



Commission on Climate Change

Maryland Climate Change Commission Mitigation Working Group

Cross-Cutting Technical Work Group Meeting #3 September 21, 2007

Maryland Department of the Environment
Maryland Energy Administration
Center for Climate Strategies

Agenda

1. Call to Order and Roll Call
2. Review and Approve Prior Call Summary
3. Date, Time, & Agenda for Next Call
4. Goals for September 28th MWG Meeting
5. Further Discussion of Catalog of Options (including discussion of GHG Reduction Goals as a possible “early action” for Interim Report)
6. Next Steps for MD CC TWG
7. Public Input
8. Announcements

Goals for MD Mitigation Work Group Meeting #2 - September 28, 2007

- Addition of Potential Actions to the draft Catalog of State Actions
 - Add existing and new MD options as needed
 - Consolidate selected options, as appropriate
 - Assure that the starting point for the MWG process is comprehensive
 - Identify selected options to potentially fast track for the interim report.

Stepwise Planning Process

1. Develop inventory and forecast of emissions - Ongoing
2. Identify a full range of possible actions - **Sept. 28**
3. Identify initial priorities for analysis - **Oct. 26**
4. Review Interim Report - **Nov. 14**
5. Develop straw proposals - TBD
6. Quantify GHG reductions and costs/savings - TBD
7. Evaluate externalities, feasibility issues - TBD
8. Develop alternatives to address barriers - TBD
9. Aggregate results - TBD
10. Iterate to final agreements - TBD
11. Finalize and report recommendations - TBD

CC TWG Next Steps

- Today: Going in to MWG September 28 Meeting
 - Add existing and new MD options to the catalog of state actions and consolidate options, as needed
 - Discuss GHG reduction goals as a prospective “early action” recommendation for the November Interim Report
- For October 26 MWG Meeting: Identify priority policy options from catalog
 - Rank and screen options as needed
 - Recommend at least one “early action” to the MWG for the Interim Report (goals)
 - Recommend other “priorities for analysis” to the MWG

