

Economic Impacts of Climate Action: Beyond Jobs

Climate Mitigation Work Group

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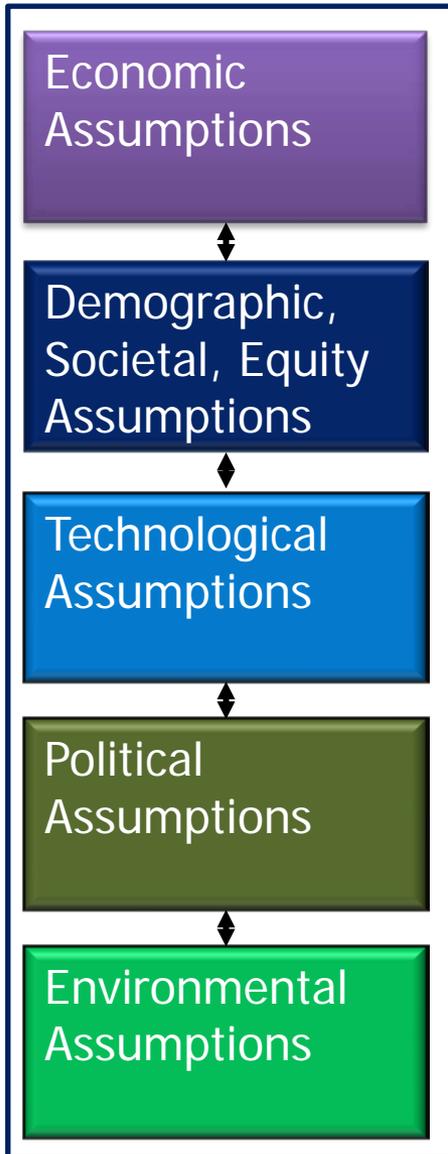


