# Climate Change and the NY State Energy Plan – or- NY MPOs in the greenhouse?

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# Overview

- Background and policy objectives of NY State Energy Plan
- Analytical Approach
- Results to date
- MPO reaction

# Status of "Greenhouse Gas" Documents

- New York State Energy Plan – adopted by Energy Planning Board, June 2002
- Recommendations to Governor Pataki for Reducing New York State Greenhouse Gas Emissions (in collaboration with the New York Greenhouse Gas Task Force) – delivered to Governor's Office, April 2003

# NY State Energy Plan

- Blueprint to inform energy decision making
- Provides broad statewide energy policy direction
- Considers:
  - transportation
  - environment
  - energy
  - economic development

# NY State Energy Plan

- ~ 65 recommendations
- 30 directly or indirectly related to transportation

# Recommendations

- Commit to a statewide goal of reducing greenhouse gas emissions 5% below 1990 levels by 2010, and 10% below 1990 levels by 2020

- The State adopts the goal of reducing statewide energy use in 2010 to a level that is 25% below 1990 energy use per unit of Gross State Product. In addition, the State adopts the goal of increasing the share of renewable energy as a percentage of primary energy use 50% by 2020.

# Recommendations

- Working with regional and local planning organizations, analyze and quantify the energy use and air pollution emissions expected to result from transportation plans and programs
- Include in the State transportation planning and State Environmental Quality Review Act (SEQRA) related processes, consideration of $CO_2$ production and mitigation strategies,as appropriate

# Recommendations

- Redirect transportation funding toward energy-efficient transportation alternatives, including public transportation, walking, and bicycling, and provide incentives to encourage greater use of related alternatives that improve transportation efficiency
- Target open space funding to prevent suburban sprawl, promote Quality Communities, reduce vehicle miles traveled, and support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions

# Recommendations

- Support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions, such as Commuter Choice, Ozone Action Days, diesel vehicle retrofits, improved traffic signal coordination with light emitting diode replacement technology, transportation system management, and other similar actions

# Implementation of Recommendations

- Consistent approach with air quality, $CO_2$ and energy analysis
- Consistent approach with conformity determinations in non-attainment areas
- Identification of projects
  - Relationship to NYS conformity regulation
  - Regionally significant transportation projects

# Objective

- Consider the energy and greenhouse gas impacts of transportation actions
- Assess and compare the energy and greenhouse gas impacts due to the implementation of projects listed in TIPs and Long Range Plans

# Determining the Need for Analysis

- Based on all regionally significant projects listed TIPs and Plans
  - Highway/Roadway Projects:
  - Traffic Signalization Projects
  - Transit/Rail Projects
  - Other

(projects identified as regionally significant are to be followed up at the projects stage with a project-level energy analysis)

# Analysis Guidelines

- Assumptions and Inputs
  - Should be consistent with most up-to-date operational information relevant to the network being analyzed
  - Travel demand model networks should be updated to include all regionally significant projects
  - Where travel demand model not available, project-level analysis should be performed

# Analysis Guidelines

- Direct and Indirect Energy Calculations for
  - No Action Scenario
  - TIP/Plan Scenario