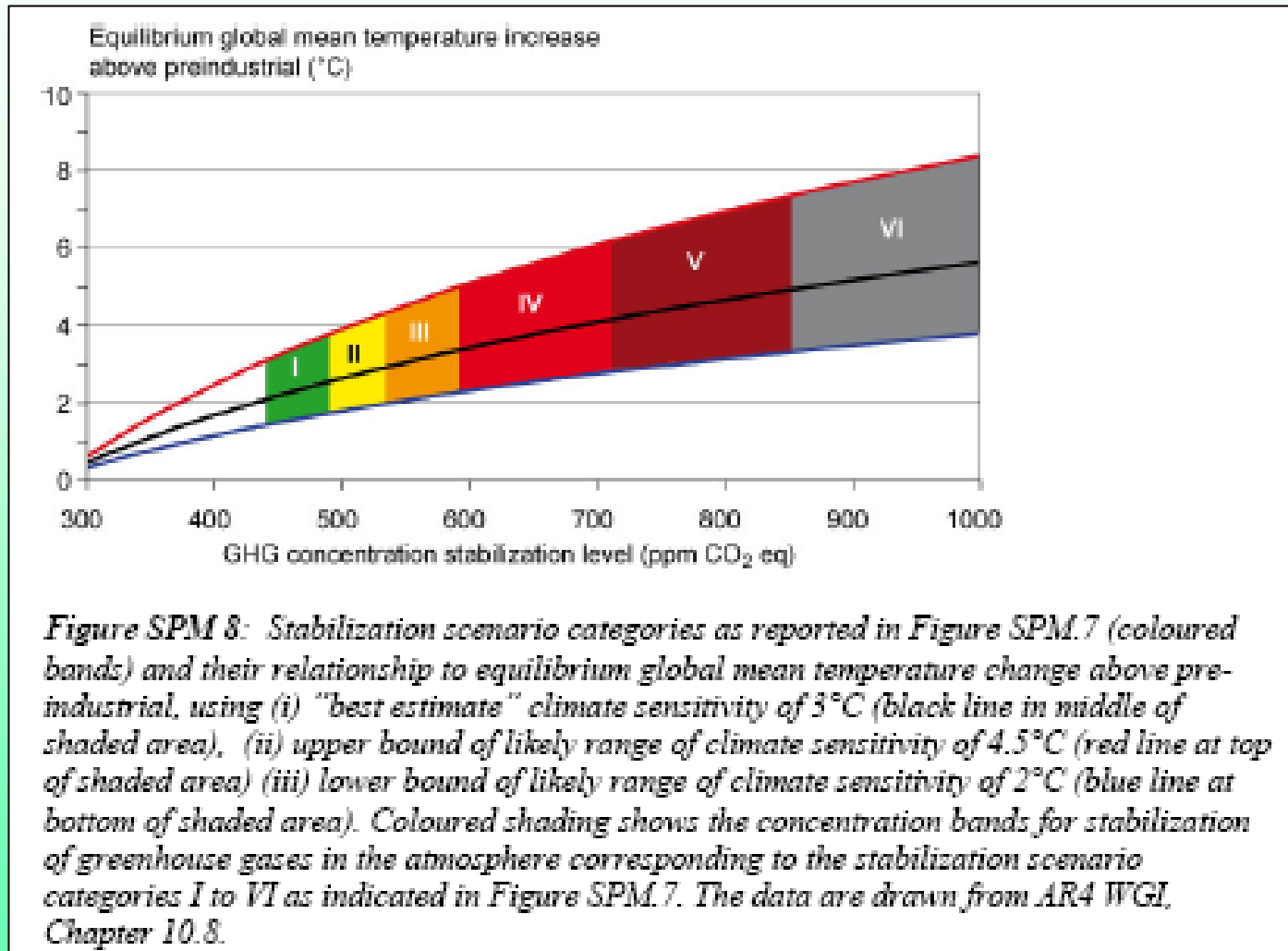
Catalog of States' Actions

- *Please refer to separate CC Catalog documents*

Key Issues in Setting Statewide GHG Reduction Goals or Targets

- Growth Rate
- Baseline
- Level(s) of Reduction
- Target Date(s) – Short-term? Long-term?
- Consumption vs. Production Approach
- Gross Emissions vs. Net Emissions
- Aspirational vs. “Ground-Up” Approach?
- Periodic Updates?

IPCC FAR WGIII – Equilibrium Temperature Rise



IPCC FAR - Working Group III

Table SPM.5: Characteristics of post-TAR stabilization scenarios [Table TS 2, 3.10]^{a)}

Category	Radiative Forcing (W/m ²)	CO ₂ Concentration ^{c)} (ppm)	CO ₂ -eq Concentration ^{c)} (ppm)	Global mean temperature increase above pre-industrial at equilibrium, using "best estimate" climate sensitivity ^{b), c)} (°C)	Peaking year for CO ₂ emissions ^{d)} (year)	Change in global CO ₂ emissions in 2050 (% of 2000 emissions) ^{d)} (%)	No. of assessed scenarios
I	2.5 – 3.0	350 – 400	445 – 490	2.0 – 2.4	2000 - 2015	-85 to -50	6
II	3.0 – 3.5	400 – 440	490 – 535	2.4 – 2.8	2000 - 2020	-60 to -30	18
III	3.5 – 4.0	440 – 485	535 – 590	2.8 – 3.2	2010 - 2030	-30 to +5	21
IV	4.0 – 5.0	485 – 570	590 – 710	3.2 – 4.0	2020 - 2060	+10 to +60	118
V	5.0 – 6.0	570 – 660	710 – 855	4.0 – 4.9	2050 - 2080	+25 to +85	9
VI	6.0 – 7.5	660 – 790	855 – 1130	4.9 – 6.1	2060 - 2090	+90 to +140	5
Total							177

a) The understanding of the climate system response to radiative forcing as well as feedbacks is assessed in detail in the AR4 WGI Report. Feedbacks between the carbon cycle and climate change affect the required mitigation for a particular stabilization level of atmospheric carbon dioxide concentration. These feedbacks are expected to increase the fraction of anthropogenic emissions that remains in the atmosphere as the climate system warms. Therefore, the emission reductions to meet a particular stabilization level reported in the mitigation studies assessed here might be underestimated.

