Climate Action Team Economics Subgroup Public Workshop

Updated Macroeconomic Impact Analysis

September 14, 2007

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Overview

- Objective of this macroeconomic modeling.
- Inputs.
- Impact Measures.
- Scenarios.
- Models.

Objective

- Improve upon the macroeconomic impact analysis in the 2006 Climate Action Team Report.
- Improve the characterization of the climate strategies.
- Incorporate additional modeling approaches and perspectives.

Inputs

- Baseline: 2006 CAT Report
  - Economic growth: ~60% growth by 2020
  - GHG emissions
- Climate Strategies:
  - Emissions impacts, costs and savings
- Emissions target:
  - 1990 emissions by 2020
  - Reduce by 174 MMT CO_2e

Impact Measures

- Personal income.
- Employment.
- Gross State Output.
- Report impacts for 2020.

Scenarios

- 2006 CAT Report: Single Case
  - All climate strategies together
- This Report: Multiple Scenarios
  - Updated climate strategies with a sensitivity case
  - Cap and Trade program with varying specifications
  - Energy price sensitivity
  - 2020 emissions target in all Scenarios

Scenarios (Continued)

Case	Climate Strategies	Cap-and-Trade Program	Offsets	Energy Prices
Baseline	None	None	None	IEPR Forecast
Scenario 1	Reference Case	Program A: All Sectors	None	IEPR Forecast
Scenarios 2-4: The Impact of Allowing Offsets				
Scenario 2	Reference Case	Program A: All Sectors	$10/ton	IEPR Forecast
Scenario 3	Reference Case	Program A: All Sectors	$30/ton	IEPR Forecast
Scenario 4	Reference Case	Program A: All Sectors	$50/ton	IEPR Forecast
Scenarios 5-6: The Impact of Narrowing the Scope of the Cap and Trade Program				
Scenario 5	Reference Case	Prog B: Major Sectors	None	IEPR Forecast
Scenario 6	Reference Case	Prog B: Major Sectors	$30/ton	IEPR Forecast
Scenarios 7-8: Sensitivity Case Examining What if the Climate Strategies Produce only 50% of Their Expected Reductions				
Scenario 7	Sensitivity: 50% Effective	Program A: All Sectors	$30/ton	IEPR Forecast
Scenario 8	Sensitivity: 50% Effective	Prog B: Major Sectors	$30/ton	IEPR Forecast
Scenario 3*: Energy Price Sensitivity Case				
Baseline	None	None	None	MPR Forecast
Scenario 3*	Reference Case	Program A: All Sectors	$30/ton	MPR Forecast

Scenarios (Continued)

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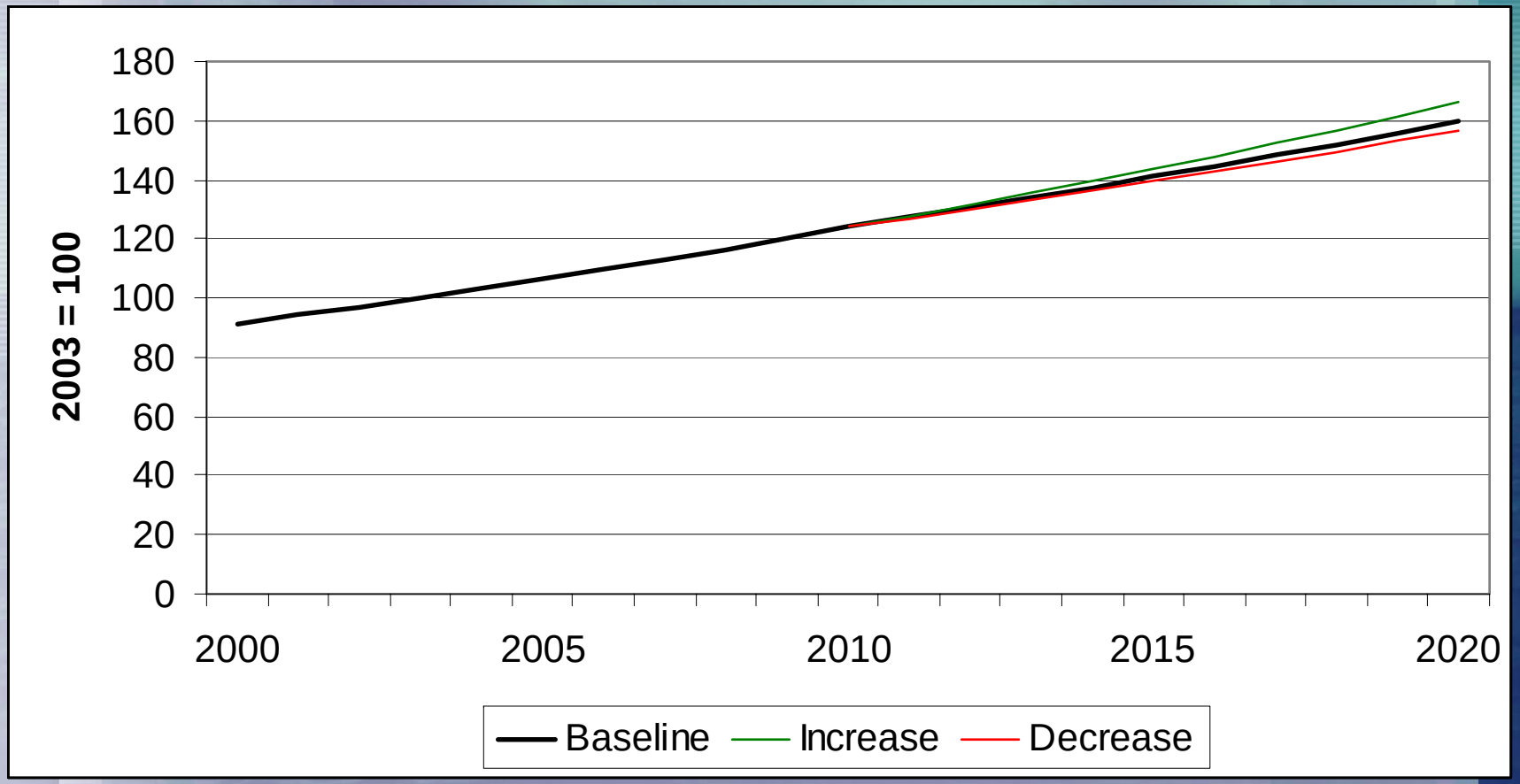
Models