THE PRESTO TOOLS AND SCENARIO APPROACH

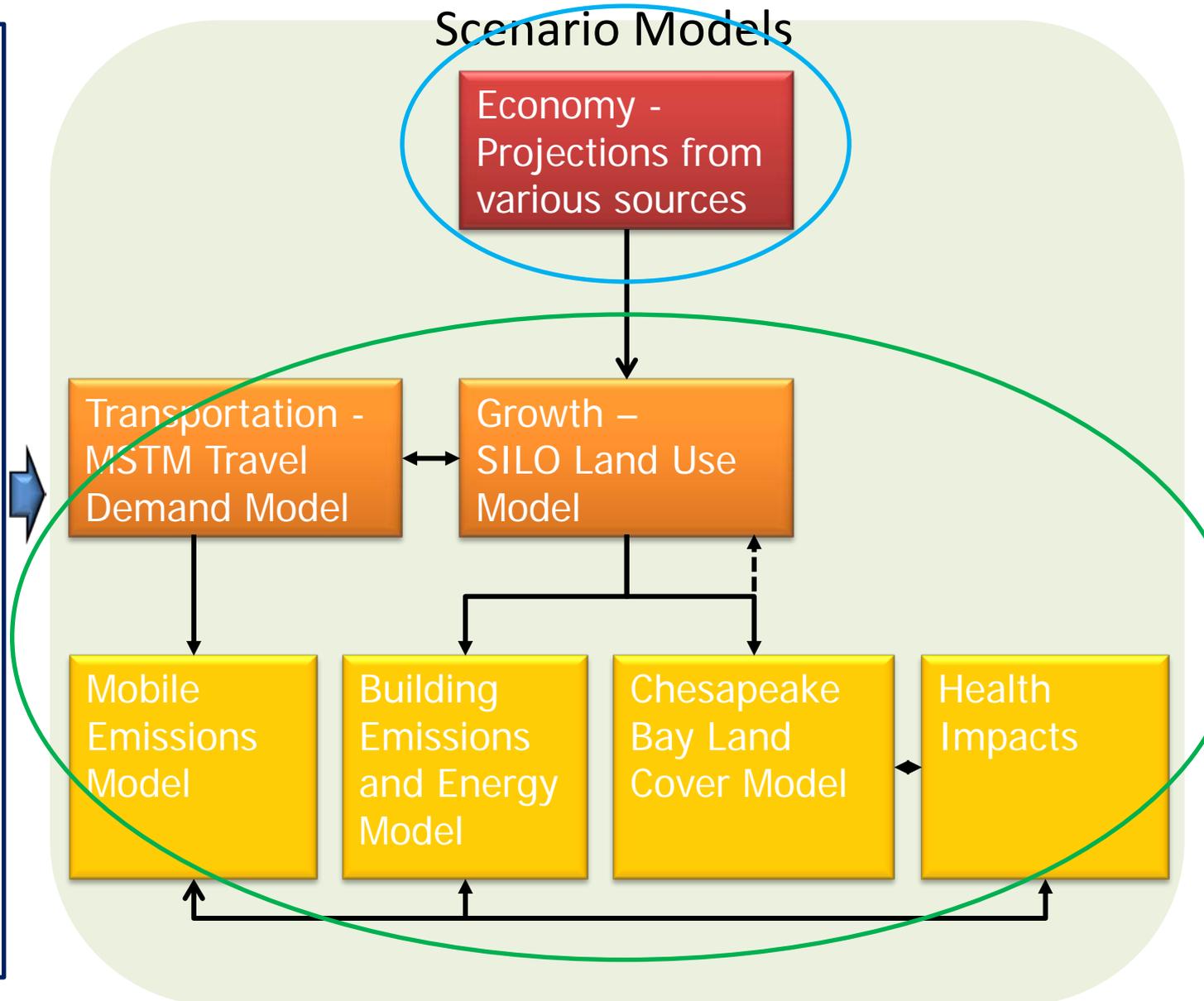


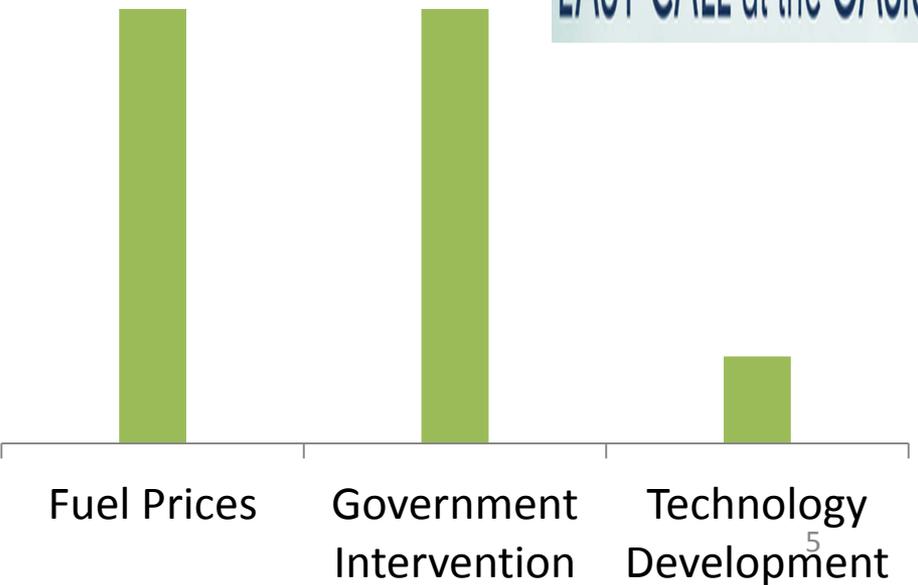
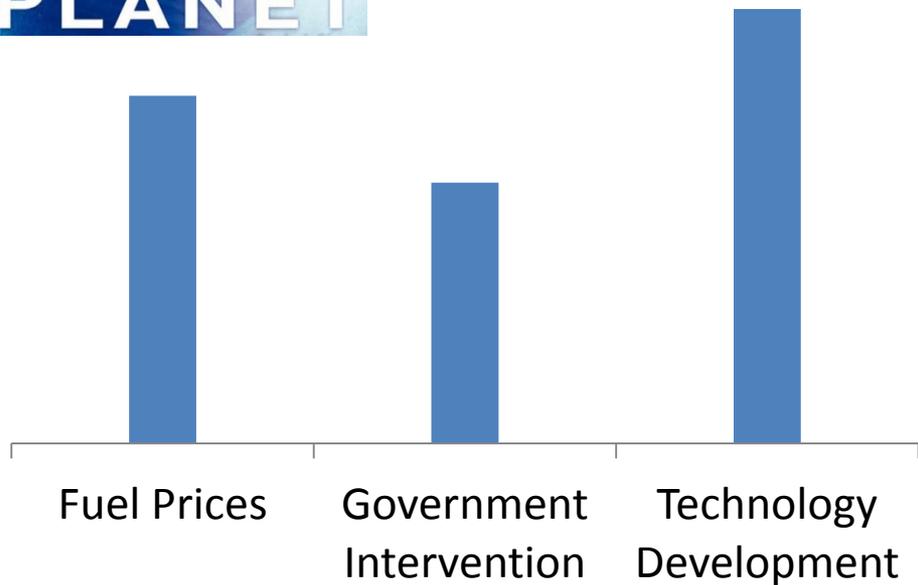
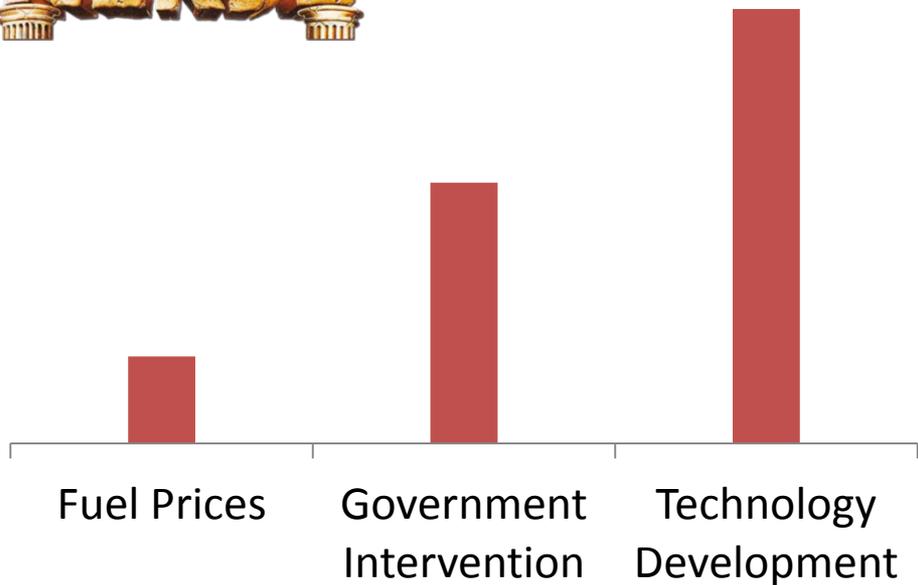
Economic Impacts Goes Beyond Jobs

Scenario Drivers



Scenario Models

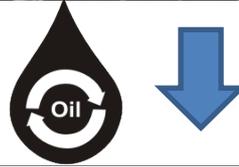




REVENGE OF THE NERDS



ASHES AND DIAMONDS



100 +

0 5 10 20Miles

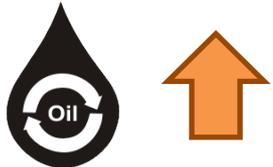
- 50% Capacity Increase on Interstates
- 50% Capacity Increase on State Hwy
- 25% Capacity Increase on Arterials

100 +

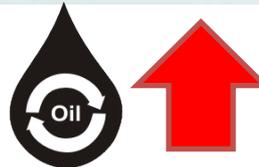
0 5 10 20Miles

- Existing Highways
- New Tolled Highways

THE BLUE PLANET



LAST CALL at the OASIS



100 +

0 3 6 12Miles

- New Commuter Rail
- Existing Commuter Rail
- New Metro Rail
- Existing Metro Rail
- New Light Rail
- Existing Light Rail

