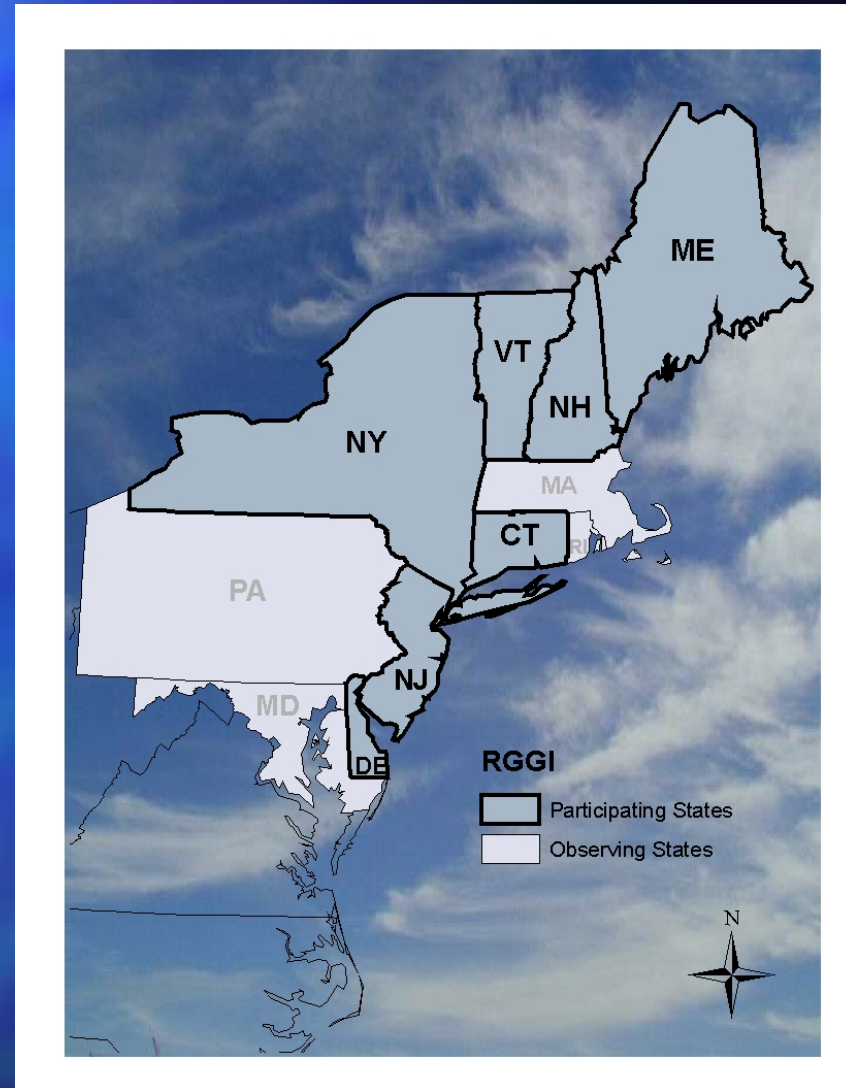


# Regional Greenhouse Gas Initiative (RGGI)

Gina McCarthy  
Commissioner, CT DEP  
Pew State and Regional  
Workshop


October 10, 2006



“It used to be the news and the weather, now the weather is the news.”



global change news



Hurricane Floyd  
NOAA-12 AVHRR/HRPT  
Multi-spectral False Color Image  
September 13, 1999 @ 21:48 UTC

Extreme Weather Events to  
Continue and Likely Increase

The complex block contains a satellite image of Hurricane Floyd. The image shows a large, swirling storm system with a distinct eye. The colors are false-color, with the storm clouds appearing in shades of blue and white against the darker background of the ocean. The text "global change news" is at the top left. The NOAA logo is in the top left corner of the image. The text "Hurricane Floyd" and "NOAA-12 AVHRR/HRPT" is in the top right corner of the image. The text "Multi-spectral False Color Image" and "September 13, 1999 @ 21:48 UTC" is in the bottom right corner of the image. The text "Extreme Weather Events to Continue and Likely Increase" is at the bottom of the block.