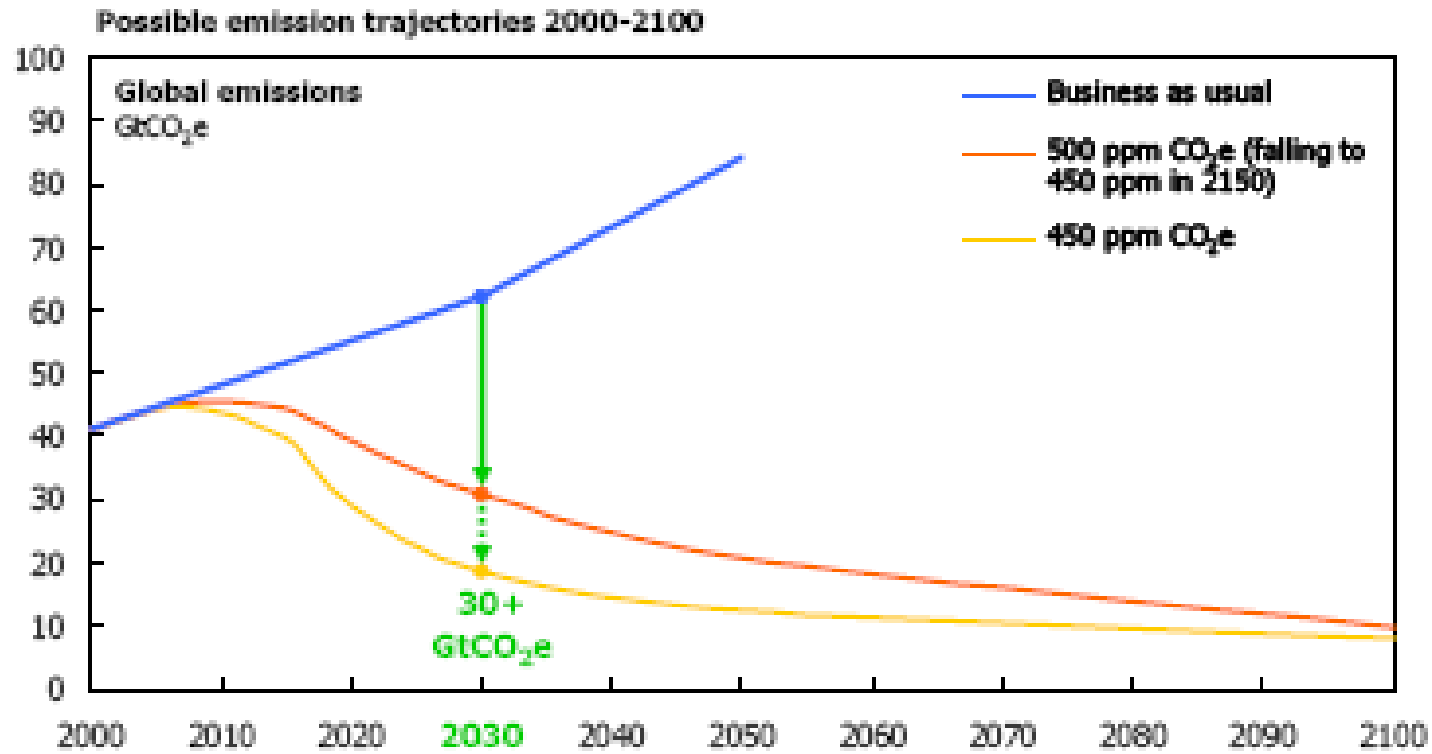
b) The best estimate of climate sensitivity is 3°C [WG I SPM].

c) Note that global mean temperature at equilibrium is different from expected global mean temperature at the time of stabilization of GHG concentrations due to the inertia of the climate system. For the majority of scenarios assessed, stabilisation of GHG concentrations occurs between 2100 and 2150.

d) Ranges correspond to the 15th to 85th percentile of the post-TAR scenario distribution. CO₂ emissions are shown so multi-gas scenarios can be compared with CO₂-only scenarios.