100 +

0 3 6 12Miles

- New Commuter Rail
- Existing Commuter Rail
- New Metro Rail
- Existing Metro Rail
- New Light Rail
- Existing Light Rail

Employment part of the picture



CAFE standards + green vehicles

Vehicle Operating Cost
ZEV Rate in 2040

Infrastructure Investments

Rail Miles
Rail Stations
Limited Access Highway Miles
Hihgway Lane Capacity
Arterial Lane Capacity

Employment Impacts

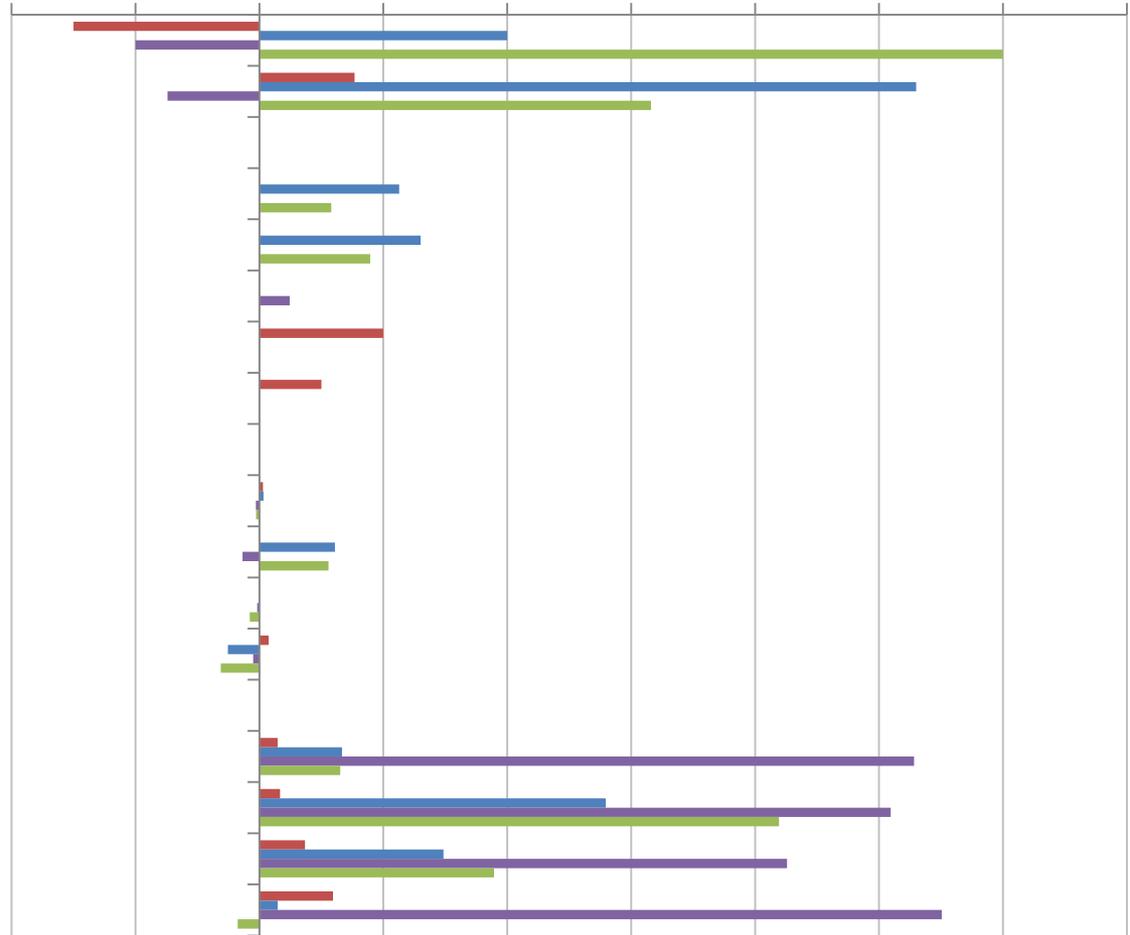
Total Employment
Core Employment
Suburban Employment
Exurban Employment

