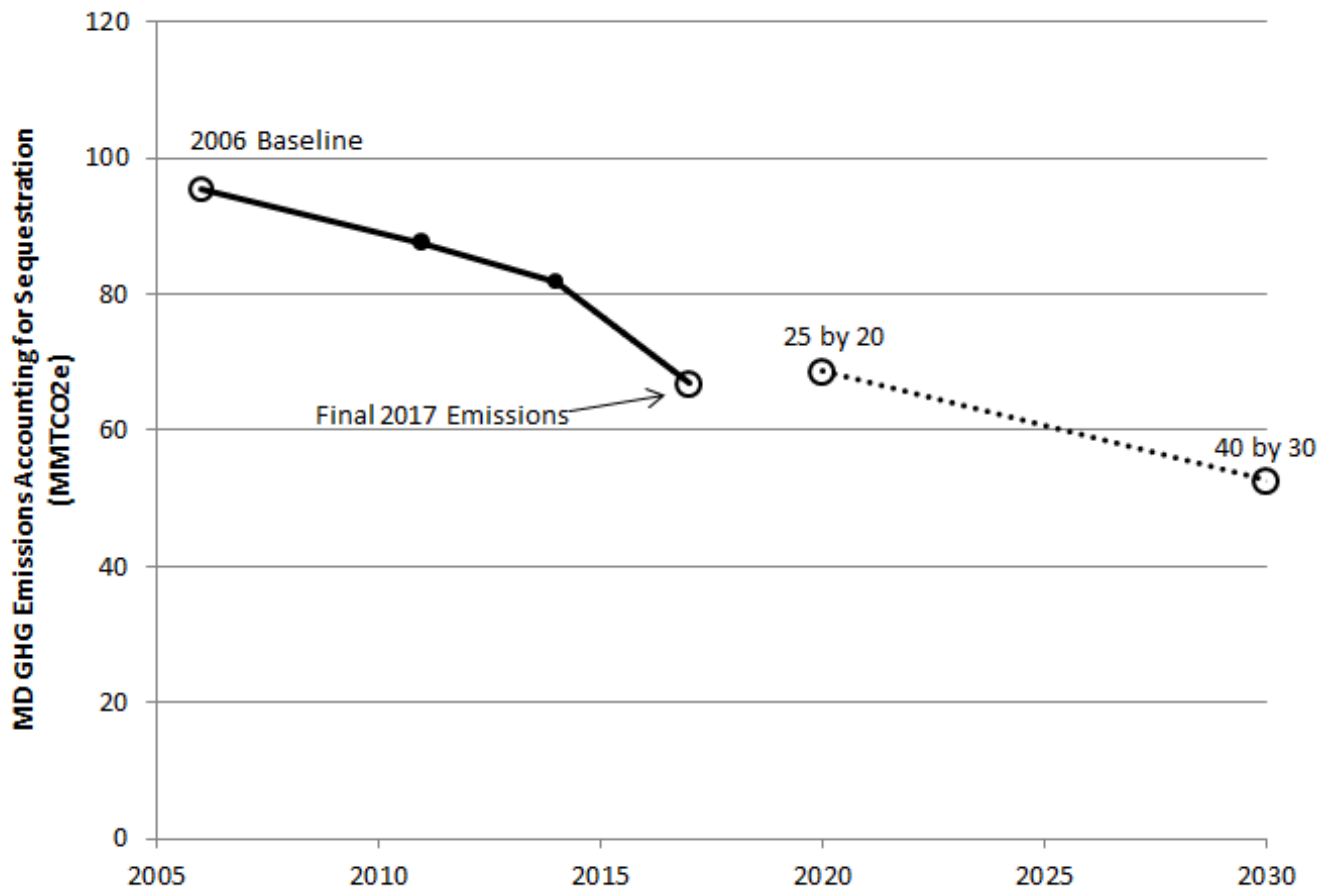
Mitigation Working Group Meeting

March 16, 2021



# The Inventory

MDE estimates state-wide GHGs covered by the GGRA every 3 years (the “GHG Inventory”) to measure progress towards our goals.

