

Relating a U.S. Emissions Target to a Global Goal

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RFF

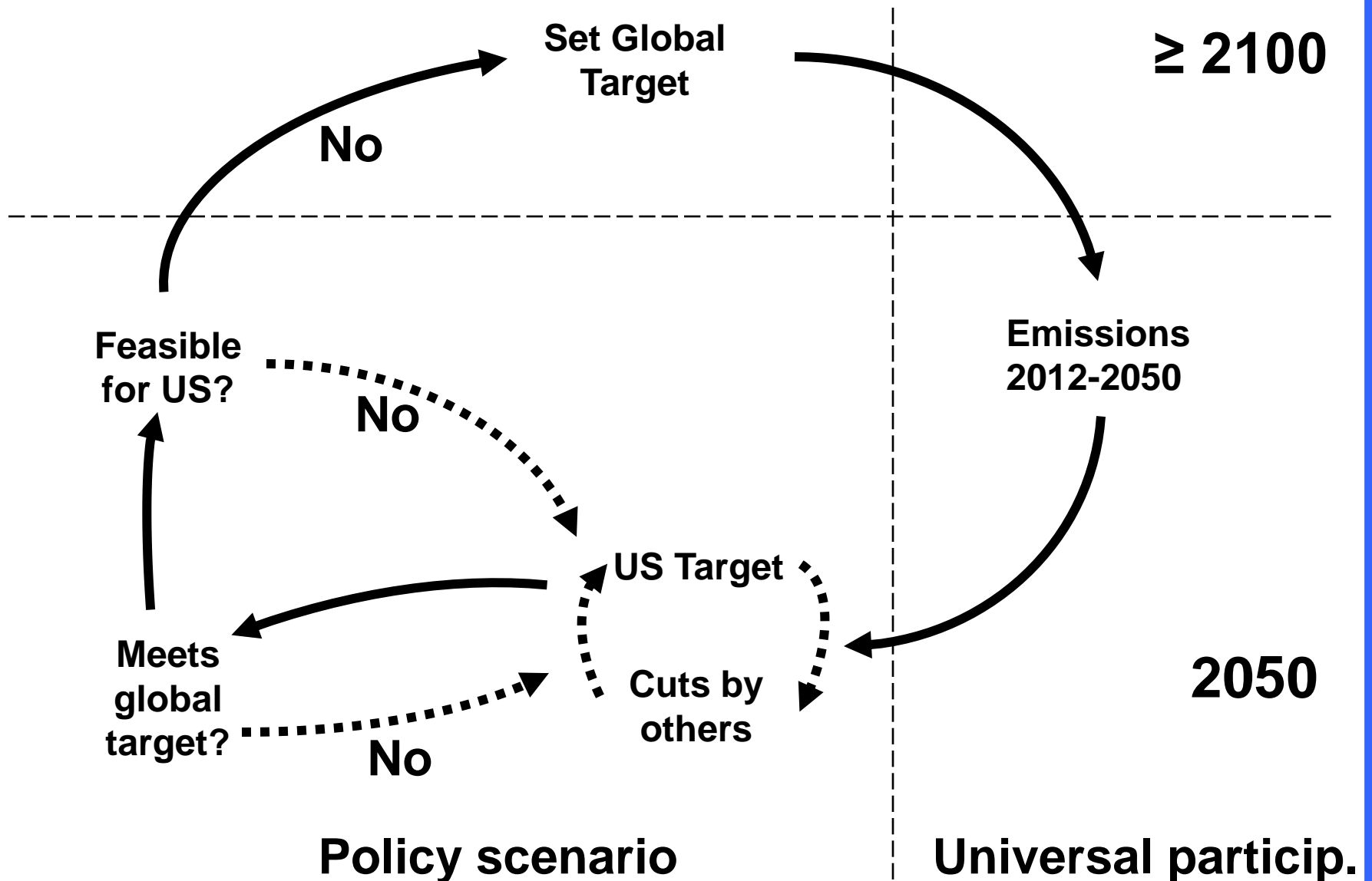
18 June 2008



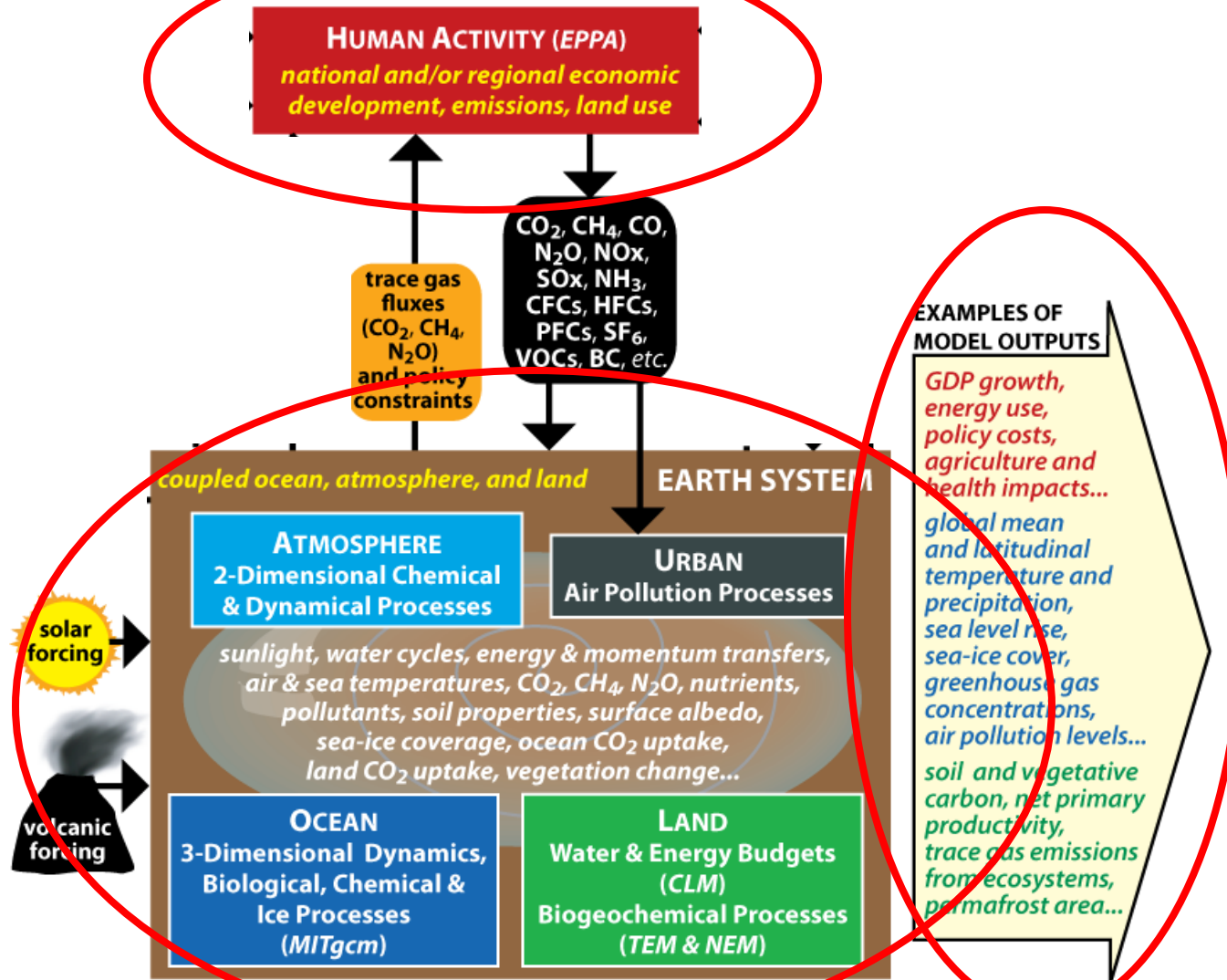
Framing the Question

- The U.S. policy target: a political choice
 - A statement of concern or aspiration?
 - A practical goal, with measures to meet it?
- Assessment of a practical U.S. target
 - An assessment procedure
 - Use of models, MIT example
 - A sample exercise
- What importance of the credibility of U.S. target (& associated policy) in
 - Short-term effort & cost?
 - Long-term, global success?