Land Use Policy

Development Capacity
Core Development Capacity
Suburban Development Capacity
Exurban Development Capacity

Inputs Relative to Baseline Scenario

-100% -50% 0% 50% 100% 150% 200% 250% 300% 350%

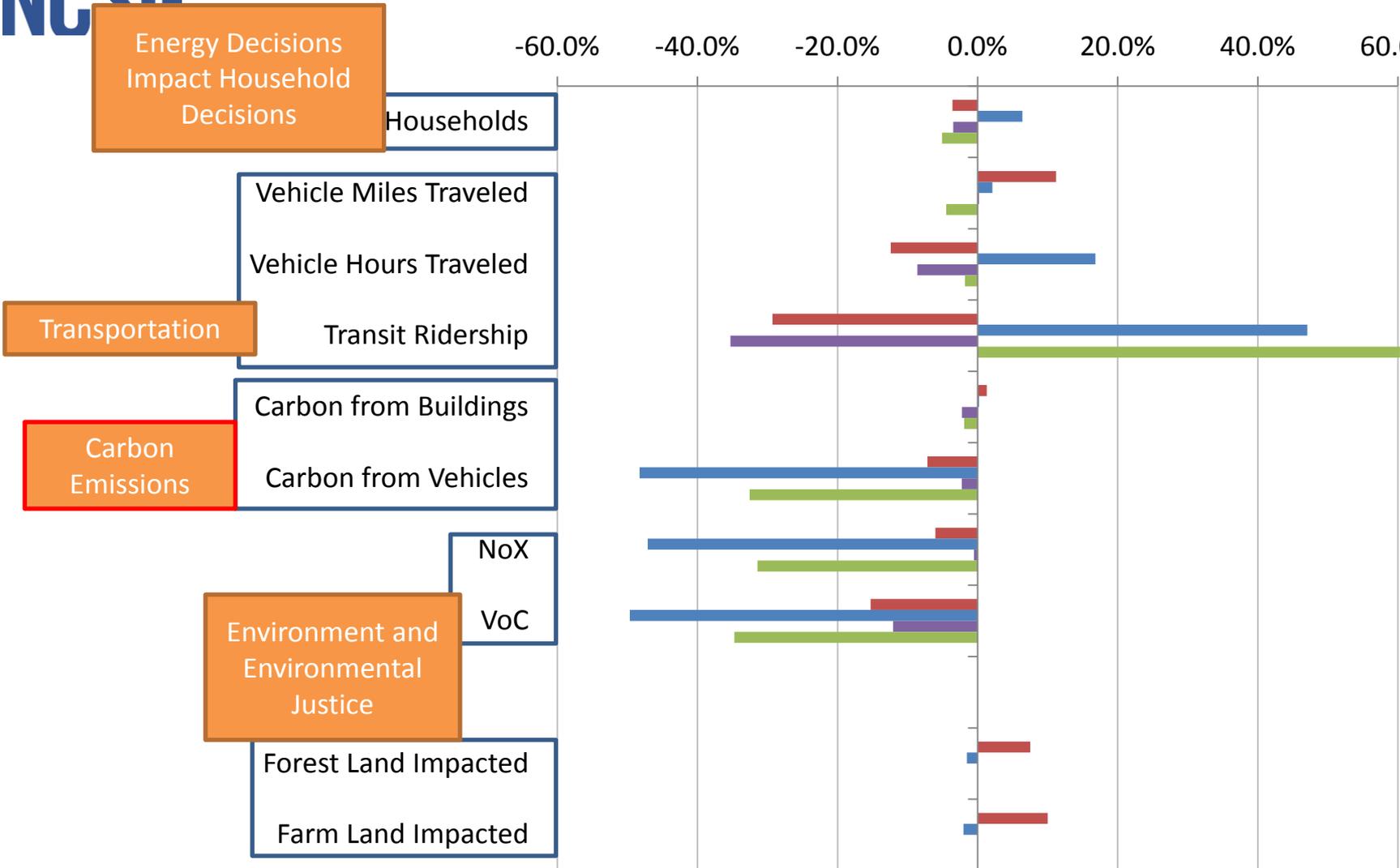