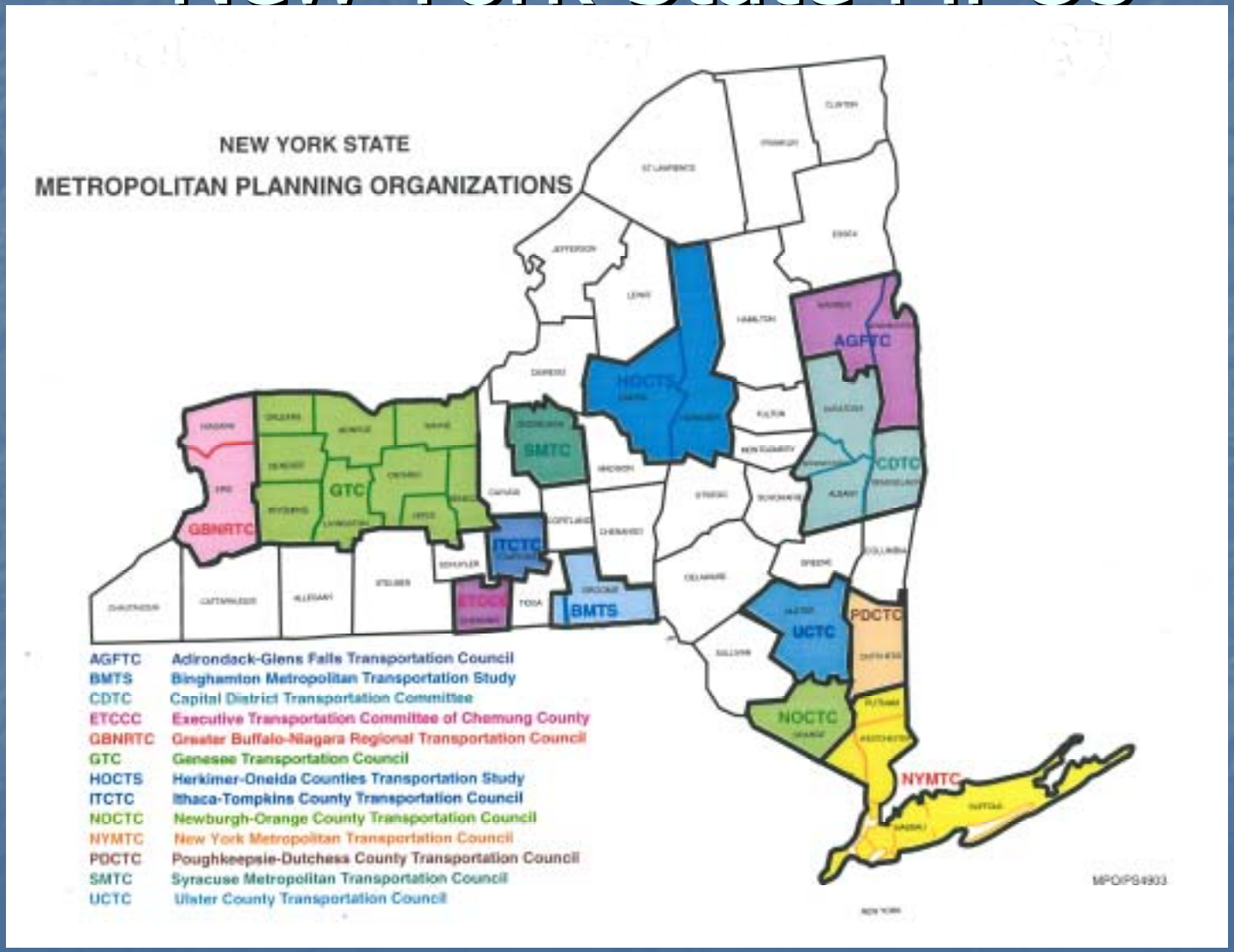
# Roadway Transportation Projects

- Direct Energy – The energy consumed by the vehicles using the facility.
- Indirect Energy – All energy inputs to the construction, operation, and maintenance of a system

# Results

- Preliminary
- Not qa/qc'd
- Model based or project based, depending on MPO
- For 2025 analysis year
- Some MPOs did additional analysis years
- Confidence in trend, not absolute numbers

# New York State MPOs



# GBNRTC Results


Direct Energy Reduction:

$36 \times 10^9$ BTUs

(19.23%)

Greenhouse Gas Reduction:

781 tons

(19.26%)

Model based

# GTC Results


Direct Energy Reduction:

$0.025X10^9$ BTUs

(0.02%)

Greenhouse Gas Reduction:

1 ton

(0.03%)

Model based

# SMTC Results


Direct Energy Reduction:

$-1.07X10^9$ BTUs

(-1.05%)

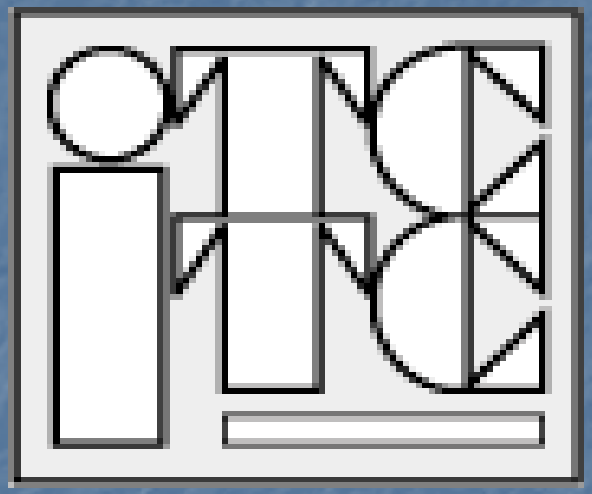
Greenhouse Gas Reduction:

21 tons

(1.13%)

Model based

# ITCTC Results



Direct Energy Reduction:

$0.198X10^9$ BTUs

(1.81%)

Greenhouse Gas Reduction:

15 tons

(1.90%)

Model based

# ECTC Results


Direct Energy Reduction:
$172X10^9$ BTUs
(11.75%)

Greenhouse Gas Reduction:
3612 tons
(11.70%)

Project based

# HOCTS Results


Direct Energy Reduction:

NA

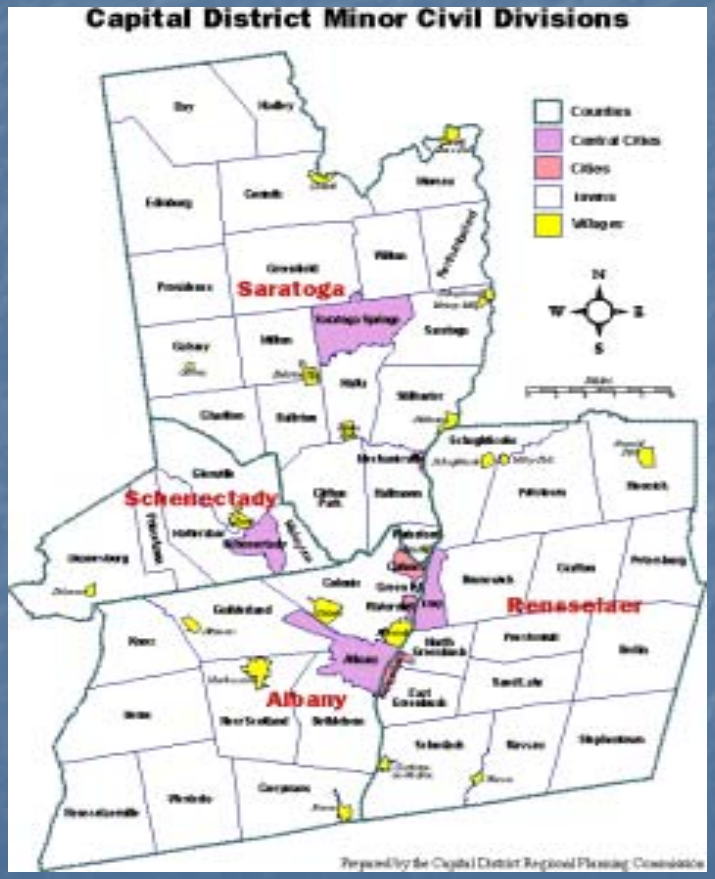
Greenhouse Gas Reduction:

0.01 tons

(1.79%)

Project based

# CDTC Results




Direct Energy Reductions:

$5228X10^9$ BTUs

(11.89%)

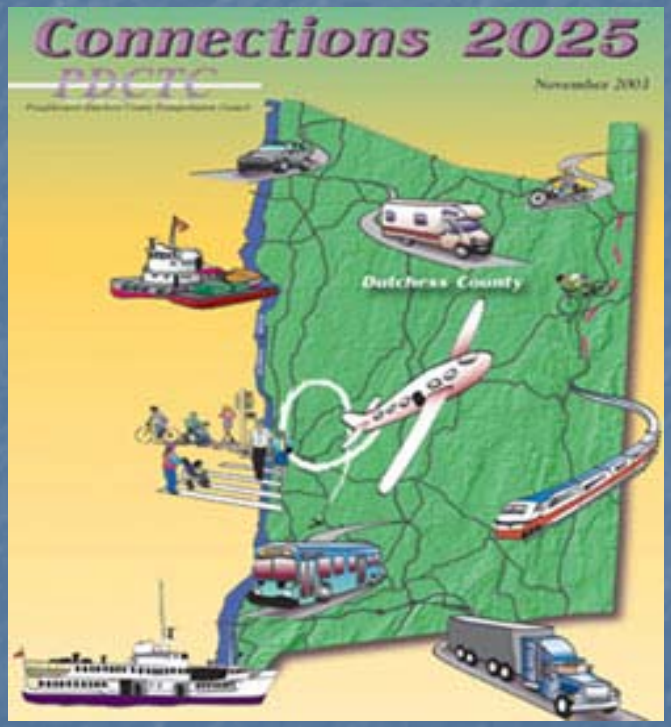
Greenhouse Gas Reduction:

111,521 tons

(11.89%)

Model based

# PDCTC Results




Direct Energy Reduction:

$1.086X10^9$ BTUs

(2.55%)

Greenhouse Gas Reduction:

23 tons

(2.54%)

Model based

# OCTC Results


Direct Energy Results:

$0.152X10^9$ BTUs

(0.13%)

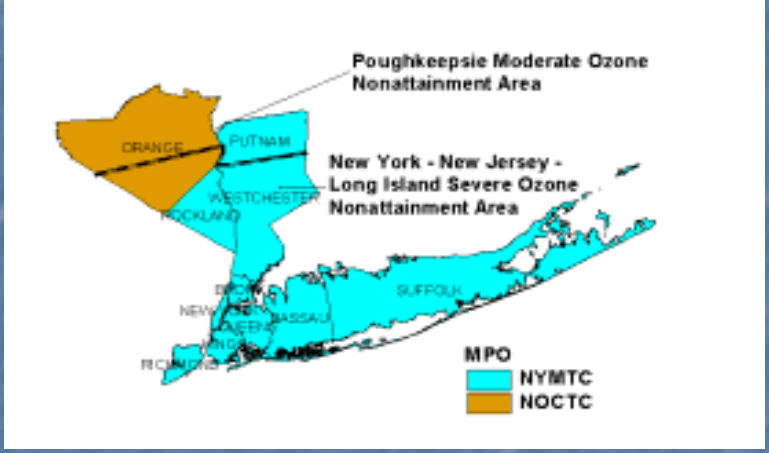
Greenhouse Gas Reduction:

3 tons

(0.12%)

Model based

# NYMTC Results




Direct Energy Reduction:

$6.555X10^9$ BTUs

(0.57%)

Greenhouse Gas Reduction:

906 tons

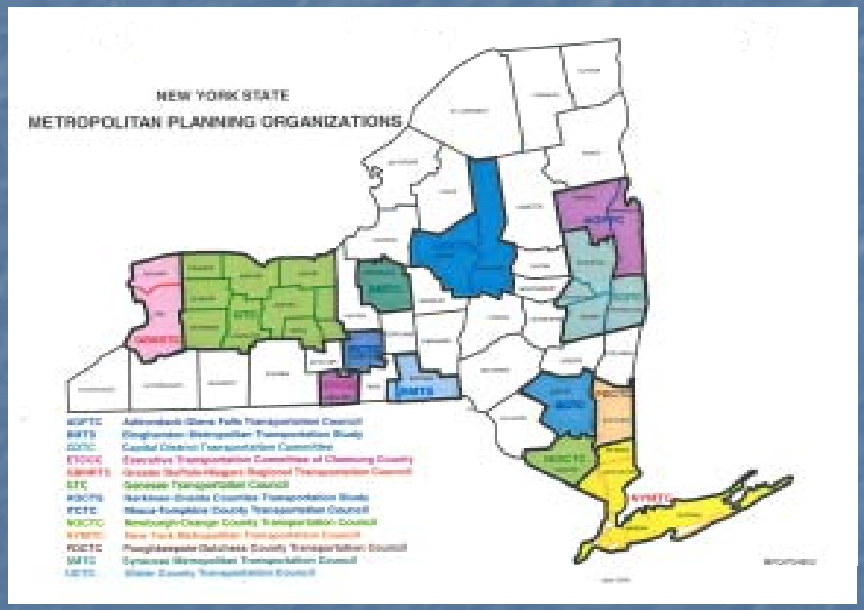
(1.01%)

Model based

# Results to come

- A/GFTC
- BMTS
- UCTC

# Statewide results




Direct energy reduction:

$5443X10^9$ BTUs

(11.53%)

Greenhouse Gas Reduction:

116,883 tons

(10.90%)

# MPO Reaction

- Both positive and negative
- Integrated policy direction from DOT
- TIPs and Plans can only affect small percentage of energy and emissions
- State needs to be leader in greenhouse gas reductions
- Guidance, guidance, guidance

# MPO Reaction

- Force for positive change
- Will direct focus to energy use and greenhouse gas emissions
- Far-reaching policy objectives
- Promotes awareness of issues
- Recognizes role of transportation
- Promotes ongoing ride-sharing/TDM activities
- Supports innovative project alternative selection decisionmaking

For more information on the New York State Energy Plan:

www.nyserda.org/Energy_Information/energy_state_plan.asp