# Climate Change is Happening Now



- Study after study confirms this fact
- Negative impacts of climate change occurring at rates faster than originally projected (e.g., NASA report finds ice caps are melting 12-15x faster than originally expected)



# Impacts of Climate Change

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- Warming atmosphere & oceans
- Sea level rise
- Increased storm intensity
- Loss of wetlands
- Habitat loss, species migration & loss
- Spread of vector-borne diseases

# Climate Change is the U.S. Northeast



- Issued by Northeast Climate Impacts Assessment (Oct 06)
- Projects impacts of higher- and lower-GHG emissions scenarios for 9 northeast states
- Annual temperatures across Northeast have risen more than 1.5°F since 1970
- Winters have been warming at 1.3°F per decade since 1970

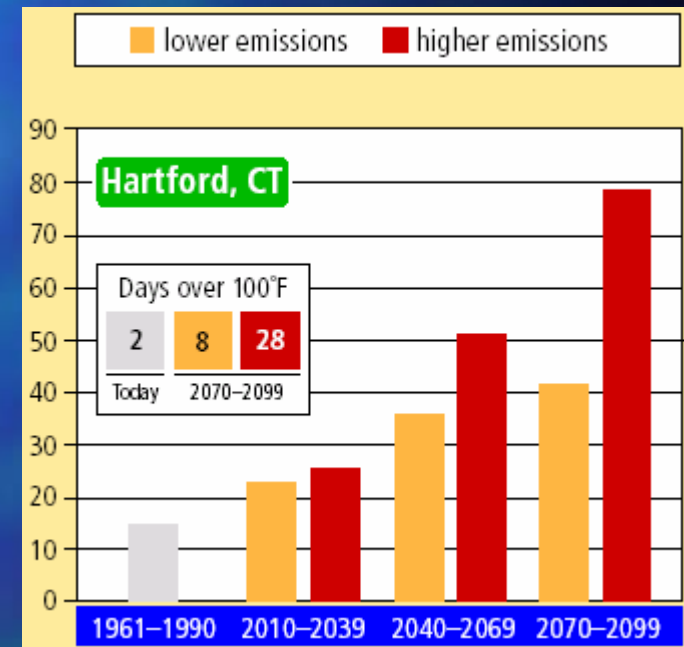




# NECIA Report Findings

(higher-emissions scenario)

- By end of century, winters could warm 8-12°F, summers 6-14°F
- More 90°+ days (complicating ozone attainment efforts)
- More late summer & early fall droughts
- Sea-level rise will continue, threatening NE coastline
- Start & end of seasons will be significantly altered

