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Stakeholder Webinar: Program Review

February 11, 2013

1:00 - 3:00 PM ET

Audio: (800) 404-8174
Visual: Participant-Specific

- Presentation materials posted at: http://www.rggi.org/design/program_review/materials_by_date

THE REGIONAL GREENHOUSE GAS INITIATIVE
An Initiative of the Northeast and Mid-Atlantic States of the U.S.

RGGI Program Review

Stakeholder Webinar – February 11, 2013

www.rggi.org

RGGI Program Review

- RGGI is the nation's first mandatory market based program to limit CO_2 emissions
- The states committed to a 2012 Program Review
- During the Program Review process states:
  - Conducted electricity sector, CO_2 emissions, and macro economic analyses;
  - Consulted extensively with stakeholders and market experts

RGGI Program Review Results

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The states found:

- Emissions are currently approximately 40% below 2005 levels
- Investment of auction proceeds from the first three years of the program is generating $1.6 billion in net economic benefit region-wide through the end of the decade
- To maintain a working market the cap needs to be adjusted
- Additional opportunities to make a the successful RGGI program even more effective and efficient

Model Rule Amendments

- Outline:
  - Size and Structure of the Cap
  - Interim Adjustments for Banked Allowances
  - Undistributed and Unsold Allowances
  - Cost Containment Reserve (CCR)
  - Flexibility Mechanisms
  - Interim Control Periods
  - Reserve Price
  - Miscellaneous

Size and Structure of Cap
(Model Rule XX-5.1)

- The Updated Model Rule contains language for the CO_2 allowance base budget for allocation years 2014-2020, with the regional RGGI cap set at 91 million short tons in 2014.
- The Updated Model Rule continues to maintain the original 2.5% per year reduction to the RGGI regional cap for the years 2015-2020.
- The states commit to conduct a program review by 2016, including potential reductions to the cap post-2020.

Interim Adjustments for Banked Allowances (Model Rule XX-5.3)

The Updated Model Rule contains language to address the private bank of allowances held by market participants via two Interim Adjustments for Banked Allowances.

- A reduction to the budget will be made for 100% of the first control period private bank of allowances over a 7 year period (2014-2020), as determined on January 1, 2014.
- A reduction to the budget will be made for 100% of the second control period private bank of allowances over a 6 year period (2015-2020), as determined on March 15, 2014.
- Interim Adjustment for Banked Allowances formula: (bank / adjustment period) x (ratio of each state's annual base budget to total regional annual cap)
- Market participants may continue to bank allowances.

Interim Adjustments for Banked Allowances
(Model Rule XX-5.3 – Illustrative Example)

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- As an illustrative example only, the following chart assumes that the first control period private of allowances (2009-2011) is 49 million and second control period private bank of allowances (2012-2013) is 60 million.
- In the example below:
  - A reduction to the budget is made for 100% of the first control period private bank of allowances over a 7 year period (2014-2020).
  - A reduction to the budget is made for 100% of the second control period private bank of allowances over a 6 year period (2015-2020).

Interim Adjustments for Banked Allowances							
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Regional CO_2 Budget	91 M	89 M	87 M	85 M	82 M	80 M	78 M
Interim Adjustment (49 M)	7 M	7 M	7 M	7 M	7 M	7 M	7 M
After First Adjustment	84 M	82 M	80 M	78 M	75 M	73 M	71 M
Second Control Period Interim Adjustment (60 M)		10 M	10 M	10 M	10 M	10 M	10 M
After Second Adjustment	84 M	72 M	70 M	68 M	65 M	63 M	61 M

Undistributed and Unsold CO_2 Allowances (Model Rule XX-5.2)

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- The Updated Model Rule contains language to provide the ability to retire undistributed and unsold allowances at the end of each control period, subject to each state's statutory and/or administrative process.