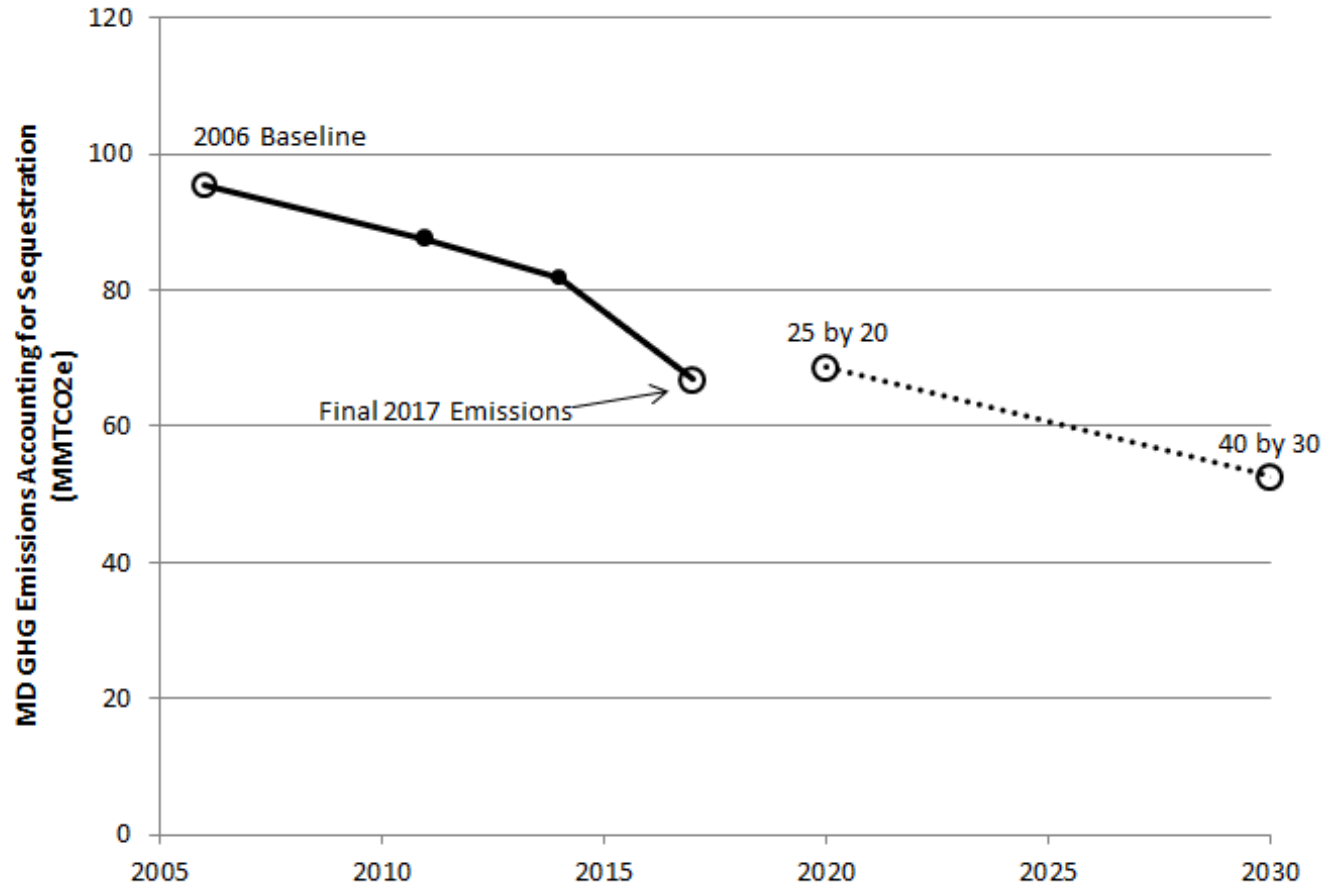




# The 2020 Inventory

MDE is preparing the 2020 GHG Inventory this year, which will tell us whether we met the 2020 goal.

