



**pennsylvania environmental council**

Scott Van de Mark

Director, Special Projects

(412) 481-9400

[svandemark@pecpa.org](mailto:svandemark@pecpa.org)

[www.pecpa.org](http://www.pecpa.org)

# Pennsylvania Environmental Council

- **Statewide**
- **Innovation & Collaboration**
- **Policy & Programs**
- **Program Areas:**
  - **Water Resources**
  - **Sustainable Communities**
  - **Energy & Climate**



# Pennsylvania Climate Change Roadmap

---

## Pennsylvania Climate Change Roadmap

---



June 2007

---

- **Stakeholder-Driven**
- **Inventory of Existing Emissions in Pennsylvania**
- **38 Sector-Specific Policy Recommendations**
- **Available at [www.pecpa.org](http://www.pecpa.org)**

# PEC Roadmap: Emissions Inventory

- Historical Emissions (1990-2005)
- Emission Projections Through 2025
- Gases: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, & SF<sub>6</sub>
- Common metric – **CO<sub>2</sub>e** (*CO<sub>2</sub> equivalent*)– indicates relative contribution of each gas to global radiative forcing on a Global Warming Potential (GWP) basis.

# PEC Roadmap: Emissions in PA



**In 2005, PA emitted 317 MMtCO<sub>2</sub>e**

- Equal to 1% of *worldwide* GHG emissions
- Among the top 25 *countries* in the world
- By 2025: 383 MMtCO<sub>2</sub>e / year

# PEC Roadmap: GHG Emissions in PA

Category	US %	PA %
Electricity Production	32	<b>37</b>
Transportation	26	23
Non-Fossil Fuel Use Industry	14	15
Residential & Commercial	9	<b>12</b>
Waste Industry	4	2
Agriculture	7	2
Fossil Fuel Industry	3	<b>6</b>
Industrial Process	5	3



# PEC Roadmap: Reference Case Projections

**2005 = 317 MMtCO<sub>2</sub>e / year**

By **2025** (current rate of growth) = 383 MMtCO<sub>2</sub>e / year

**Goal: 25% below 2000 emissions by 2025**

**237 MMtCO<sub>2</sub>e / year**

To reach goal: must reduce emissions by 146 MMtCO<sub>2</sub>e

# PEC Roadmap: Energy Supply Recommendations

- Increase AEPS to 25% by 2025
- Add Tier 3 Efficiency Component
- System Benefit Fund + Incentive Policies
- Sequestration Potential \*
- Fossil Fuel Methane



# PEC Roadmap: Residential, Commercial, and Industrial

- Public Benefit Fund (gas)
- New Building Standards
- Training and incentives for retrofits & upgrades
- Biomass & Biofuel
- Methane > small scale power generation
- Education



Source: [www.usda.gov](http://www.usda.gov); [www.ernstseed.com](http://www.ernstseed.com); [www.pittsburghgreenstory.com](http://www.pittsburghgreenstory.com)

