



# Oregon GHG Planning with the RSPM Tool

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# State GHG Planning with RSPM

Oregon GHG requirements called for a new “Strategic” Planning Tool ... **GreenSTEP/RSPM**

- Goal-oriented.** Complement other tools.
- Quick Runtimes.** Many scenarios to explore uncertainties and tradeoffs.
- Breadth over Depth.**
- Simple.** Time available for using outputs.
- Visual/interactive.** Exploration by policy makers/public.

# Factors Considered at the Household Level



# Forecasts Made at the Household Level



## OUTPUT REPORTING

**Statewide** GreenSTEP summarizes results at the county and metropolitan area level.

**Metropolitan** RSPM summarizes results at regional and district levels.

# Regional Strategic Planning Model

RSPM evaluates a full range of factors that affect household travel and emissions.

Regional Context	Local Actions		Collaborative Actions	
	Community Design	Marketing & Incentives	Vehicles & Fuels	Pricing
<ul style="list-style-type: none"> <li>• Demographics</li> <li>• Income Growth</li> <li>• Fuel Price</li> </ul>	<ul style="list-style-type: none"> <li>• Future Housing (Single- &amp; Multi-Family)</li> <li>• Parking Fees</li> <li>• Transit Service</li> <li>• Biking</li> </ul>	<ul style="list-style-type: none"> <li>• TDM (home &amp; work-based)</li> <li>• Car Sharing</li> <li>• Education on Driving Efficiency</li> <li>• Intelligent Transportation Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Vehicle Fuel Economy (mpg)</li> <li>• Fuels</li> <li>• Commercial Fleets</li> </ul>	<ul style="list-style-type: none"> <li>• Pay-As-You-Drive Insurance</li> <li>• Gas Taxes</li> <li>• Road User Fee</li> </ul>

# Sensitivity Test Viewer (CAMPO)

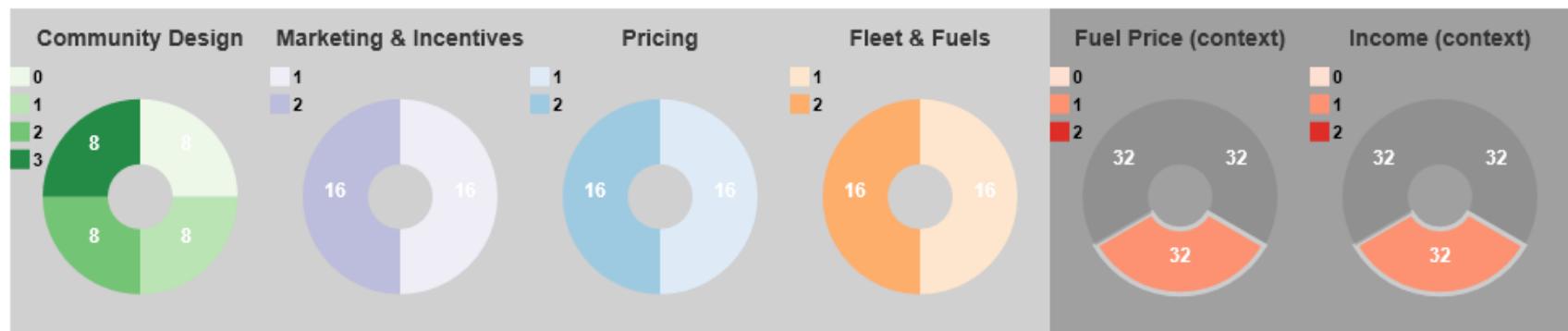
## Corvallis Metropolitan Planning Area Scenario Viewer