Carbon Emissions Not the Only Impact



Scenario Results Relative to Baseline

-60.0% -40.0% -20.0% 0.0% 20.0% 40.0% 60.0%

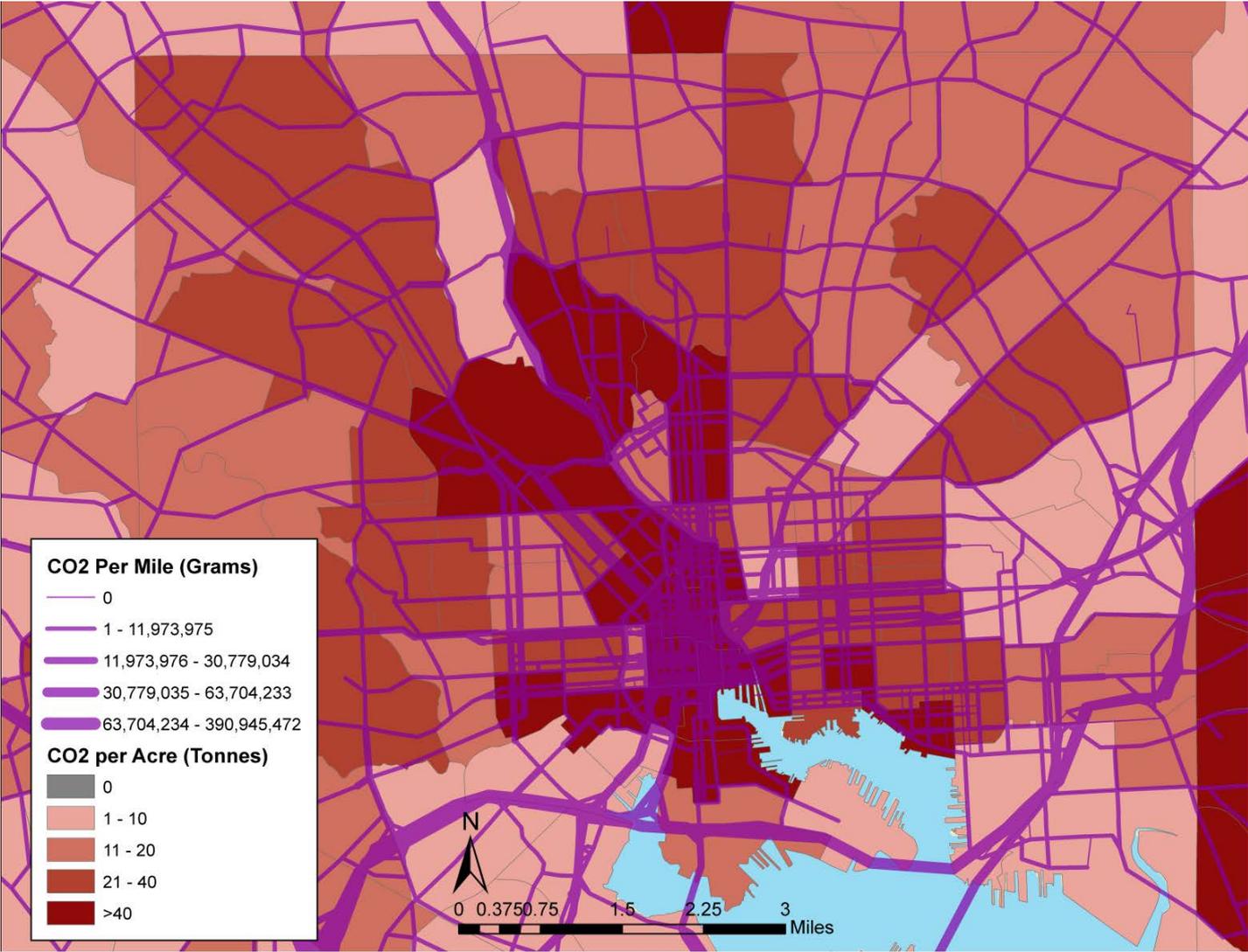


Energy Burden at the Household Level



PRESTO!