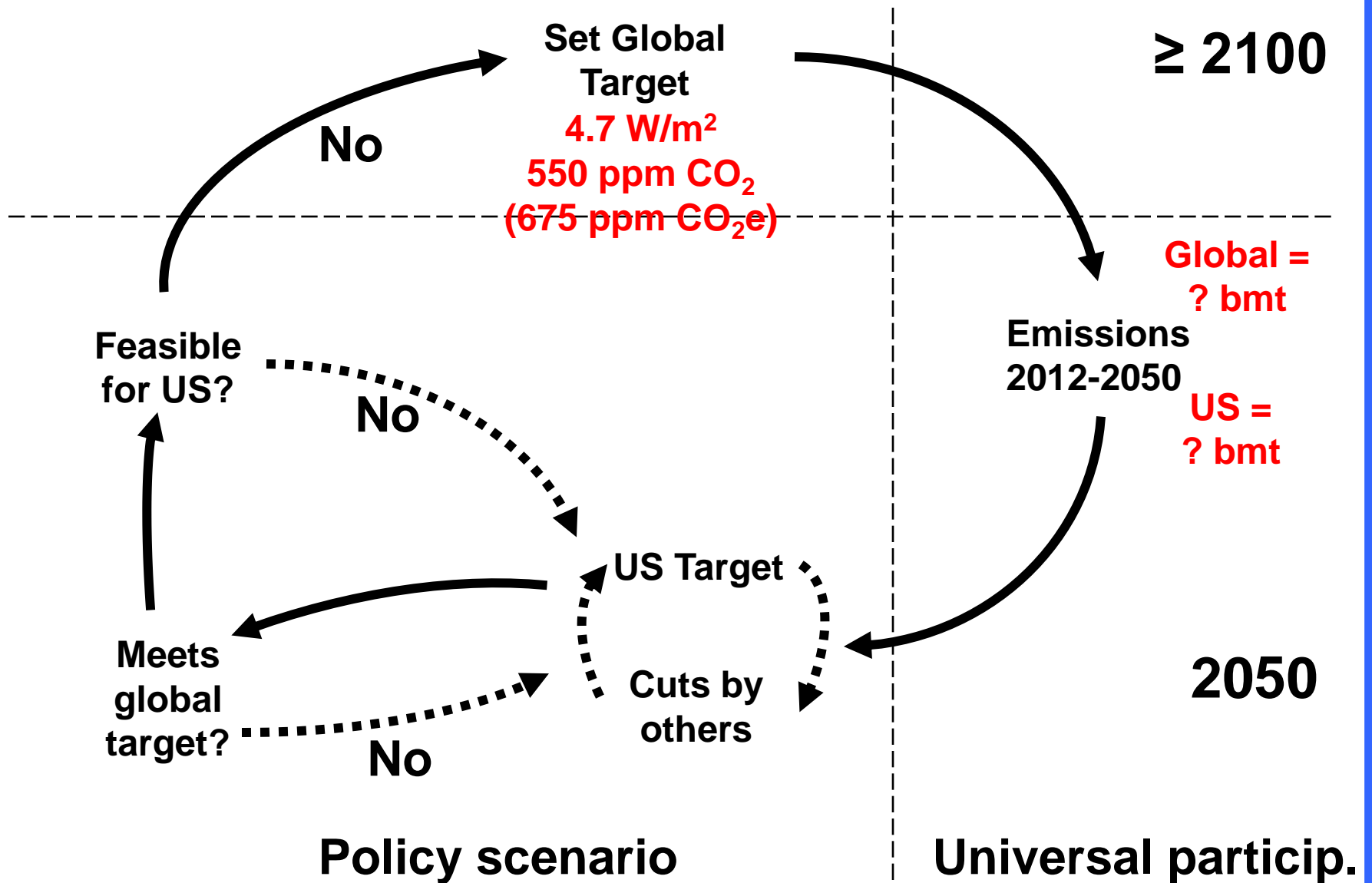
An Assessment Procedure



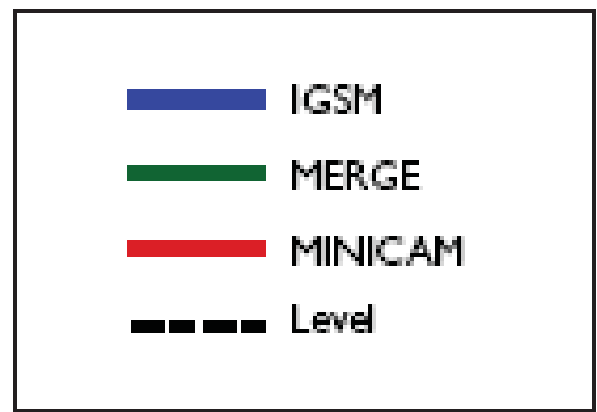
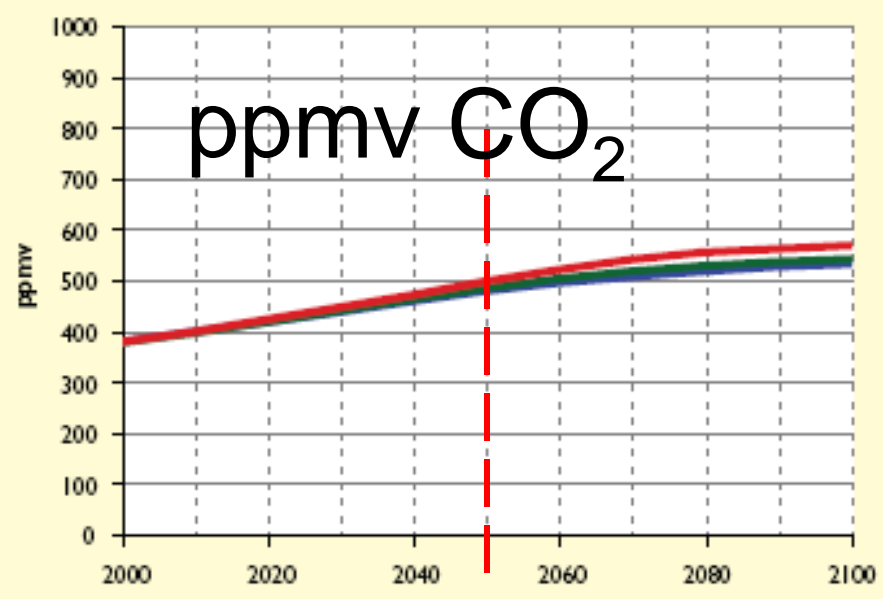
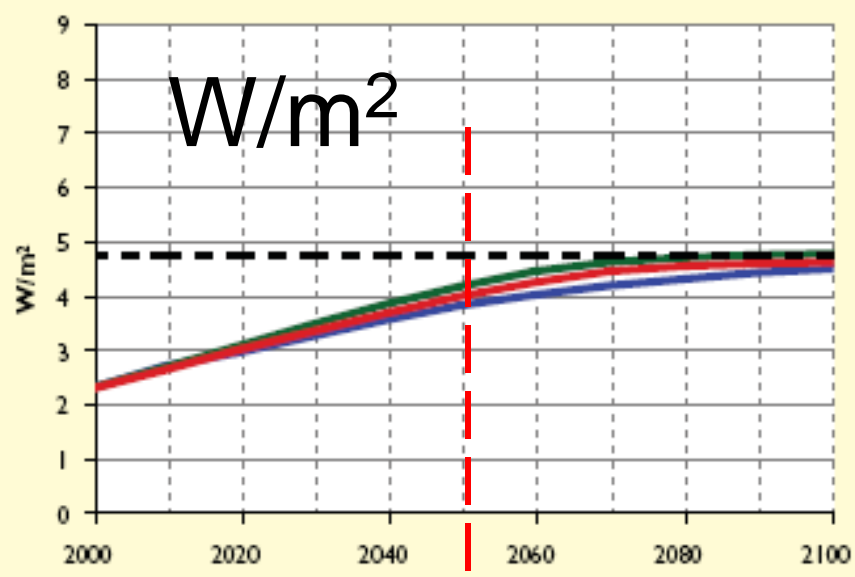
MIT Integrated Global System Model