- November 29, 2006 Economic Impact Modeling Conference
- Models included in this Report:
  - ARB: E-DRAM
  - U.C. Berkeley: BEAR Model

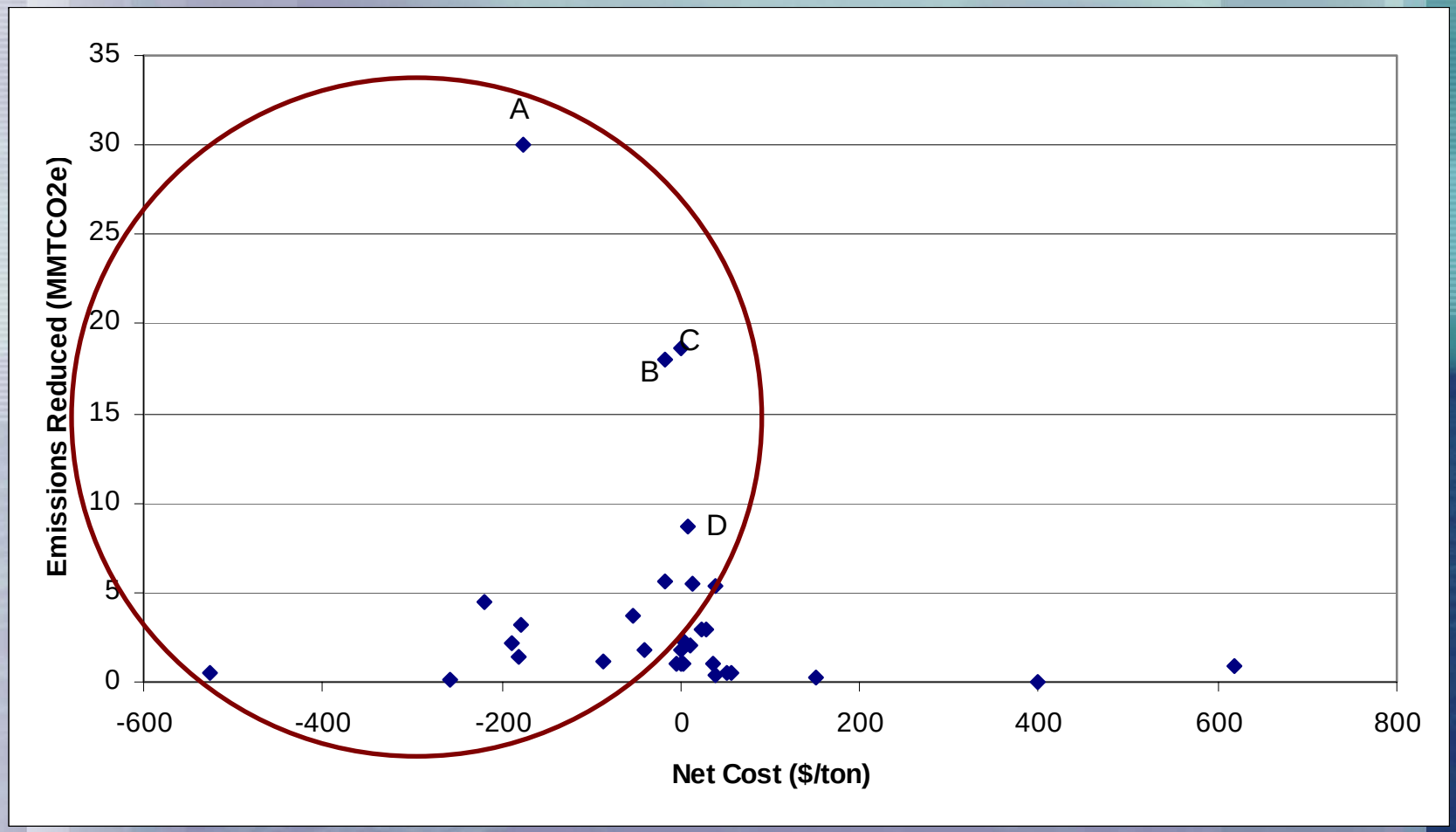
Results

- 2006 CAT Report estimated increases in personal income and employment
- This Report:
  - E-DRAM shows increases in income and employment
  - BEAR Model shows reductions in income and employment
  - Results vary by Scenario

Results (Continued)



Results: (Continued)



Ongoing Work

- Engage additional models.
- Understand the factors that lead to differing results.
- Additional Scenarios warrant analysis.