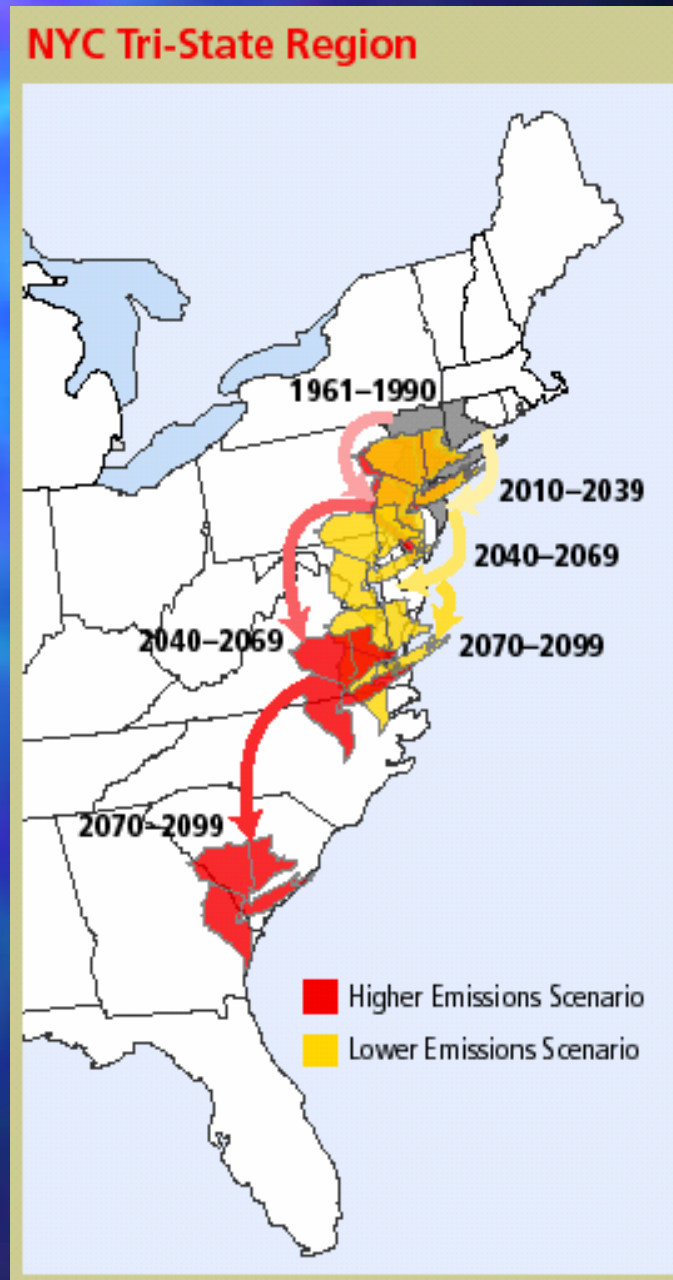


# Feeling the Heat



- Changes in average summer heat index will strongly alter how summer feels to residents of the Northeast.
  - For example, summers in southwest CT could feel like summer weather currently experienced in SC and GA by the end of the century under the higher emissions scenario.

(NECIA Report, 10/06)