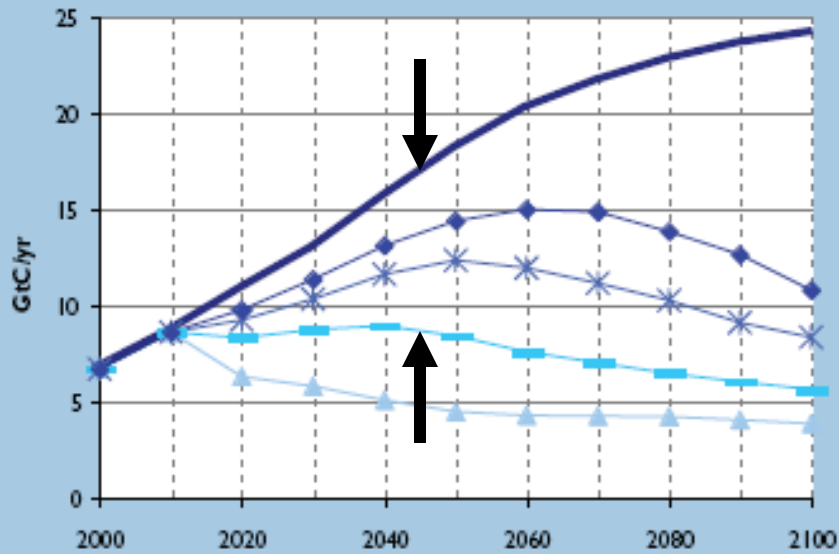
A Trial Case



Estimates of
stabilization at
 4.7W/m^2

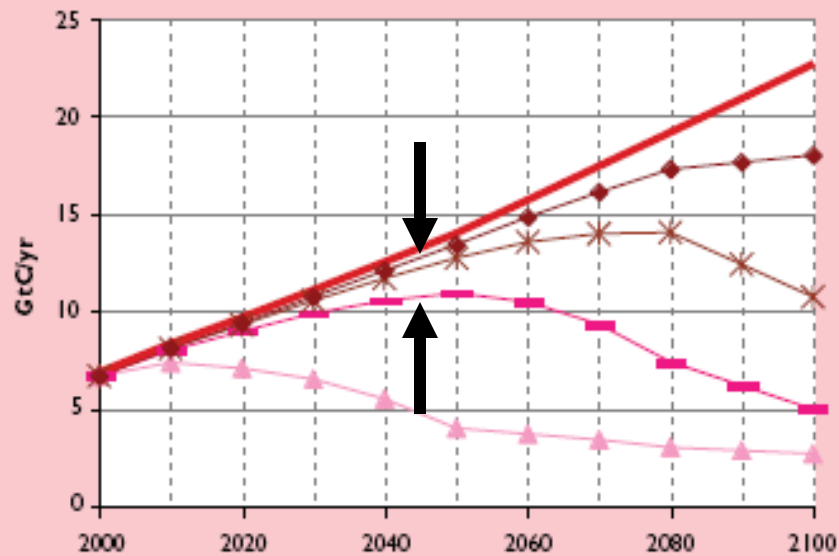


IGSM

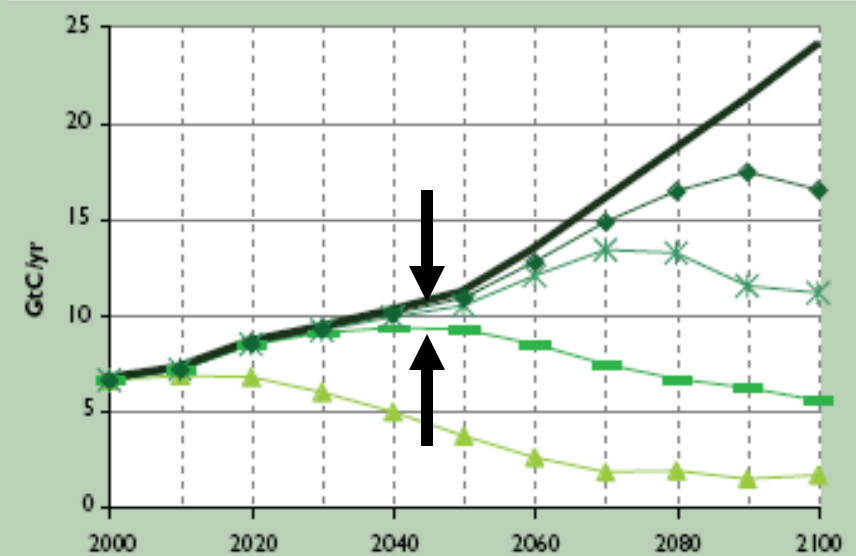