Environmental Justice is a Spatial Issue



How Do Climate Policies Reshape the Geography of Opportunity?



User login Username: Password: Log in

[What is an Opportunity Map?](#)
 [Documentation](#)
 [Test Result Table](#)
 [Create User ID](#)

Opportunity Map

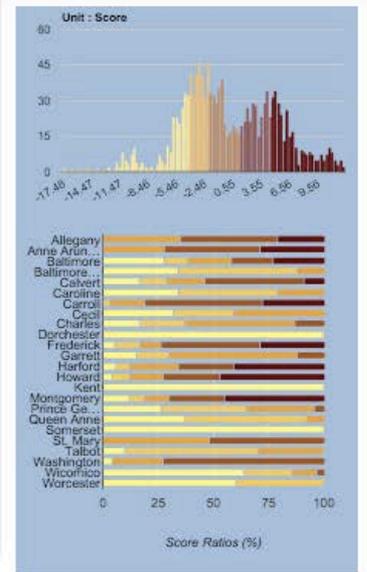
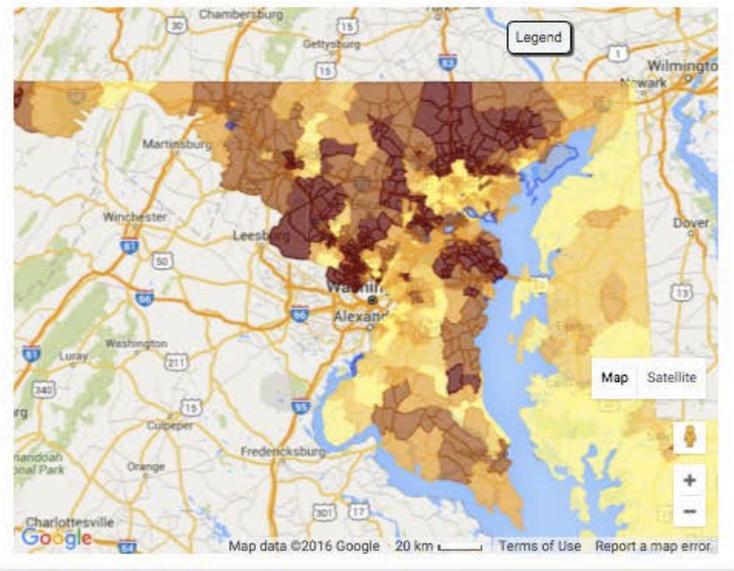
Home