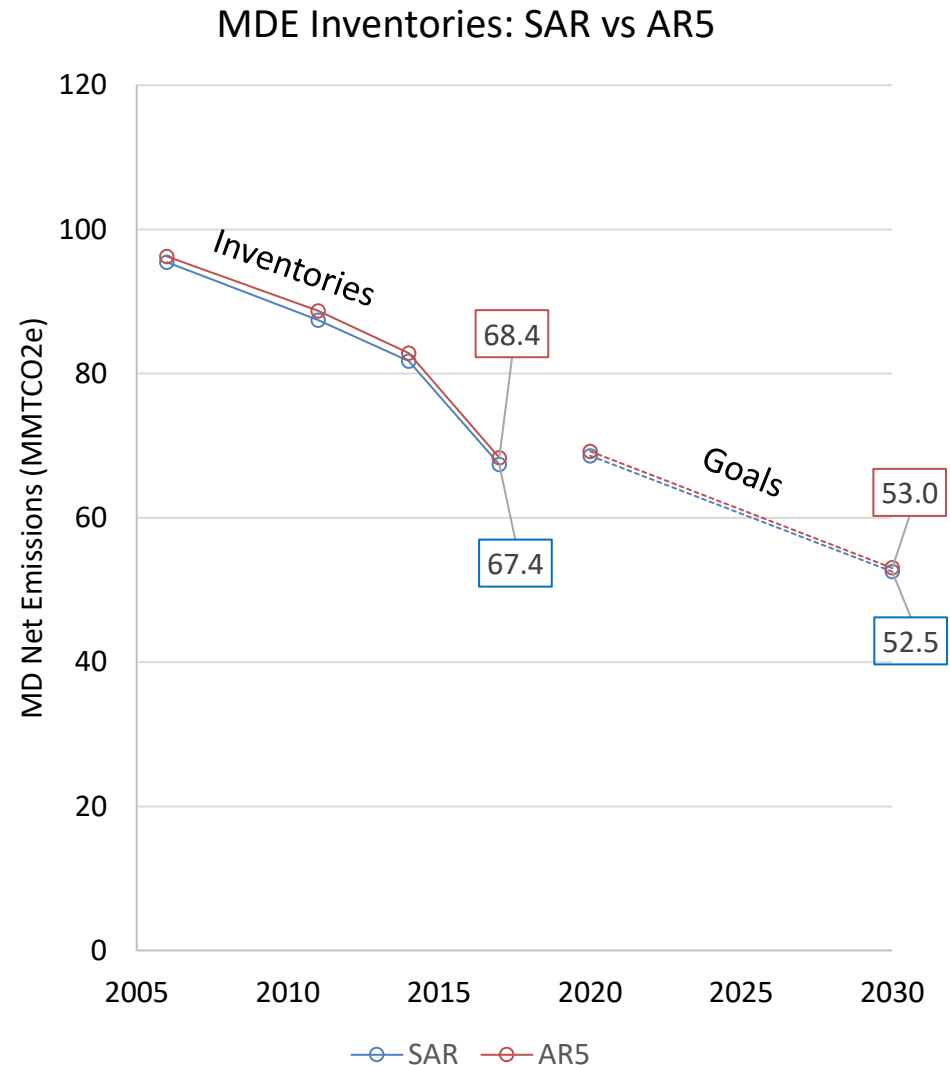
MDE is updating our methodology, which will require updating the prior inventories.





