Manassas Climate Task Force – Scenario Planning Meeting

January 26, 2023

Agenda

- 7:00 – 7:05 pm Welcome – Quick Introductions
- 7:05 – 7:20 pm Brief of potential Climate Action Goals for Task Force consideration (Hicks)
- 7:20 – 7:30 pm Options for additional goals needed to meet 2030 target (Bubbosh)
- 7:30 – 7:50 pm Task Force members discuss/advocate for actions to consider
- 7:50 – 8:00 pm Voting/Consensus on new goals to include in next Scenario Planning model
- 8:00 pm Adjourn

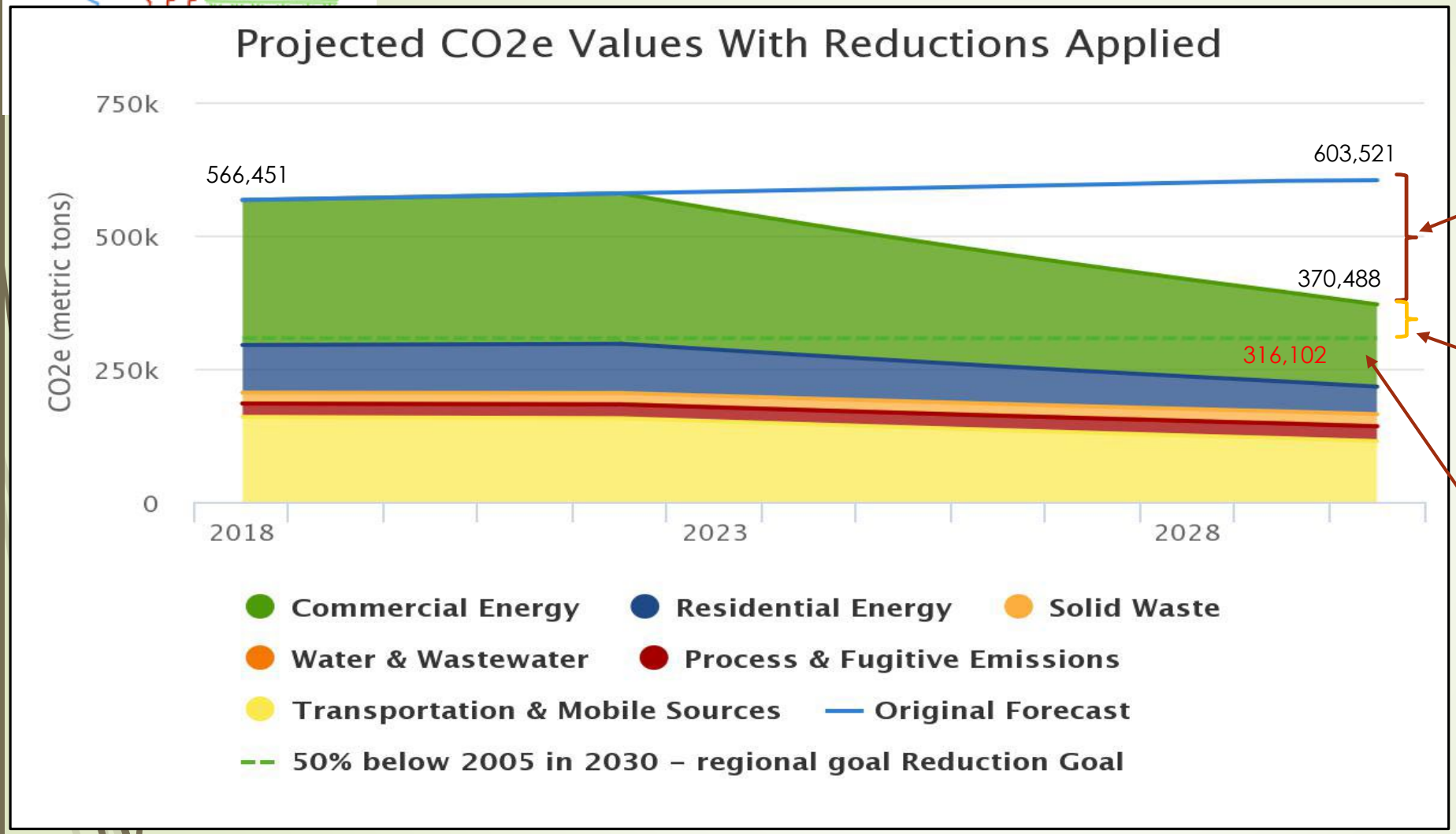
Community wide GHG Emissions Forecast w/ Planning Scenario