Cost Containment Reserve (CCR)
(Model Rule XX-1.2, XX-5.3, XX-9)

The updated Model Rule contains language for the adoption of a CCR as a cost containment flexibility mechanism, with the following design elements:

- The CCR allowances will be sold at any auction if demand for allowances at prices above the CCR trigger price exceeds the supply of non-CCR allowances, until all CCR allowances available for the year are sold.
- CCR allowances will only be sold at or above the CCR trigger prices of: $4 in 2014, $6 in 2015, $8 in 2016, $10 in 2017, and adjusted 2.5% in each calendar year thereafter.
- The CCR allowances will be in addition to the cap and be fully fungible.
- A fixed annual quantity of 5 M CCR allowances in 2014 and a fixed annual quantity of 10 M CCR allowances thereafter, with annual replenishment as needed, up to the fixed quantity to ensure availability of allowances each year.

Flexibility Mechanisms
(Model Rule XX-1.2, XX-6.5, XX.10.3)

To prevent undesirable market behavior caused by an overlap in flexibility mechanisms and to simplify the use of offsets, the updated Model Rule:

- Retains a 3.3% offset limitation for compliance.
- Removes international offsets.
- Removes control period extension to 4 years.
- Replaces the price triggers and the resultant offset expansion with the CCR.

U.S. Forests Offset Protocol
(Model Rule XX-10.2 and XX-10.5)

- The states have developed a RGGI U.S. Forests Offset Protocol, with the intent that the Updated Model Rule incorporates the protocol by reference.
- For those states that adopt this new protocol, it includes: Forestry Management, Avoided Conversion, and Reforestation.
- The new RGGI U.S. Forests Offset Protocol is based on the California Air Resources Board (CARB) U.S. Forest Offset Protocol.[1]
  - States that adopt this new protocol may accept projects that have been registered with the Climate Action Reserve.
  - The RGGI Protocol uses a discounting approach to address reversals and ensure performance.
- The states will require compliance with general offset requirements contained in the Model Rule, including additionality, verification, and the application process, as appropriate.

[1] See CARB Compliance Offset Protocol for U.S. Forest Projects: http://www.arb.ca.gov/cc/capandtrade/protocols/usforestprojects.htm

Offsets
(Model Rule: XX-10.5(b))

- SF_6 Offset Category: The updated Model Rule deletes the language referring to consistency applications associated with reduction in emissions of sulfur hexafluoride that were filed prior to 2009 in Section 10.5(b)(3), as those requirements are no longer applicable.

- End-Use Energy Efficiency Offsets Category: The updated Model Rule deletes language for offset projects commenced prior to January 1, 2009.

Interim Control Periods
(Model Rule XX-1.2, XX-1.5, XX-4.1, XX-6.5, XX-7.2)

The updated Model Rule contains language to establish:

- A new requirement for sources to acquire allowances for 50% of annual emissions over each of the first 2 years of a control period.
- Maintains final compliance reconciliation for the balance of allowances at the end of the 3-year control period.

Reserve Price
(Model Rule XX-1.2)

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- The minimum reserve price in calendar year 2014 will be $2.00. Each calendar year thereafter, the minimum reserve price shall be 1.025 multiplied by the minimum reserve price from the previous calendar year, rounded to the nearest whole cent.

- The updated Model Rule contains language to remove provisions in state regulations for a “current market reserve price”, where applicable.

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Miscellaneous

- Early Reduction CO_2 Allowances (XX-5.3): The updated Model Rule deletes language related to the ERA provisions, as they are no longer applicable to the program.

- Incorporation by Reference (XX-10): The updated Model Rule contains updates for all documents incorporated by reference.

RGGI IPM Analysis: Amended Model Rule

RGGI Model Rule Scenario Analysis

Assumptions

Revised IPM Modeling to Reflect Program Features in the Model Rule . . .

- The regional cap beginning at 91 million tons in 2014
- The Interim Adjustment for Banked Allowances
- The revised CCR triggers and the modified CCR size for 2014

Continued to use 2 scenarios related to the potential use of banked allowances . . .