About This Effort

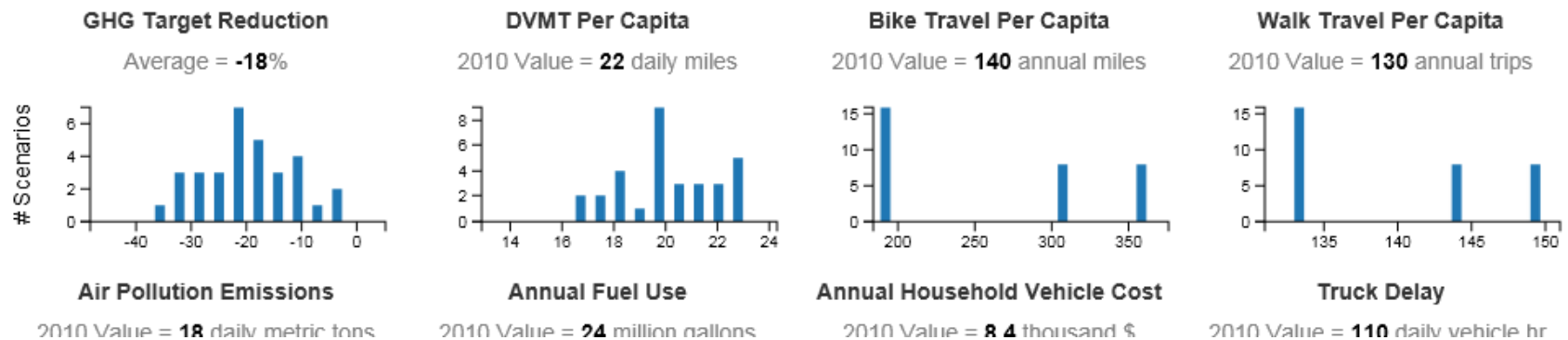
Quick Start

Detailed Instructions

### Scenario Input Levels | [Clear All Selections](#)



### Model Outputs: 32 scenarios selected out of 288 scenarios | [Clear All Selections](#)



# Regional Strategic Planning Model

## Inputs

- Regional Context
- Community Design
- Marketing & Incentives
- Fleet & Technology
- Pricing

## RSPM

1. Create MPO Households
2. Estimate Daily VMT



3. Add Vehicles & Estimate Greenhouse Gas Emissions

## Outputs

- Mobility
  - Vehicle miles traveled
- Land Use
  - Mixed Use
  - Housing Type
- Economy
  - Travel delay
- Equity
  - Household travel costs
- Environment
  - Air Quality
  - Greenhouse gas emissions

# Oregon GHG Planning with RSPM

## □ Oregon State GHG Goals

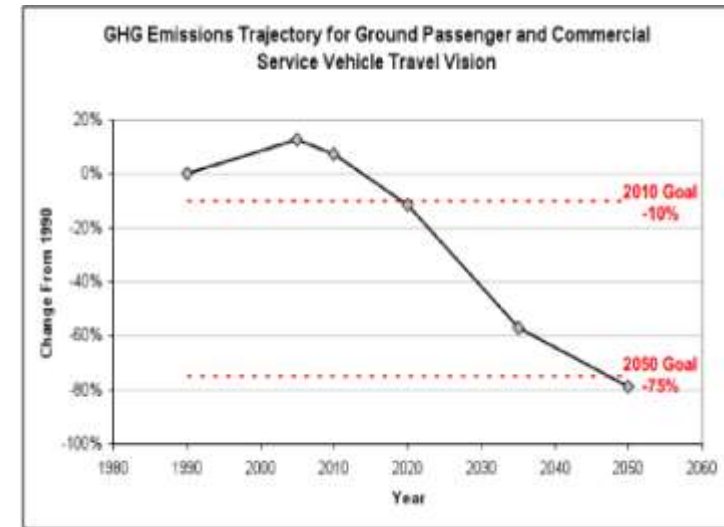
- Stop emissions growth by 2010
- Reduce emissions by 10% by 2020
- Reduce emissions by 75% by 2050

## □ Metropolitan GHG Reduction Targets

- Covers 6 metropolitan areas for 2035
- Covers light duty vehicles (cars and trucks)
- Scenario Planning – required in 2 largest MPOs

## □ Oregon Sustainable Transportation Initiative (OSTI)

- Interagency program (ODOT & DLCD/Land Use & DOE & DEQ)
- Statewide Transportation Strategy (STS)
- Development of new planning tools (RSPM, toolkit, etc.)
- MPO Scenario Planning