Reduction in fossil & industrial CO₂ to meet 4.7 W/m²

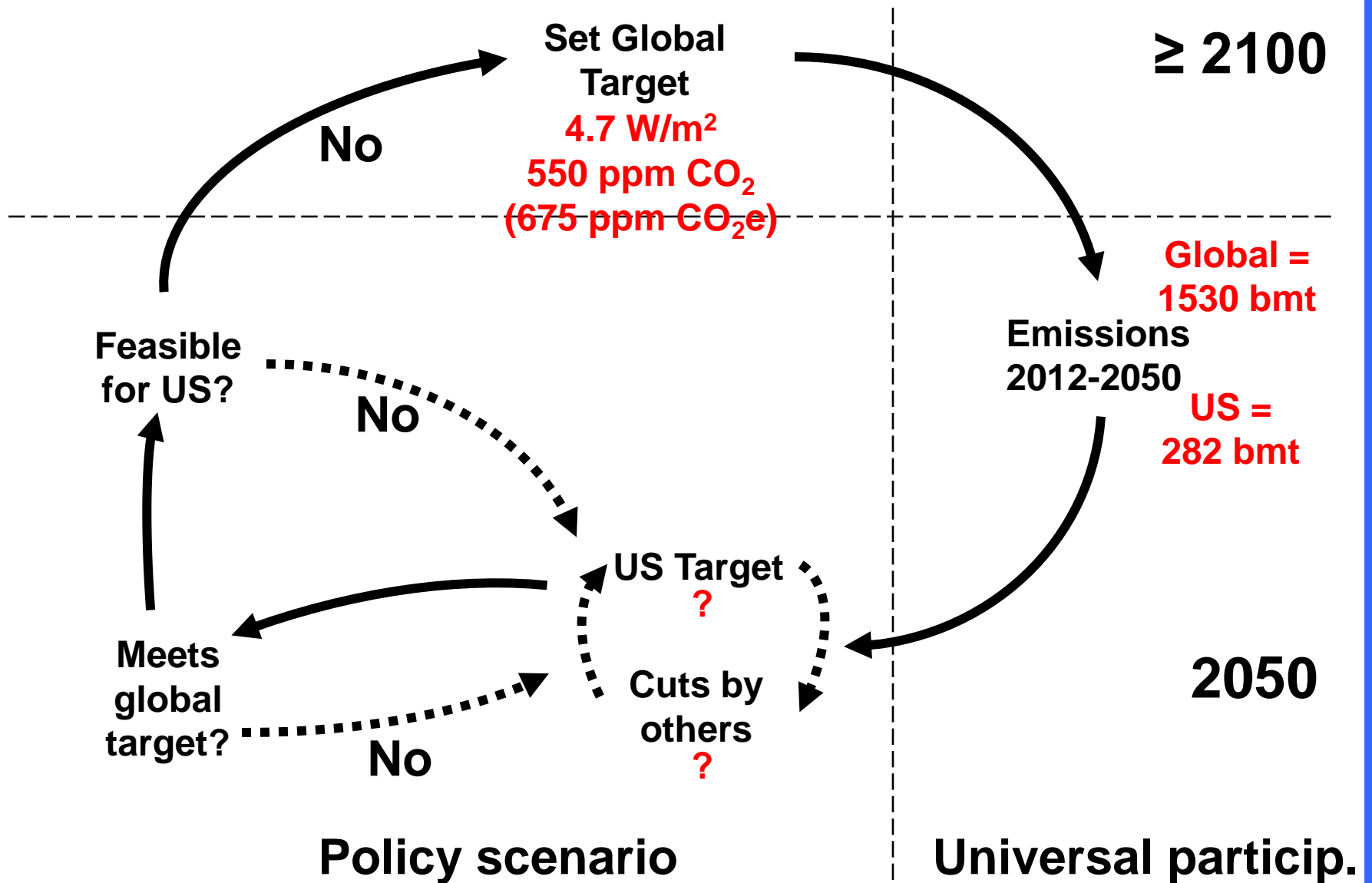
MiniCAM



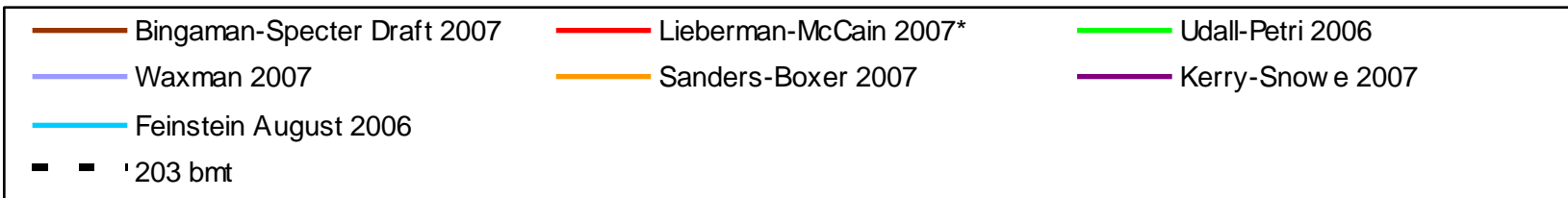
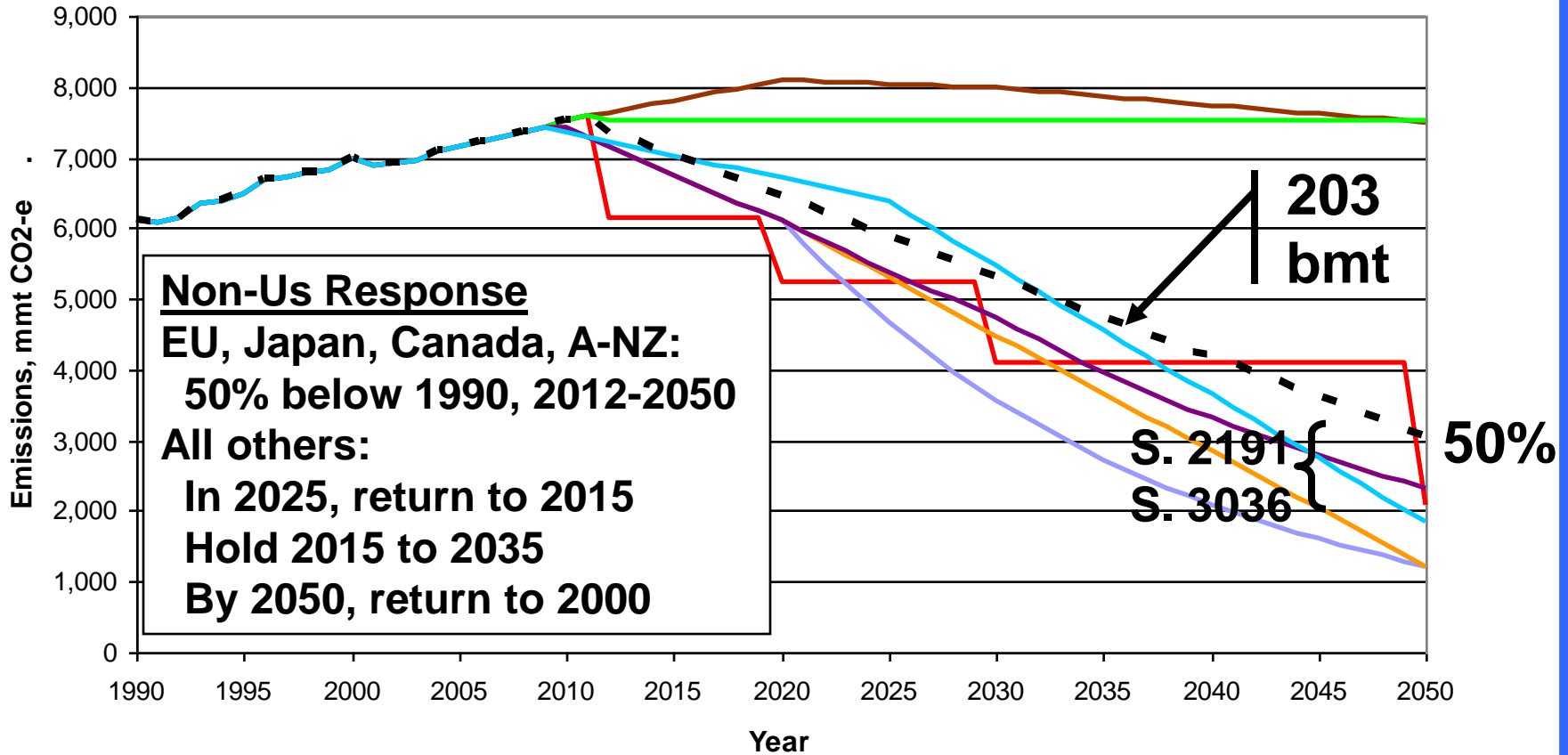
MERGE