To examine different assumptions for how market participants might use banked allowances for compliance purposes, the states used alternate banking usage scenarios:

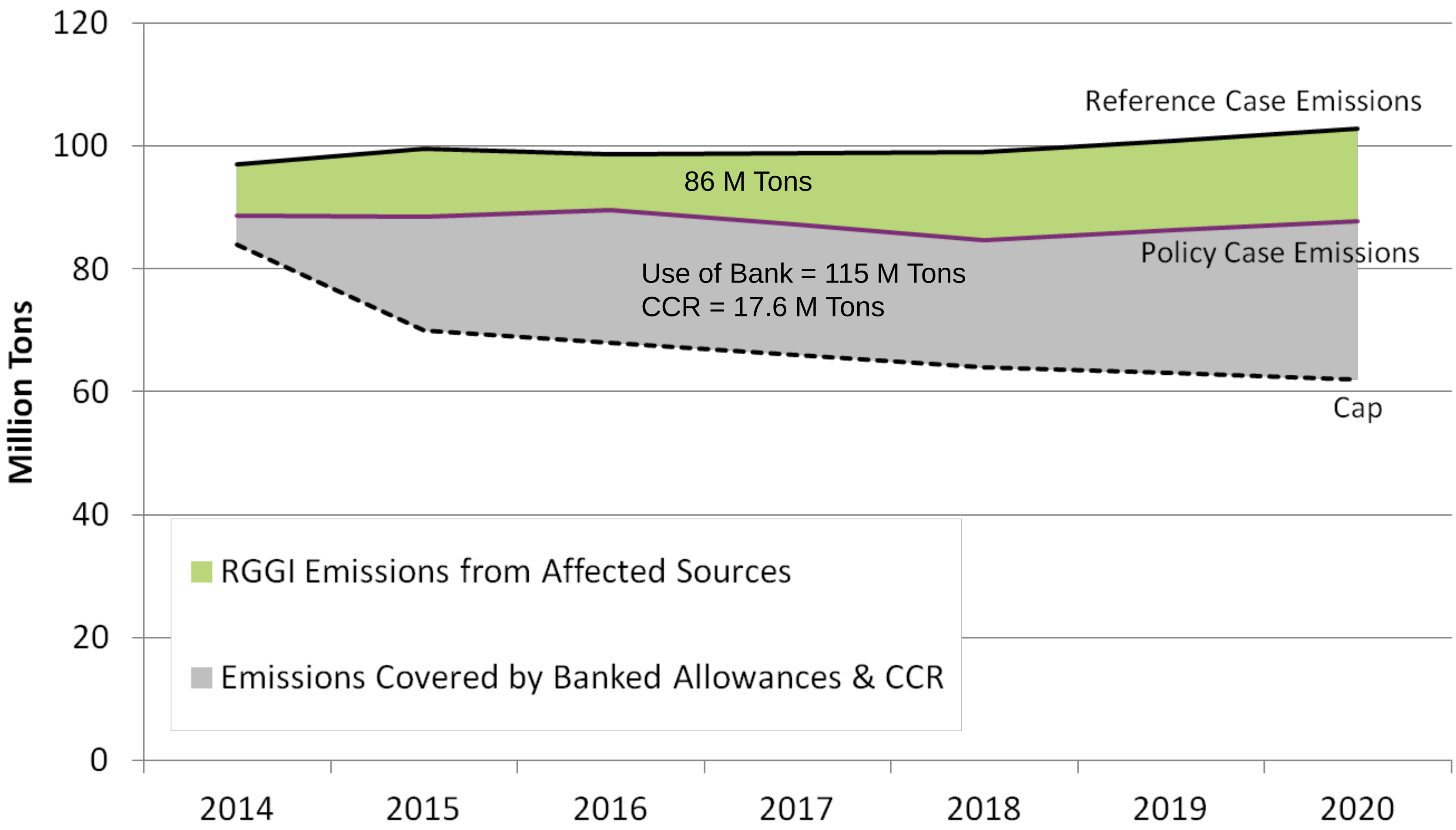
1) 91 Cap Bank MR

The IPM model inherently has perfect foresight (*i.e.,* knows all future market outcomes, including allowance prices and how to maximize use of the bank with perfect certainty).