Sector	2005	2018	2030 Business as Usual	2030 Planning Scenario
Commercial Energy	283,700	272,194	• Population Growth 0.9% annually through 2030 • Carbon Intensity of the Grid remains unchanged thru 2030 • NHTSA's Corporate Average Fuel Economy (CAFE)	154,389
Process & Fugitive Emissions	16,300	25,127		27,868
Residential Energy	122,687	89,366		51,657
Solid Waste	17,811	20,141		22,339
Transportation & Mobile Sources	191,400	159,271		113,844
Water & Wastewater	305	352		391
MTCO2eq (Total)	**632,203**	**566,451**	**603,521**	**370,488**

Remember: Overall GHG Reduction target is 50% reduction relative to 2005 levels = 632,203 $MTCO_2eq$

Target is <= 316,102 $MTCO_2eq$ by 2030

Community wide GHG Emissions Planning Scenario (Proposed)



Proposed strategies (Explained in next section) – Accounts for 233,033 $MTCO_2eq$

Delta reductions that TF will need to consider = 54,386 $MTCO_2eq$

Dashed blue line represents target of 50% reduction relative to 2005

Summary of proposed reduction targets

targets	Total $MTCO_2eq$ Reduced	Rationale
Electric emissions intensity reduction 8%/yr - residential	31753	Manassas Electric Util. Co. can aggressively employ grid carbon intensity reductions (2018-2020 reductions average 8%)
Electric emissions intensity reduction 8%/yr - commercial	109291	Manassas Electric Util. Co. can aggressively employ grid carbon intensity reductions (2018-2020 reductions average 8%)
Heat pumps - residential - 5% of housing units per year	6210	Federal incentives encourage retrofitting Avg. lifespan of HVAC 10-15 years [45% of all housing units will convert to heat pumps between 2023-2030]
Heat pumps - commercial - 5% of floor area per year	14165	Federal incentives encourage retrofitting Avg. lifespan of HVAC 10-15 years
VMT reduction 2%/year (16% in 2030) per capita - diesel (freight vehicles)	7192	By 2030, expanding the rate of telework to 20 percent and implementing other TDM strategies, such as pricing commuter parking regionwide and ensuring a majority of employees receive monthly transit benefits, could reduce VMT by 6 percent and SOV trips by 20 percent.
VMT reduction 2%/year (16% in 2030) per capita - gasoline (passenger vehicles)	17322	
EV - 20% of gasoline vehicles in 2030	14947	Pre-IRA estimates for total EV's on road was 8-10%. With estimates of 50% new car sales to be EV by 2030, that # could approach 20%
Solid waste - 1%/year reduction in waste sent to landfill (8% over 8 years)	5701	Can include increased food and/or green waste composting
Solar PV - commercial 2MW/year	5074	Equates to 20 commercial bldgs./year, 100-kw each. 373 commercial establishments currently → 160 commercial business will convert by 2030
Solar PV - residential - 500kW/year	1266	Equates to (50 houses/yr, 10kw each)
Natural gas efficiency 2.5%/year - residential	6208	12,792 total households in 2018 – Assume that 320 households per year will electrify HVAC–or- upgrade natural gas furnace efficiency
Natural gas efficiency 2.5%/year - commercial	13904	Natural gas use averaging -6.7% reduction per sq. ft. between 2015-2018