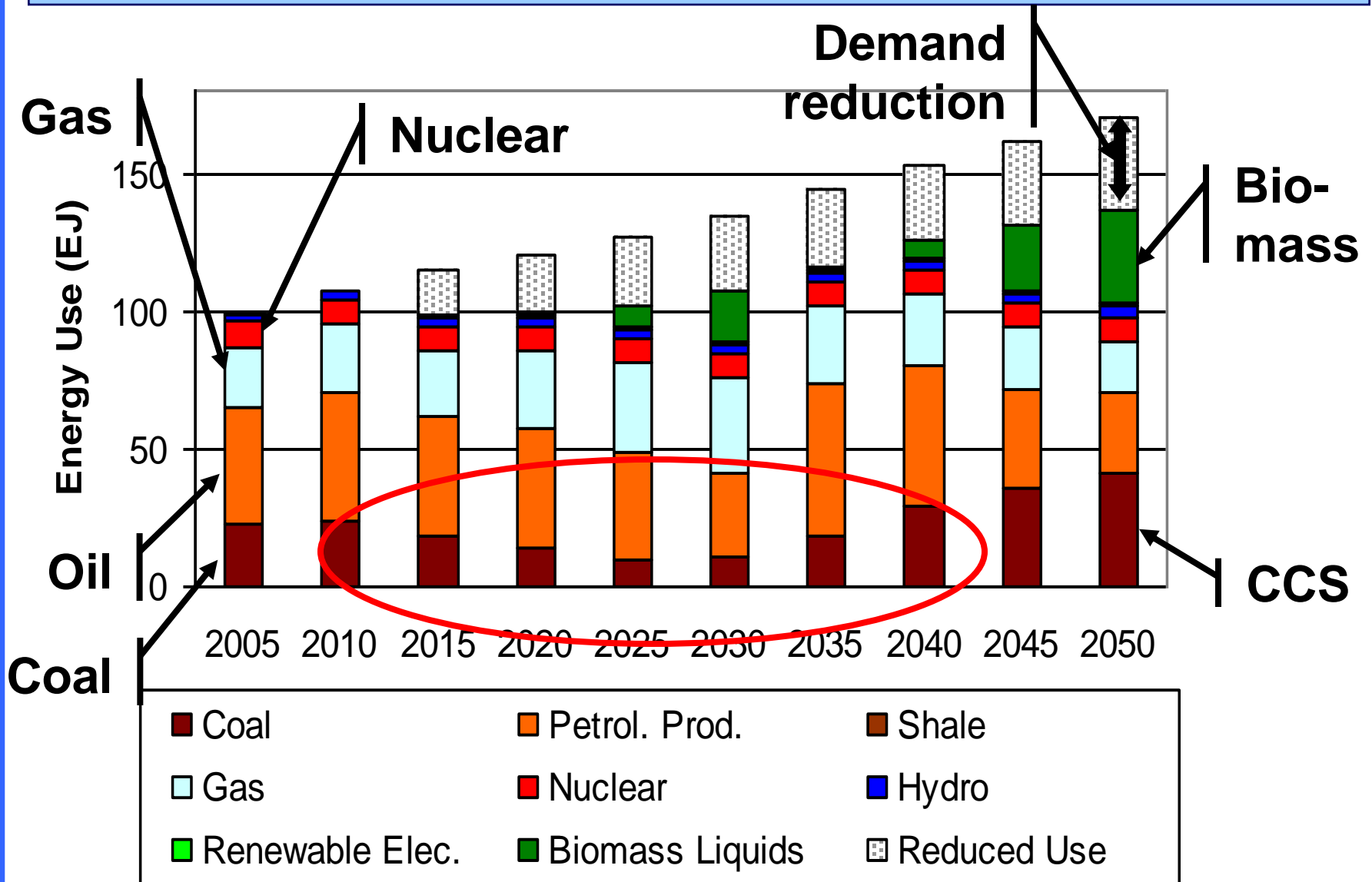
Trial Case: MIT Model



A Trial Policy Scenario

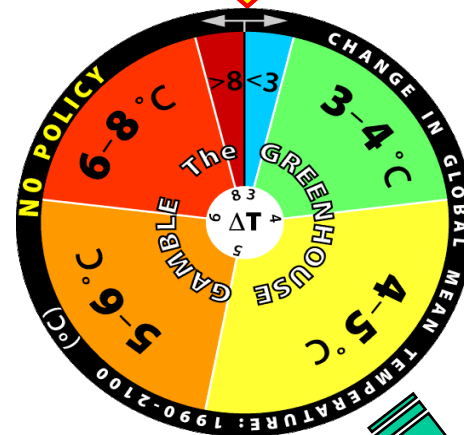
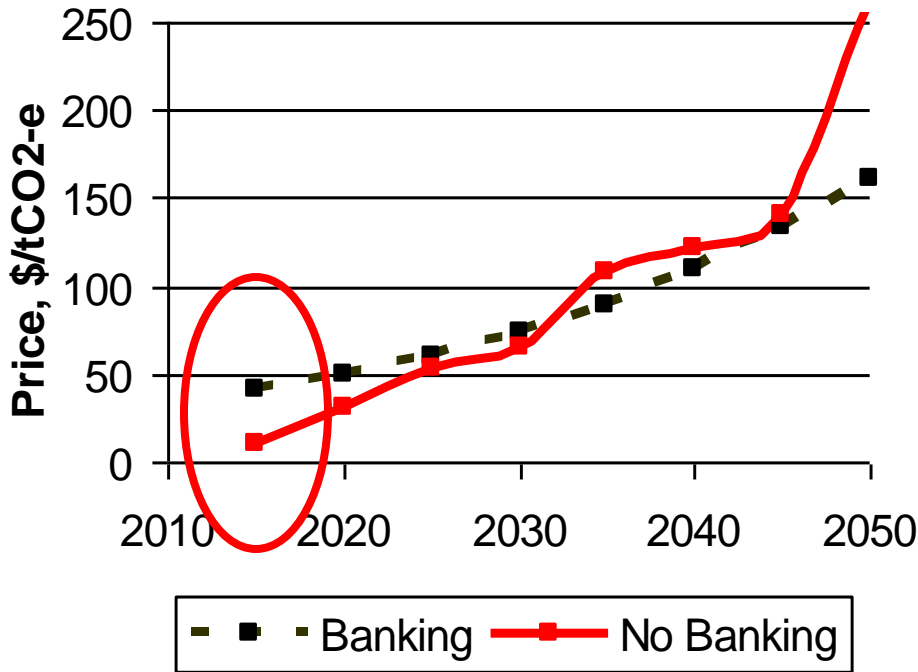