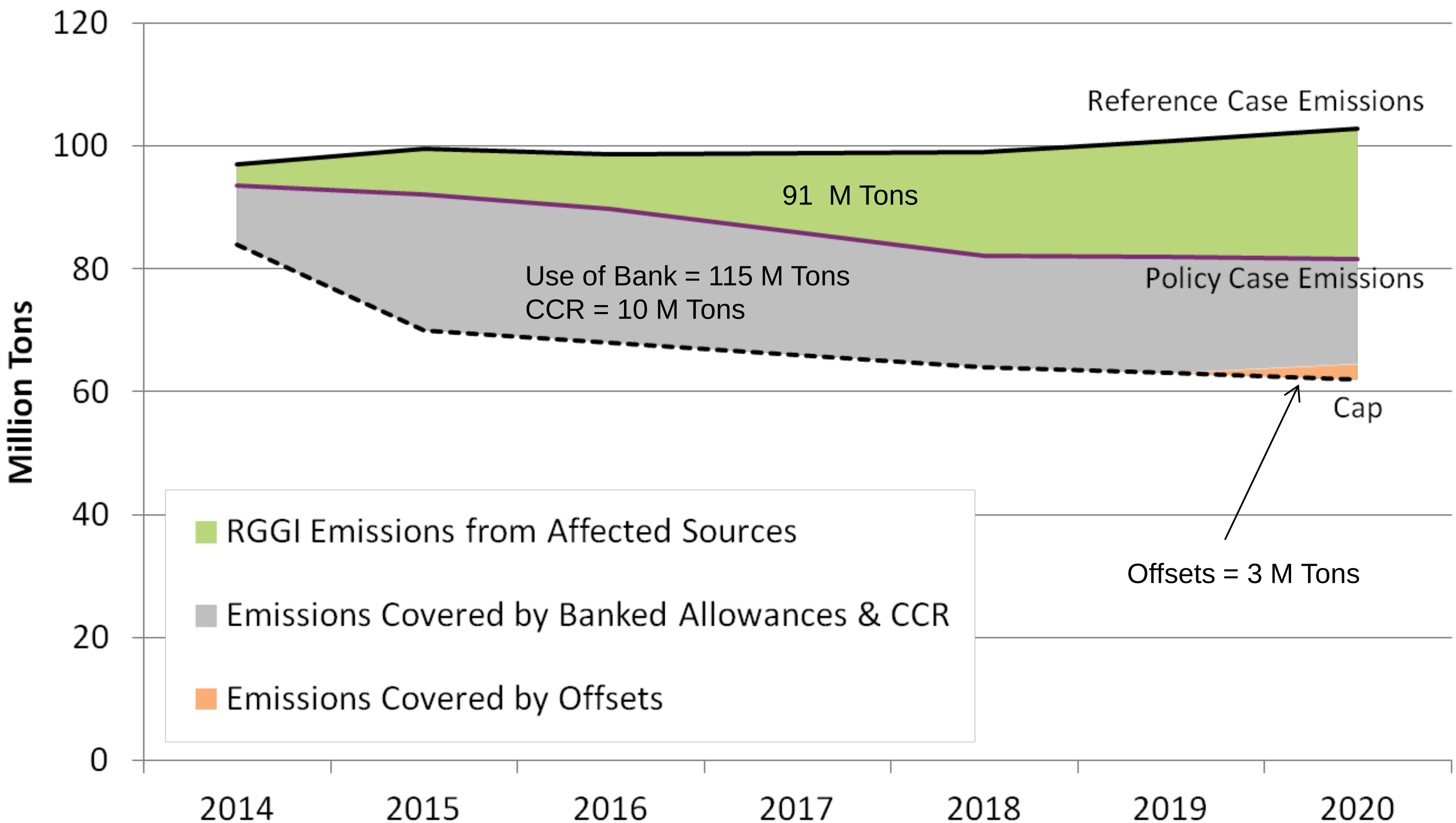
2) 91 Cap Alt Bank MR

Assumes that market participants make decisions related to use of banked allowances for compliance on a shorter time horizon than projected by IPM using perfect foresight (i.e., due to uncertainty, more likely to defer emissions reductions and rely more heavily on banked allowances in the short-term.