# State GHG Planning with RSPM

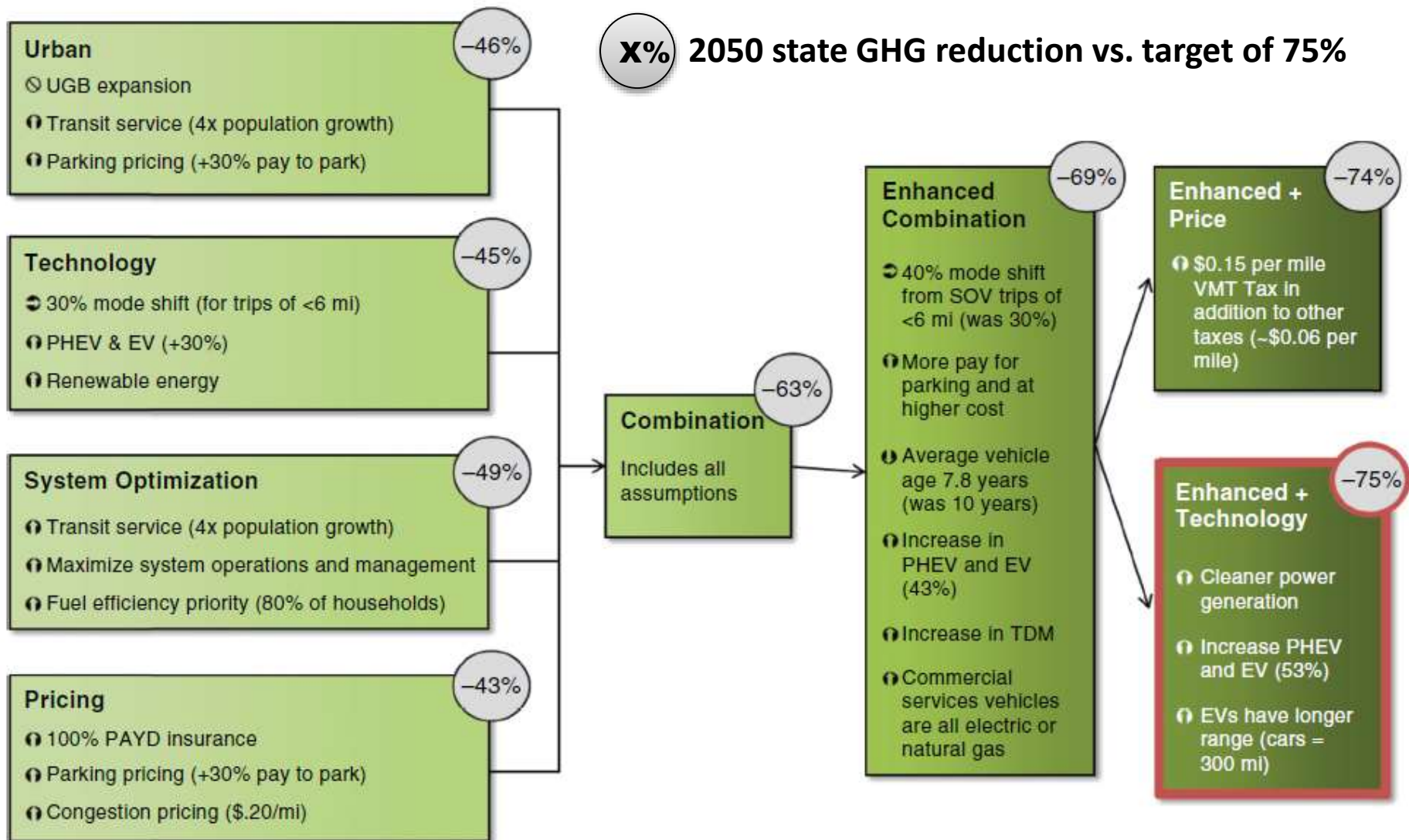


FIGURE 1 Evolution of STS scenarios for on-ground passengers (SOV = single-occupant vehicle, TDM = transportation demand management, UGB = urban growth boundary).

# MPO GHG Planning with RSPM



## MPO Scenario Planning Process

**Proposed approach:** Regional Transportation Plan meets GHG target

- Assess adopted plans
- Evaluate more ambitious strategies
- Adopt a preferred scenario
- Monitor progress

## **As implemented:**

Requirements vary by MPO size  
For smaller MPOs, voluntary process

Broadening to more “targets” (e.g., health, equity, etc.) results in...