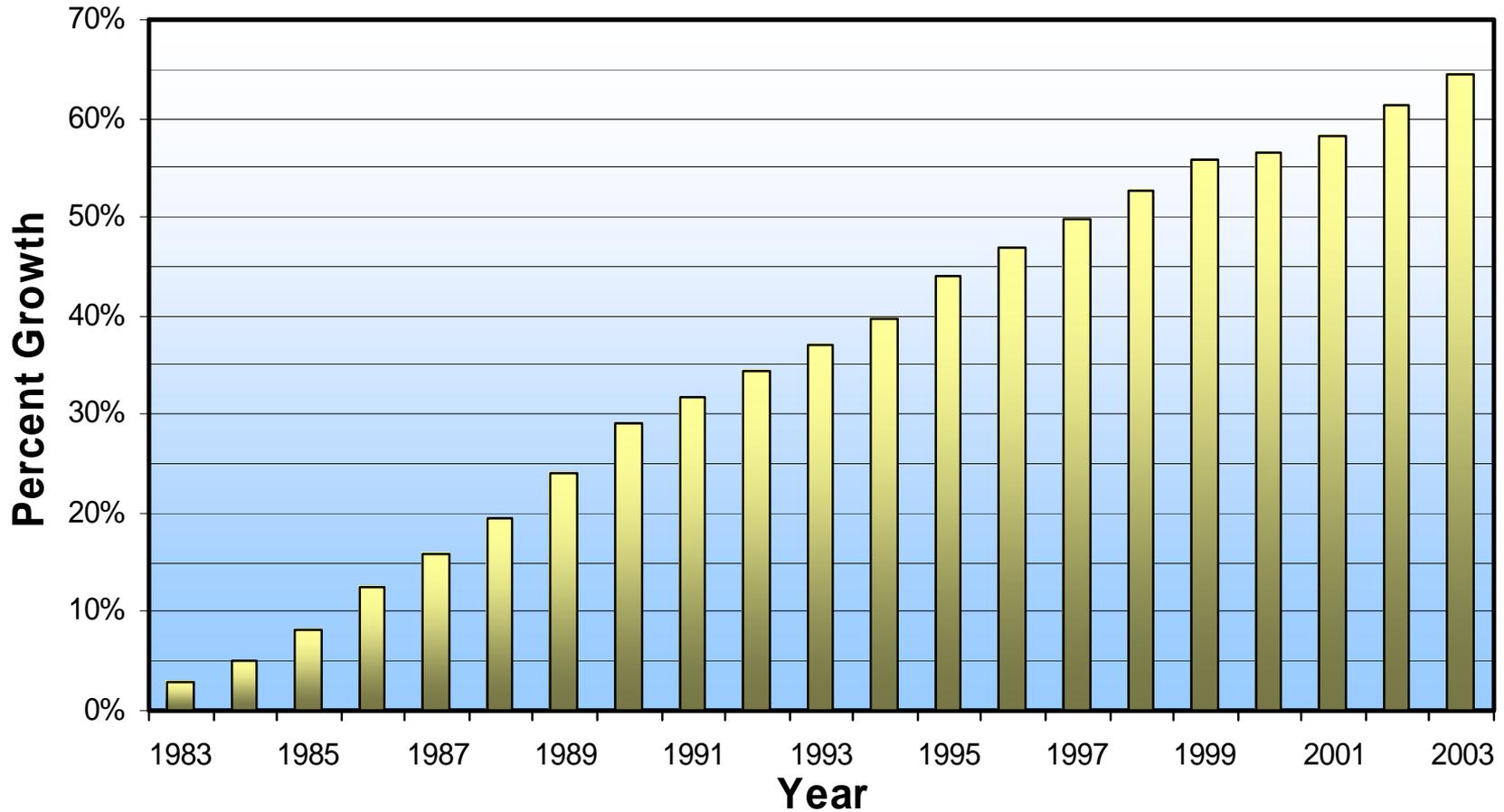
# PEC Roadmap: Transportation & Land Use

- Greater Fuel Economy & Clean Vehicles
- Renewable Fuel Standard
- Smart Growth
- Transportation Reform
- Truck Idling



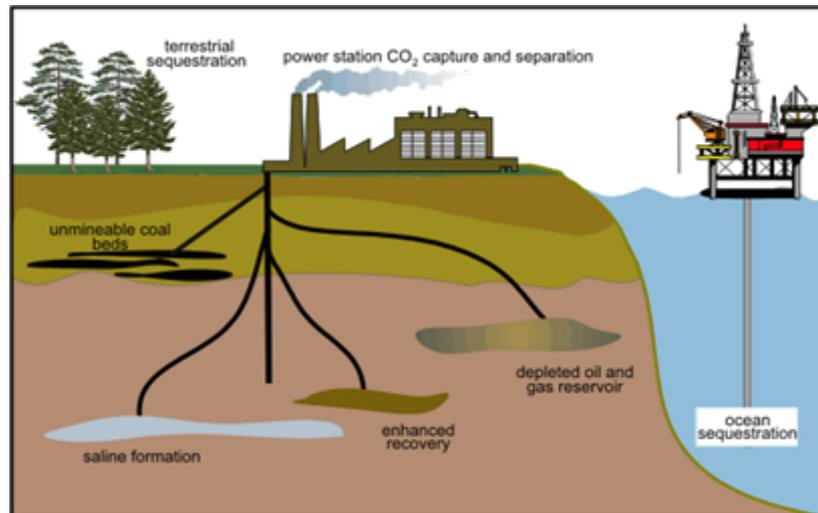
Sources: Bob Elbert; media.collegepublisher.com

# PA Traffic Cumulative Growth Trend



# PEC Roadmap: Agriculture, Forestry & Geology

- No-Till Farming
- Local Agriculture
- Afforestation
- Sequestration



Source: USDA; USDOE; ipm.iastate.edu

# Carbon Management Advisory Group

## ➤ Geologic Sequestration

- Potential: 100 Years of PA's CO<sub>2</sub> Emissions
- Legal & Liability Issues
- Siting & Infrastructure Issues

## ➤ Forest Management

- Small but significant
- Great potential for decentralized, community-based projects
- Sustainability Imperative (ecological functions)

## ➤ Land Conservation

# Pennsylvania Efforts

- Climate Change Planning Legislation
- Energy Investment Legislation
- Energy Efficiency Legislation
- Carbon Management Advisory Group