# Methodology Change #1: Updated GWPs

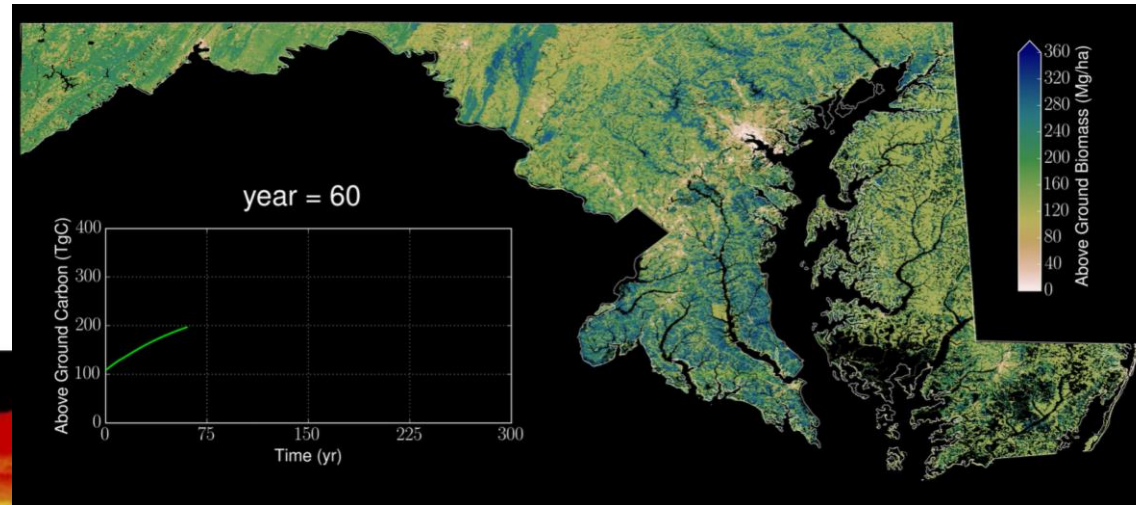
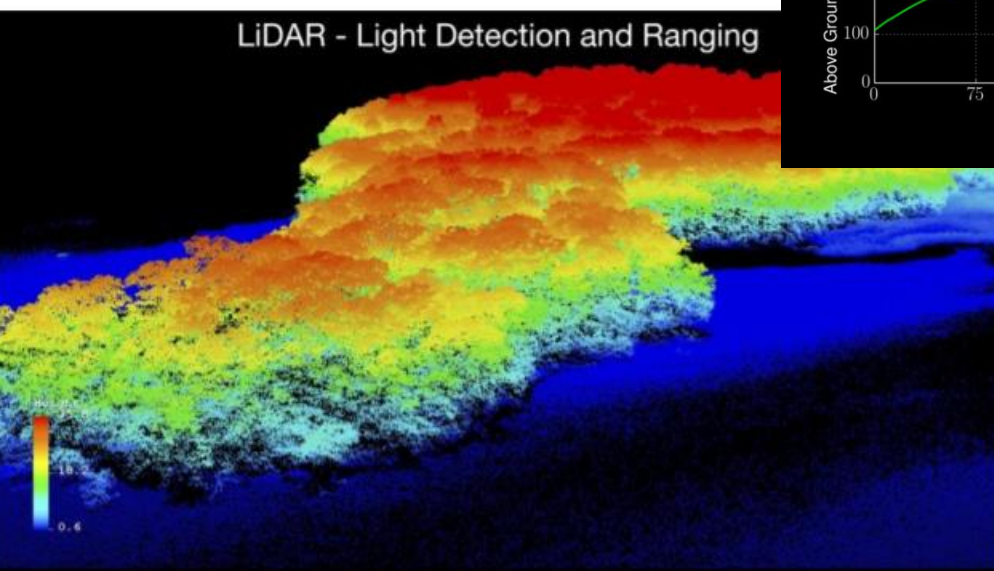
- Global Warming Potentials (GWPs) convert all GHGs to carbon dioxide equivalents (CO<sub>2</sub>e)
- Prior inventories used IPCC values from Second Assessment Report (SAR)
- MDE updating to newer values from Fifth Assessment Report (AR5)





# Methodology Change #2: New Forest Inventory Tool

Maryland first state to use high-resolution LiDAR data & modeling plus satellite data in our GHG inventory.



Hurtt et al, 2016

DNR developing model with UMD, NASA, US Climate Alliance, WRI, Delaware & other partners.