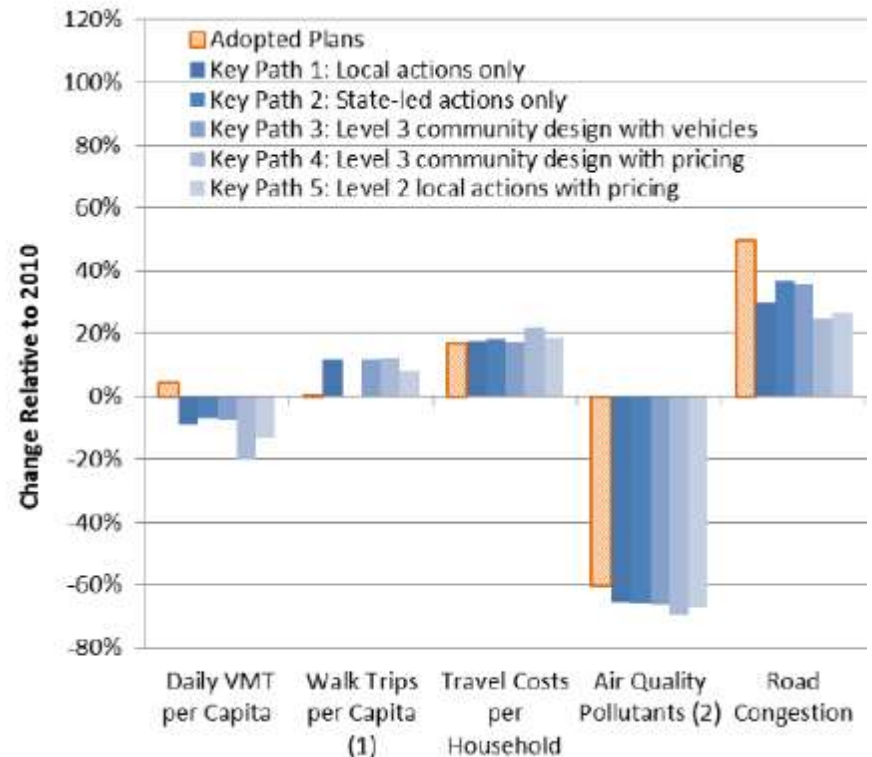
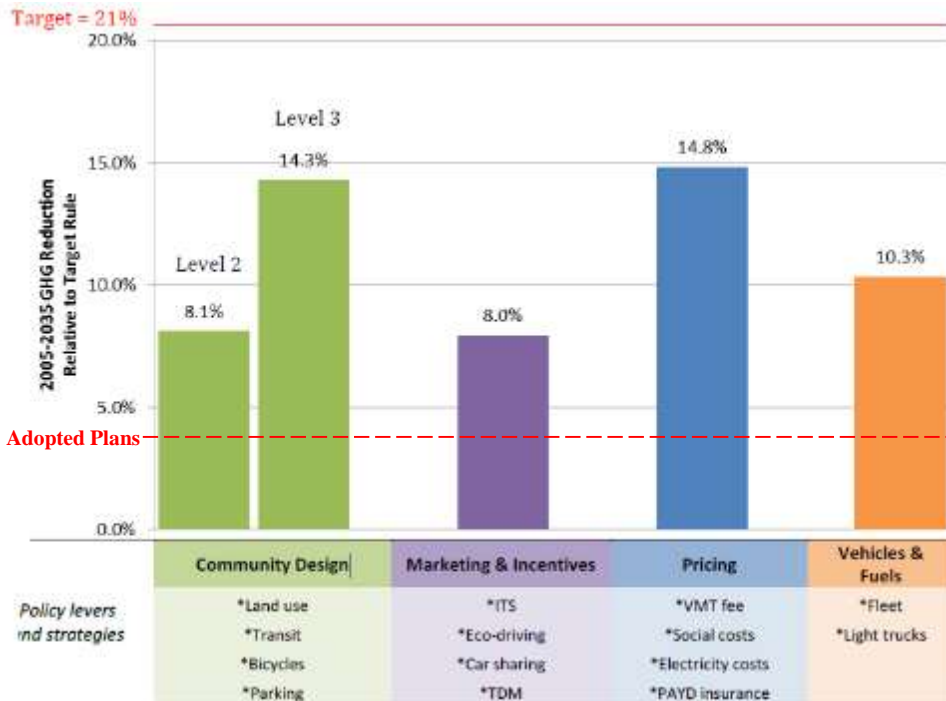
**Performance-Based Planning**

# MPO GHG Planning with RSPM

## RSPM Inputs:

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## Corvallis Area MPO Results:



# VisionEval Open Source Project

GreenSTEP family of Models

Oregon  
FHWA

**RSPM**

Regional Strategic  
Planning Model

**RPAT**

Rapid Policy Assessment Tool  
(formerly SmartGAP)

**EERPAT**

Energy and Emissions  
Reduction Policy  
Analysis Tool

## Tool advantages

- Broad set of community outcomes
- Broad set of old/new policy inputs
- HH Budget constraints good for pricing
- Quicker setup than traditional tools
- Short runtimes allows for 1000s of runs
- Open source and modular construction
- 4 tools on Common Framework will allow improvements by a community of developers

(COMING SOON)

## Tool limitations

- Less detail relative to other planning tools
- What-if Tool can't tell you how to get there
- Built for understanding GHG/Vehicle Travel, not mode shifts

**GreenSTEP**

Greenhouse gas Strategic  
Transportation Energy Planning