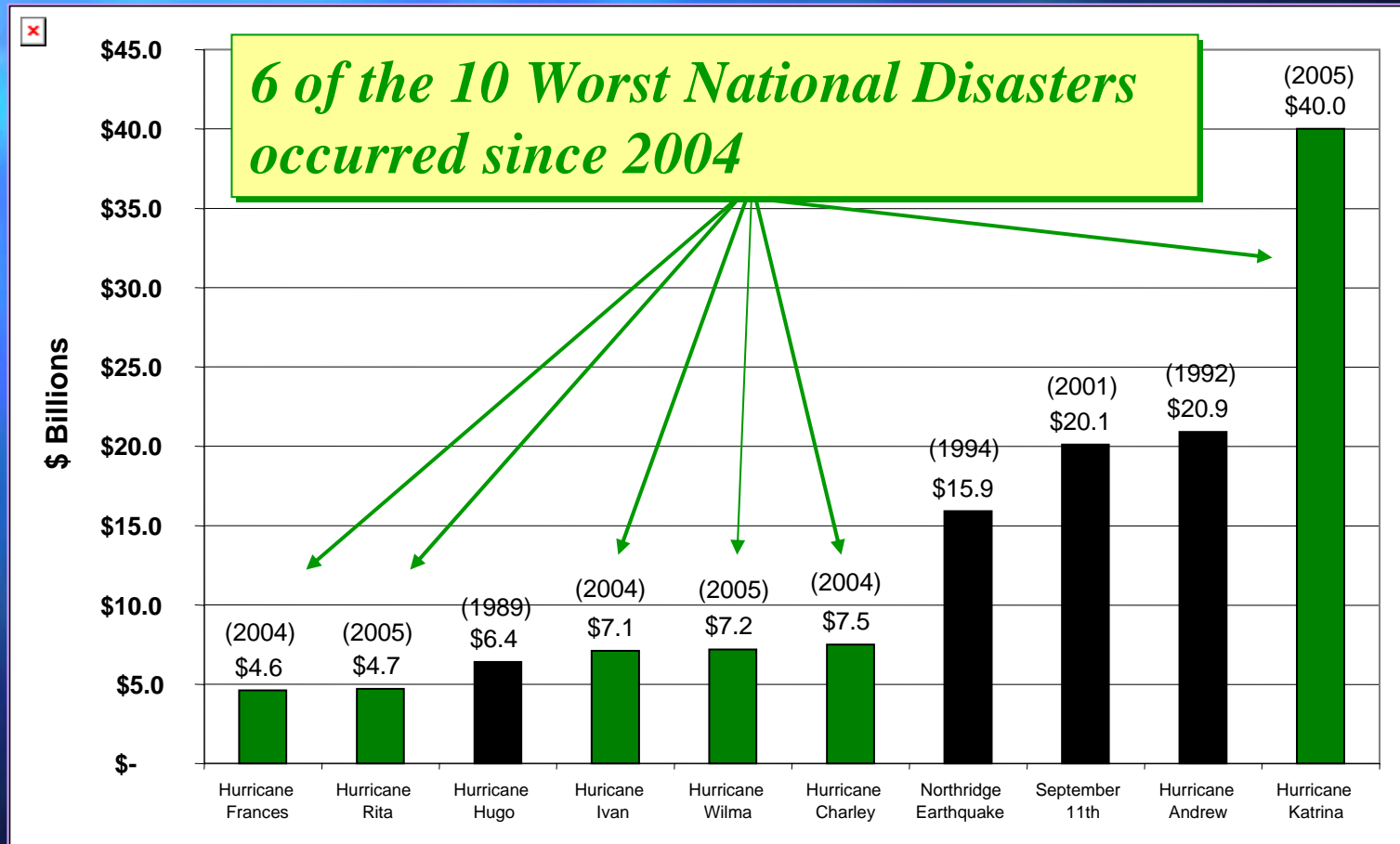


# Climate Indicators: Why Are We Concerned?



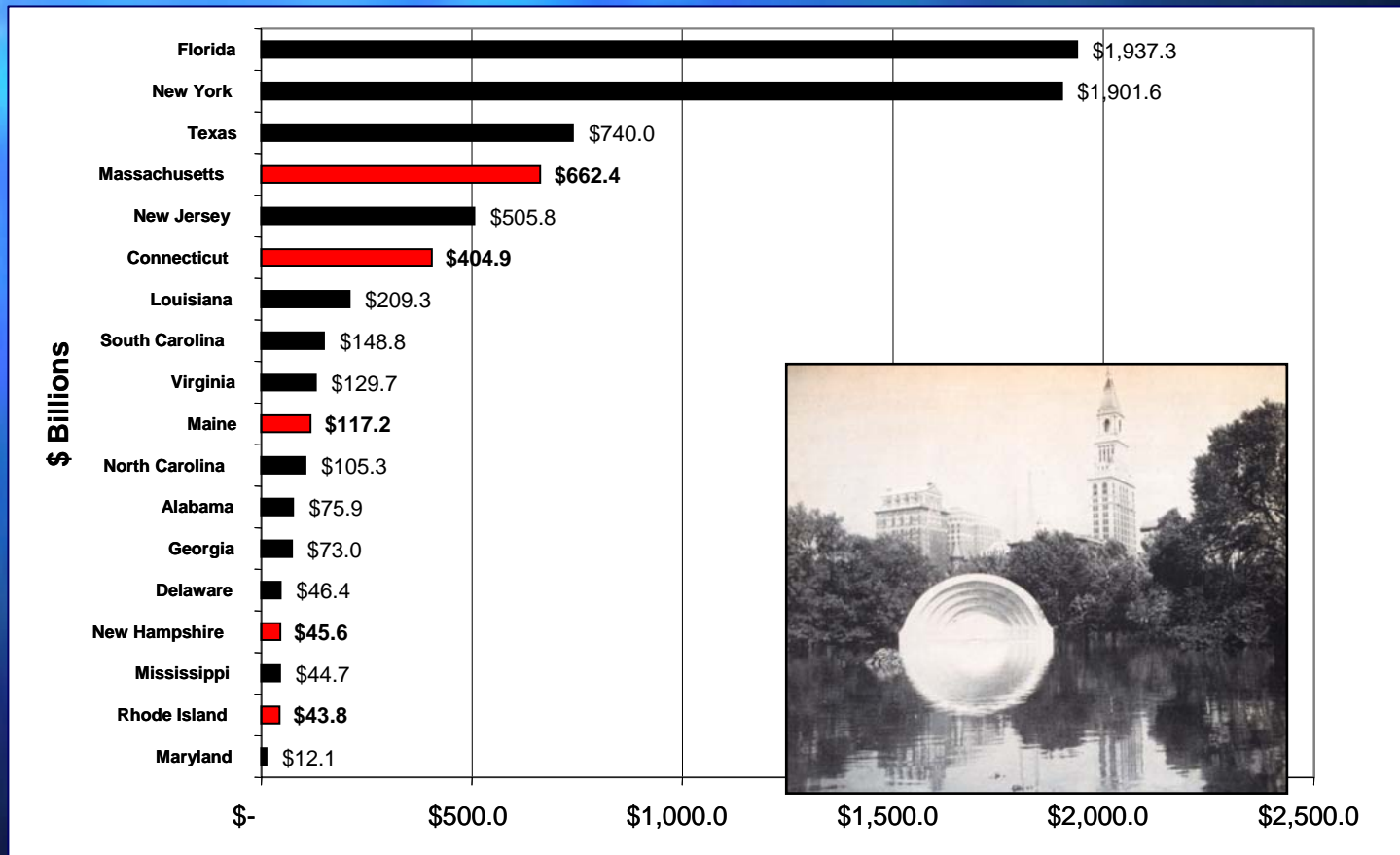
- 2005: record number of category five hurricanes
- Greenland ice sheet melting much faster than even most aggressive models predicted
- 2003 European heat wave: 30,000 excess deaths
- 2005 flooding on Indian subcontinent
- In last 100 years, 2F increase and 20% more precipitation in southern New England
- Increased frequency of tornadoes, 200 in one day in March 2006

# Economic Impacts



# New England Perspective

## Coastal Property Exposure – Over \$1 Trillion



### References

Insurance Information Institute

Photo - New England Hurricane of 1938. Bushnell Park in Hartford, CT.

\$6 billion in US damages with nearly 700 fatalities. An identical Category 5 hurricane today would cost an estimated \$23.5 billion in damages

# The longer we wait, the more it is going to cost us



- We initiated actions to reduce smoking when the causal link between tobacco and cancer was much less certain than the link between anthropogenic greenhouse gas emissions and global warming.

# CT Climate Change Regulatory Drivers

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- NEG/ECP Climate Change Action Plan (2001)
- CT Stakeholder Process (2003) & Report (Jan 2004)
- CT Climate Change Action Plan (Jan 2005)
- Numerous Public Acts

# CT Climate Change Action Plan



- **GHG Reduction Goals**
  - 1990 GHG levels by 2010
  - 10% below 1990 levels by 2020
- Recommended 55 GHG reducing actions across all sectors
  - Transportation
  - **Electricity Generation**
  - Residential, Commercial & Industrial
  - Agriculture, Forestry & Waste Management

# CT Action Plan – Electricity Sector



- Recommendation include increased support of EE, renewable energy (RPS), voluntary clean energy purchase
- To achieve GHG reductions from Electricity Generating Units (EGUs), **a regional cap & trade program was recommended as the most efficient option.**

# Why the Regional Greenhouse Gas Initiative (RGGI)?



- Recognize importance for action today.
- Regional program more efficient & effective than state-only approach.
- Logical outgrowth of region's successes in acid rain, mercury and NOx budget program.
- Focus on large electricity generating units (EGUs) that contribute significant CO2 emissions.
- Develop consistent protocols that can be used by many states. May serve as template for national program.
- Create opportunities for economic development, energy independence.