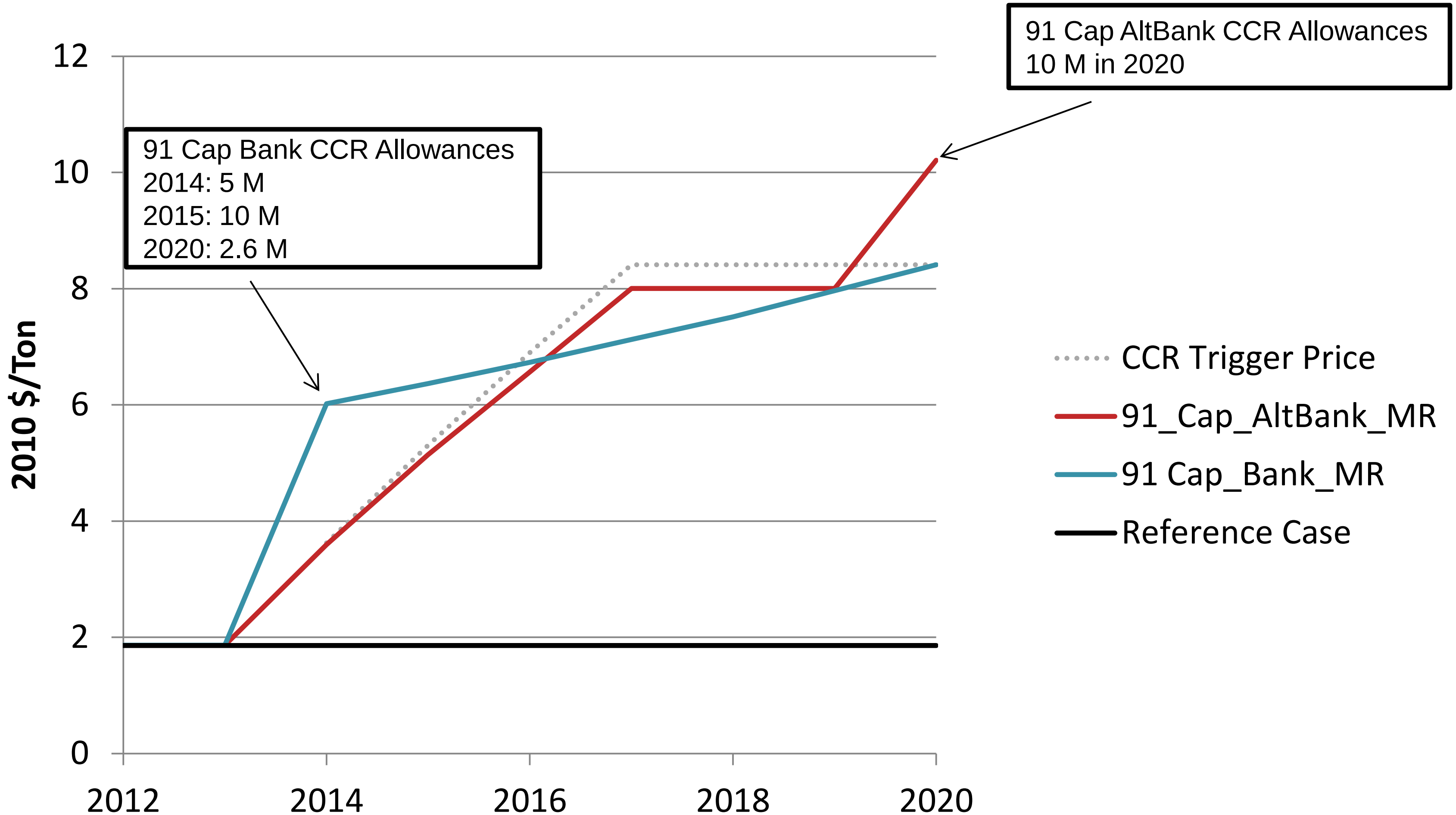
RGGI Model Rule Scenario Results
Sources of Emission Reductions 91 Cap_Bank_MR



RGGI Model Rule Scenario Results
Sources of Emission Reductions 91 Cap_AltBank_MR



RGGI Model Rule Scenario Results
Allowance Prices 91_Cap_MR Cases



RGGI Model Rule Scenario Results

91_Cap_Bank_MR & 91_Cap_Alt Bank_MR – Results Summary

Scenario Name	Allowance Price (2010$) Projection (2014-2020)	Cumulative CCR Allowances Released	Offsets	Cumulative Emissions Reduction
91_Cap_Bank_MR	$6.00 - $8.40	17.6 M	0 M	86 M
91_Cap_AltBank_MR	$3.60 - $10.20	10 M	2.7 M	91 M

REMI Economic Impact Analysis Assumptions and Results

91 Cap Bank Potential Scenario

NESCAUM

RGGI Program Review REMI Analysis

- These projections are draft and this analysis provides information for the overall program review process.