# Timeline for the 2020 Inventory

---

- Some sectors' data available very soon (e.g. electricity)
- Some sectors' data not available until Fall (e.g. transportation)
- Building emissions data comes from EIA, likely not available until **June 2022**.
- If still waiting on building data by **November 2021**, MDE will publish a ***Preliminary Inventory*** with placeholders for missing data (e.g. 2017-2019 average)
  - Will follow up with the *final inventory* when data becomes available



# What to Expect

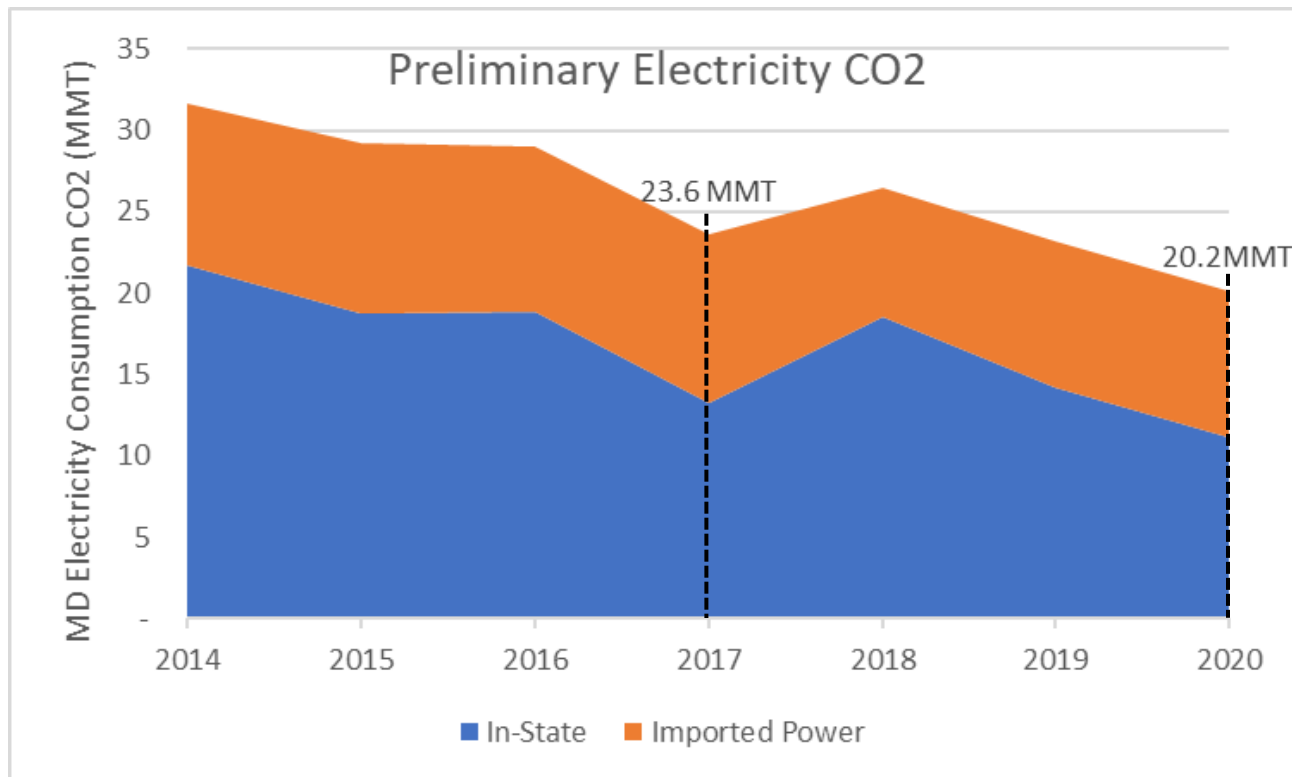
---

- 2017 Inventory was below the 2020 goal by ~1.2 MMTCO<sub>2</sub>e (weather played a role)
- Some 2020 data is already available, suggests 2020 electricity and transportation emissions are at least ~6 MMTCO<sub>2</sub>e lower than 2017.
- MDE is evaluating methods to estimate COVID impact.