U.S. Feasibility: 50% case

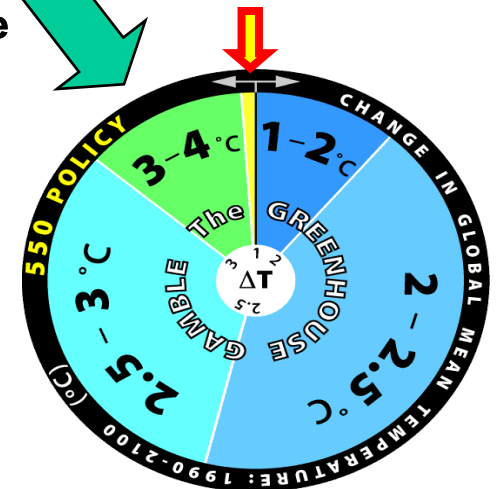


Is the CO₂ Price in the Range of the Social Cost of Carbon?

CO₂ prices



No policy case



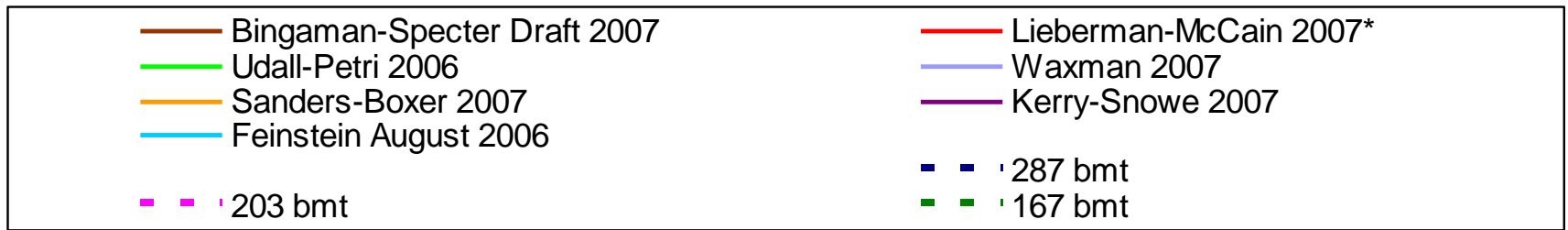
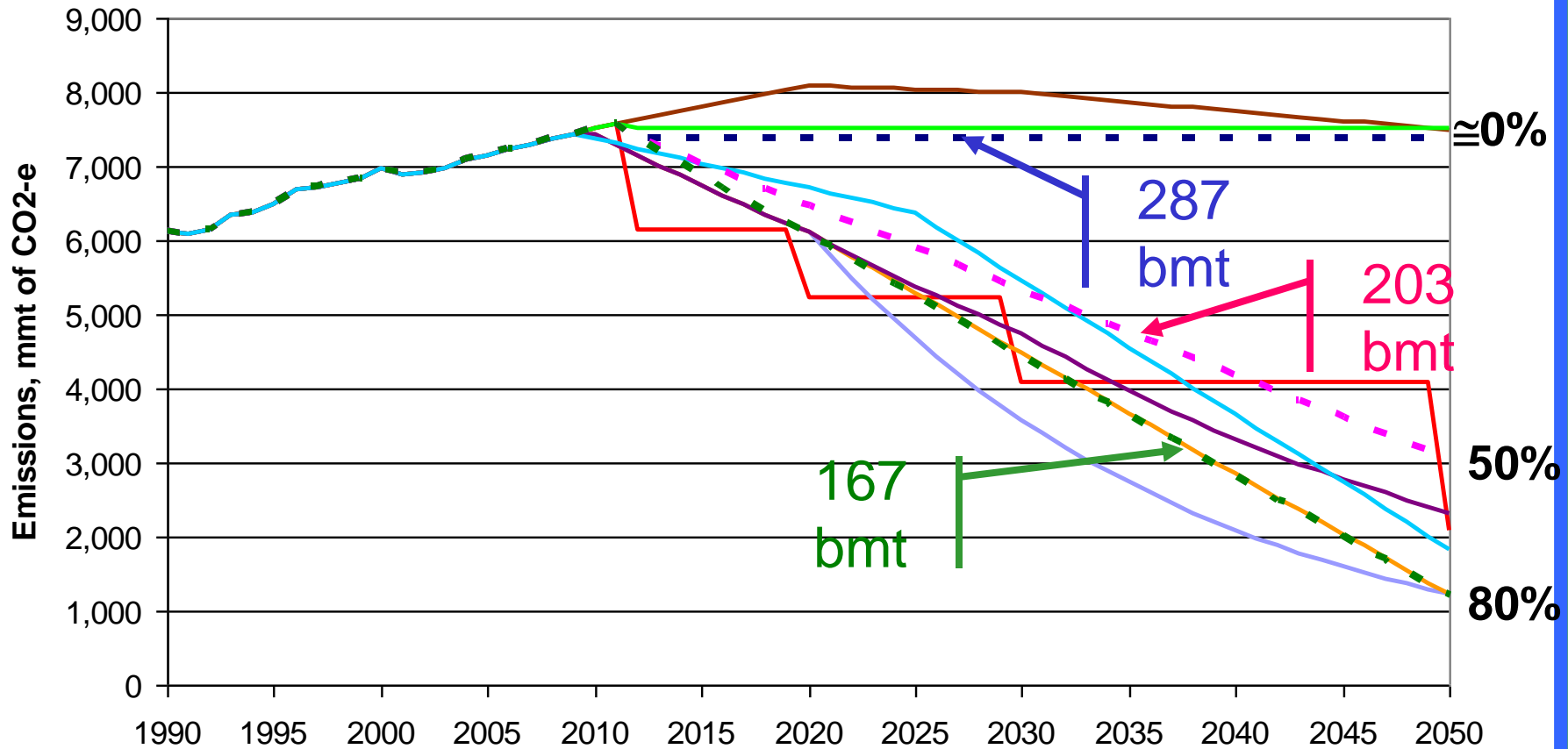
550 ppmv stabilization