- Analysis projects potential macroeconomic impacts for the 9-state RGGI region due to potential changes in the RGGI program

- Analysis does not project macroeconomic benefits due to carbon emissions reductions (e.g., value of avoided GHG emissions)

- Analysis projects the macroeconomic impacts of the incremental changes between the current RGGI program (REMI Reference Case) and potential changes to the RGGI program (91 Cap Bank IPM Potential Scenario)

RGGI Program Review REMI Analysis

- These benefits are in addition to the macroeconomic benefits due to the current RGGI program
- This analysis does not make any projections for RGGI allowance prices or RGGI proceeds after 2020
- This analysis does not analyze the impacts of investing RGGI proceeds generated after 2020

REMI Assumptions

- No changes are made to the REMI Reference Case inputs and assumptions.

- Inputs to REMI are developed using two sources of data which describe economic impacts resulting from potential changes to the RGGI program:

  1) **States' Investments of RGGI Allowance Proceeds**

  2) **IPM Output on Electricity Market Changes**

REMI Assumptions

States' Investments of RGGI Allowance Proceeds

- States' investments generate *incremental* changes in regional economic activity (e.g., spending, prices, labor availability)
- REMI model quantifies changes in the 91 Cap Bank Potential Scenario including the incremental investment of additional projected proceeds from 2012-2020
- Examples of proceed investments include: energy efficiency programs, GHG abatement projects, direct bill assistance

REMI Assumptions

States' Investments of RGGI Allowance Proceeds

- Cumulative projected proceeds for the **IPM Reference case** are **$1,549.97M (2010$)**.

- Cumulative projected proceeds for the **91 Cap Bank Potential Scenario** are **$3,783.49M (2010$),** representing an **additional $2,233.51M (2010$)** in proceeds compared to the Reference Case.

REMI Results

Summary of Regional Economic Impacts *(3% Discount Rate)*

Summary of Regional Economic Impacts, 2012-2040

Scenario	**91 Cap Bank**
Cumulative Change in Gross State Product ($2010)	$8.2 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional GSP:	$48,000 Billion
Cumulative Change in Employment (Job-Years)	124,800
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Employment:	941,000,000
Cumulative Change in Real Personal Income ($2010)	$6.8 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Real Personal Income:	$43,000 Billion

Additional REMI Results

Summary of Regional Economic Impacts *(0% Discount Rate)*

Summary of Regional Economic Impacts, 2012-2040

Scenario	91 Cap Bank
Cumulative Change in Gross State Product ($2010)	$14.5 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional GSP:	$74,000 Billion
Cumulative Change in Employment (Job-Years)	124,800
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Employment:	941,000,000
Cumulative Change in Real Personal Income ($2010)	$12.4 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Real Personal Income:	$66,000 Billion

Summary of Regional Economic Impacts *(7% Discount Rate)*

Summary of Regional Economic Impacts, 2012-2040

Scenario	91 Cap Bank
Cumulative Change in Gross State Product ($2010)	$3.9 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional GSP:	$31,000 Billion
Cumulative Change in Employment (Job-Years)	124,800
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Employment:	941,000,000
Cumulative Change in Real Personal Income ($2010)	$3.1 Billion
Percent Change from Business-As-Usual	0.0%
Business-As-Usual Regional Real Personal Income:	$28,000 Billion

Next Steps

- With release of Model Rule states will transition to state specific processes to amend their statutes and/or rules
- The state-specific processes will take place over the next year, according to each state's regulatory schedule
- Each state will conduct its own stakeholder process
- States will continue to work together to implement the RGGI program review changes outlined today
- More information on materials presented today are available at: http://www.rggi.org/design/program_review