## Preliminary 2020 Indicators: Electricity

- In-state GHGs from RGGI and preliminary imported power estimates show  $\sim 3.4$  MMTCO<sub>2</sub> drop from 2017 to 2020



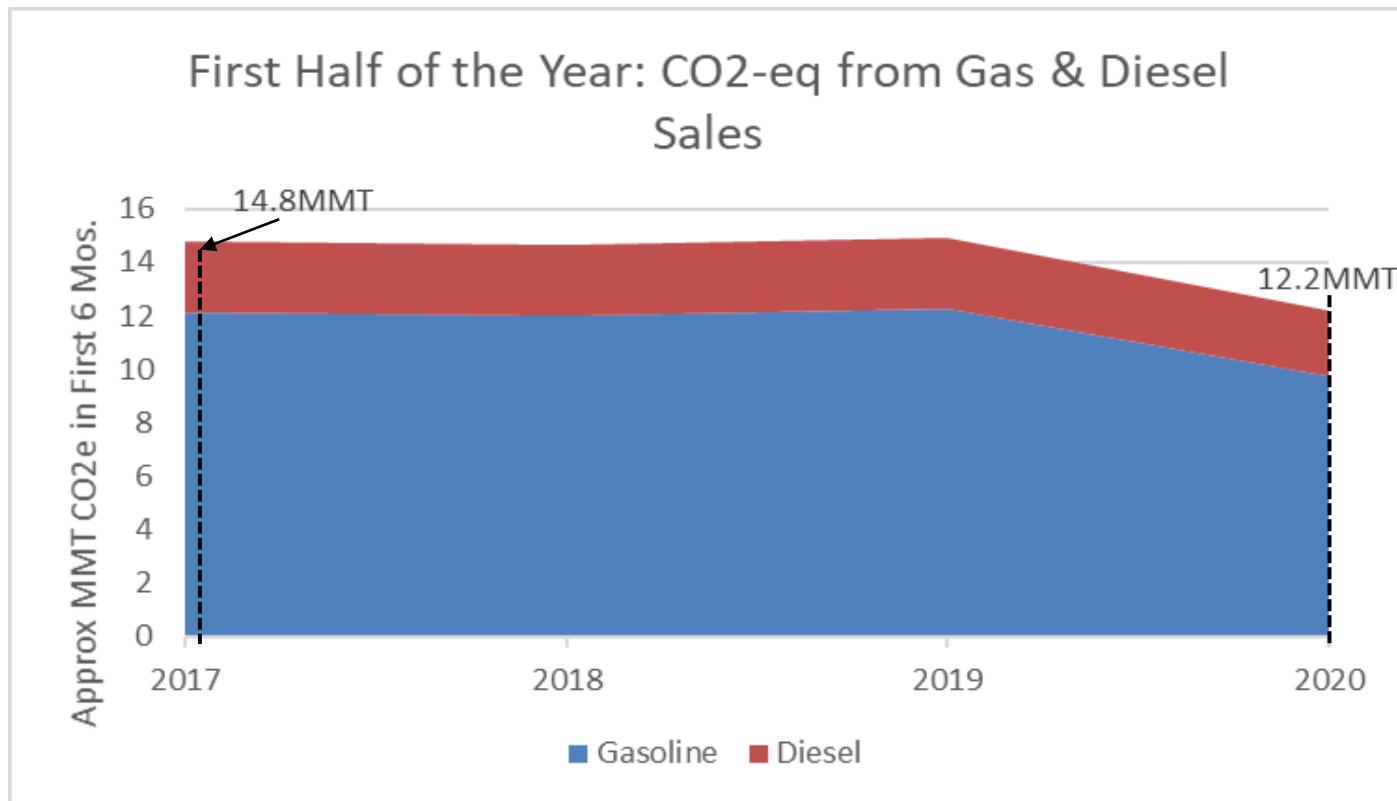
*Full inventory will include additional GHGs not covered by RGGI & will confirm imported power.*





# Preliminary 2020 Indicators: Transportation

- Fuel sales data is reported by fiscal year, so the first half of 2020 is available. Comparisons to Jan-June of 2017 shows ~2.6 MMTCO<sub>2</sub> reduction (*only have the first half of the year so far*).



*Full inventory draws on additional sources and modeling to capture broader emissions (e.g. through traffic)*



# Contact

---

Chris Hoagland

Climate Change Program Manager

Maryland Department of the Environment

[chris.hoagland@maryland.gov](mailto:chris.hoagland@maryland.gov)