# RGGI MOU & Model Rule

- RGGI Memorandum of Understanding signed on Dec 20, 2005 by 7 of 9 states active in forming RGGI framework.
  - MA & RI have not yet signed.
  - MD passed legislation which brings them into the program.
- MOU is available online at [http://www.rggi.org/docs/mou\\_final\\_12\\_20\\_05.pdf](http://www.rggi.org/docs/mou_final_12_20_05.pdf)
- The Model Rule (released 08/15/06) and related materials are available at <http://www.rggi.org/modelrule.htm>



# Model Rule Timeline

- Dec 20, 2005: MOU signed by 7 states
- Feb 10, 2006: MOU overview and discussion for stakeholders
- Feb 21, 2006: Share initial draft of model rule with agency heads
- March 23, 2006: Draft model rule released to stakeholders
- March 28, 2006: Stakeholder meeting in NYC to present model rule
- May 2, 2006: Meeting in Hartford to provide stakeholders with a venue to share main concerns
- May 22, 2006: Closing date for stakeholder and public comments
- August 15, 2006: Final Model rule released
- **Next year+: RGGI states go through state-specific rulemaking processes**



# Next Steps

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- RGGI States to begin state-specific rulemaking processes in fall 2006. Individual state rules will be adapted from the regional model rule.
- States will develop policy to address allocation & consumer benefit issues.



# RGGI Basics

- A cap-and-trade program for CO<sub>2</sub>
- Applies to all fossil fuel-fired electricity generating units (EGUs) with nameplate capacity of 25 MW or greater
- Program commences Jan 1, 2009
- Three-year compliance period



## RGGI Basics (cont.)

- Sources may cover up to 3.3% of reported emissions with offsets.
- Unlimited banking of allowances and offsets allowed
- Regional organization will manage emissions & allowance tracking system and evaluate offsets.



# Regional Emissions Cap

- Two-phase cap:
  - Stabilization at “current” levels for 2009-2014.
  - State budgets are reduced 2.5% per year 2015-2018.
- For the 7 signatory states, overall cap size is 121,253,550 tons.
  - The overall cap size would be adjusted to account for MD joining the program.

# Proposed Allocation of State Budgets



- Minimum 25% to be allocated for consumer benefit
- Remaining allowances (75% max) to be allocated pursuant to state-specific methodology
  - New source set-aside fund (if included) to be carved out of individual state budgets

# Offsets



- Standards approach – uses predefined protocols for approving offset projects
- Initial offset categories:
  - landfill methane capture & combustion
  - SF6 capture & recycling at electricity transmission facilities
  - sequestration through afforestation
  - fossil fuel end-use efficiency
  - methane capture from agricultural operations
- Initial geographic location:
  - Within the RGGI states, states with a comparable cap & trade program, states that sign an Offsets MOU
- Other categories to be considered in the future

# RGGI: A few key points



- RGGI is the first GHG cap & trade program in the U.S.
- Modeling results suggest an additional 1-2% increase in electricity prices in the region between now and 2015.
- Requirement for states to use a minimum 25% of their allowances for “consumer benefit” can help mitigate modest price increases that may result from implementation of RGGI.
- Price Triggers at \$7 & \$10 levels provide price relief measures (greater % of offsets allowed and broader geographic scope of offsets) if needed.



# Benefits of RGGI

- Market-based system is most cost-effective option
- Potential template for national program, giving us first-mover advantage
- Opportunities for energy independence & local/regional economic development
- Incentives for more efficient generation & consumption of electricity
- Benefits of existing state EE and RPS programs



# Energy / Environment Nexus

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- Energy, environmental protection and economic development are not mutually exclusive
- RGGI is an example of the types of initiatives needed to help achieve joint energy & environmental goals