OPPORTUNITY MAP

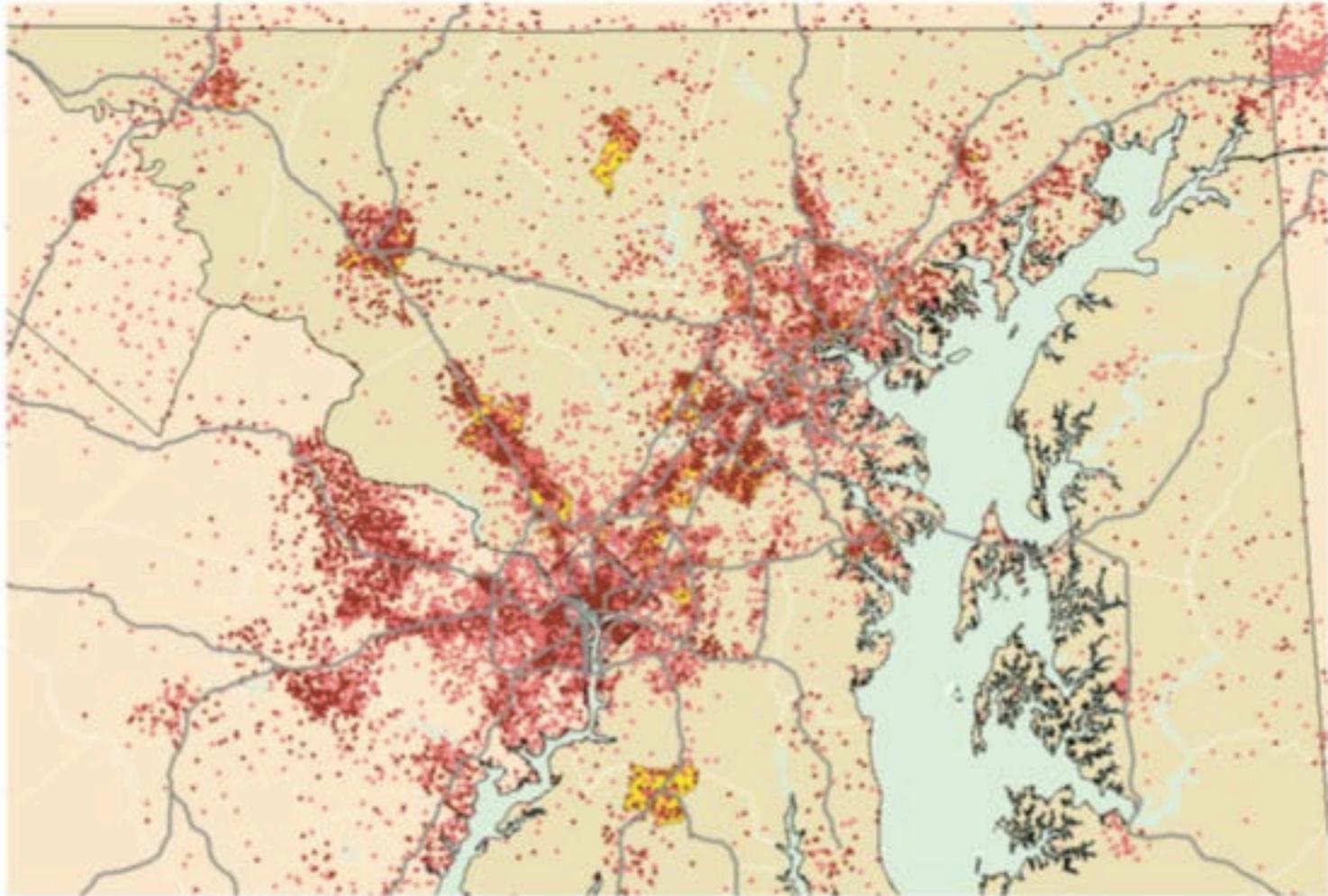
- EDUCATION
- HOUSING & NEIGHBORHOOD QUALITY
- SOCIAL CAPITAL
- PUBLIC HEALTH & SAFETY
- EMPLOYMENT & WORKFORCE
- Jobs
 - Total Job Density
 - Total Jobs Accessible by Auto
 - Total Jobs Accessible by Transit
 - Accessibility Gap between Transit and Auto
 - Change in Total Jobs (2002-2010)
 - Change in Job Density (2002-2010)
 - Percent Change in Total Jobs (2002-2010)
- Workforce
- TRANSPORTATION & MOBILITY

Submit your maps with comments

EDUCATION



The Location of New Jobs and Households Matter



- 1 Dot = 300 Employment in 2007
- 1 Dot = 300 New New Employment in 2030
- Employment Centers



PRESTO!

Concluding Comments



- Integrated and spatially explicit models have improved our ability to analyze the impacts of climate change and climate policy dramatically
- Climate change and climate policy has the potential to alter the growth rate and structure of the local economy and how income is distributed among its participants.

Concluding Comments



- Many economic and equity issues, however, are place based and locally specific.
- Addressing these issues will require spatially explicit models and analysis.

NCSG Work on Equity and Economy



- PRESTO
 - (<http://smartgrowth.umd.edu/PReSTo.html>)
- Sustainable and Equitable Economic Development
 - (<http://smartgrowth.umd.edu/SEED.html>)
- The Geography of Opportunity
 - (<http://smartgrowth.umd.edu/oppmapinfo.html>)