US Target & Implementation

What Matters?

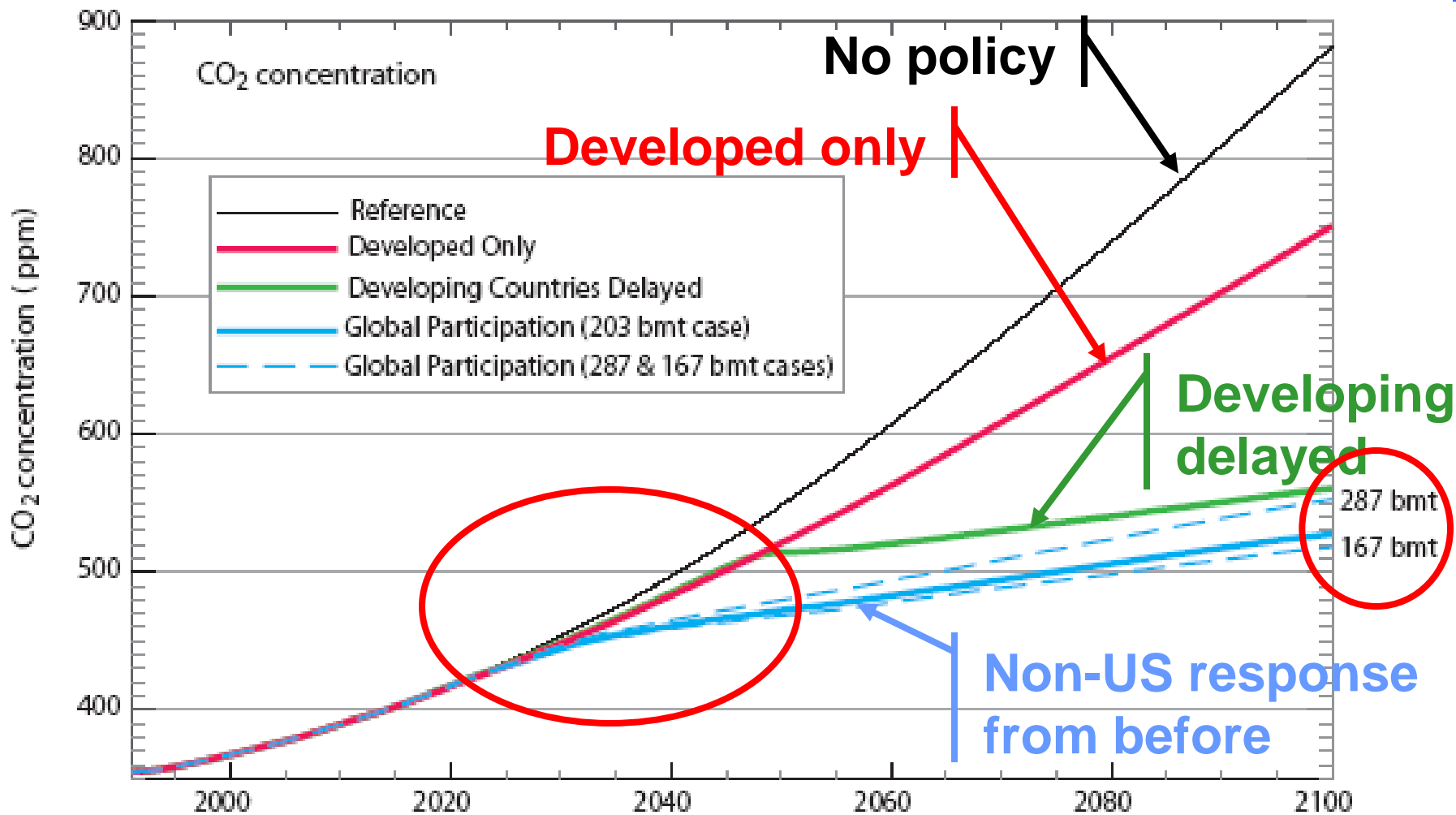


Alternative U.S. Targets



Effects of US Targets

Extend Cases to 2100 @ 2050 Levels



For Discussion

- What matters in setting a U.S. response:
 - Credibility of the 2050 target?
 - Character of the first step?
- Exploring uncertainty in the calculation (C-cycle, econ. growth, technology, etc.)
 - Scenario analysis
 - Monte Carlo studies
- Policy uncertainty & flexibility
 - If others don't perform as assumed?
- What role for the social cost of carbon?

Thank You!