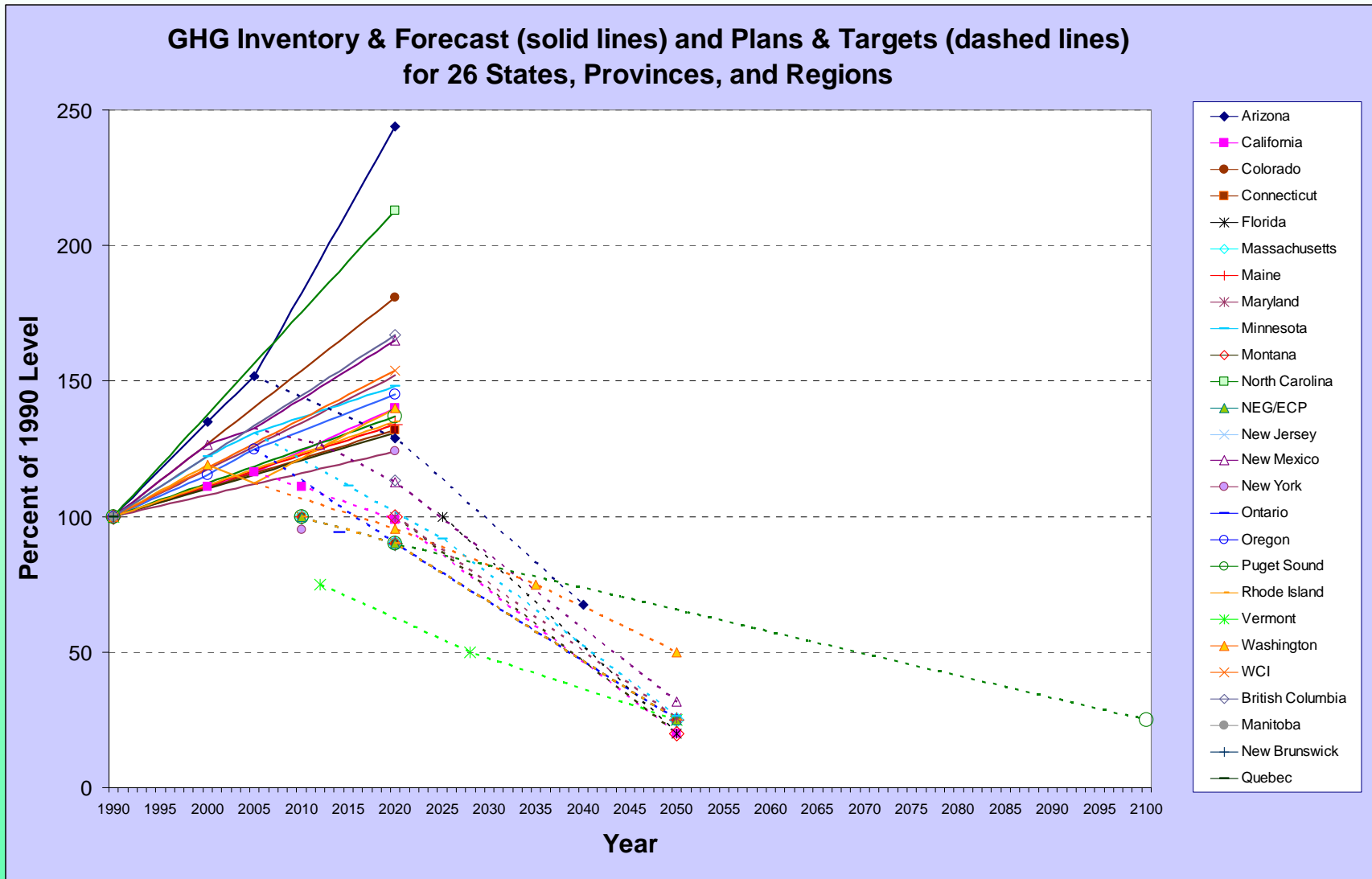
As Framed by the Stern Review

FIGURE 6: Stabilizing Emissions Requires a Minimum 30 Gt



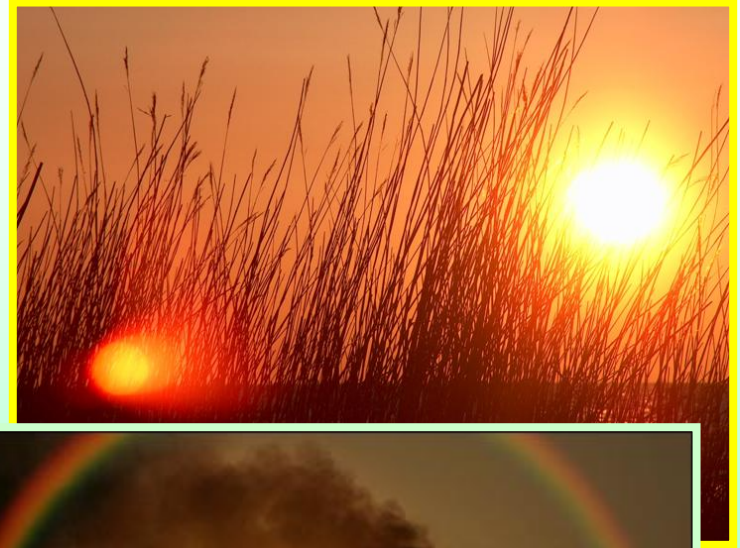
Source: Adapted from Stern Review, 2006; BAU emissions ~WEO A2 scenario; 450 ppm budget range based on Stern and preliminary IPCC analysis

Various Growth Rates & Goals



Question: What End in Mind?

- Why have climate goals?
 - One Extreme:
 - Set minimum targets we know we can reach with current technologies and programs?
 - Sometimes enforceable
 - The Other:
 - Push the envelope on technologies and programs and strive to reach it?
 - Usually aspirational



Key Question for MWG:

*What Goals Are Right
for Maryland?*

Next CC TWG Meeting

- Date and Time:
 - 11:00 am ET- Friday, October 12, 2007
- Agenda:
 - Identify initial priority options for further analysis
 - Flesh out “early action” recommendations for Interim Report



Public Input, Announcements