Regional Wind Energy Purchase

Wind Powering America
Peer Exchange

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Montgomery County Electricity Procurement

- Formed buying group via MOU & legislation
- Conducted cooperative competitive procurement (savings ~ $5 million over several years)
- Attempted 3% “clean/green” through portfolio requirement

Big dogs eat first.

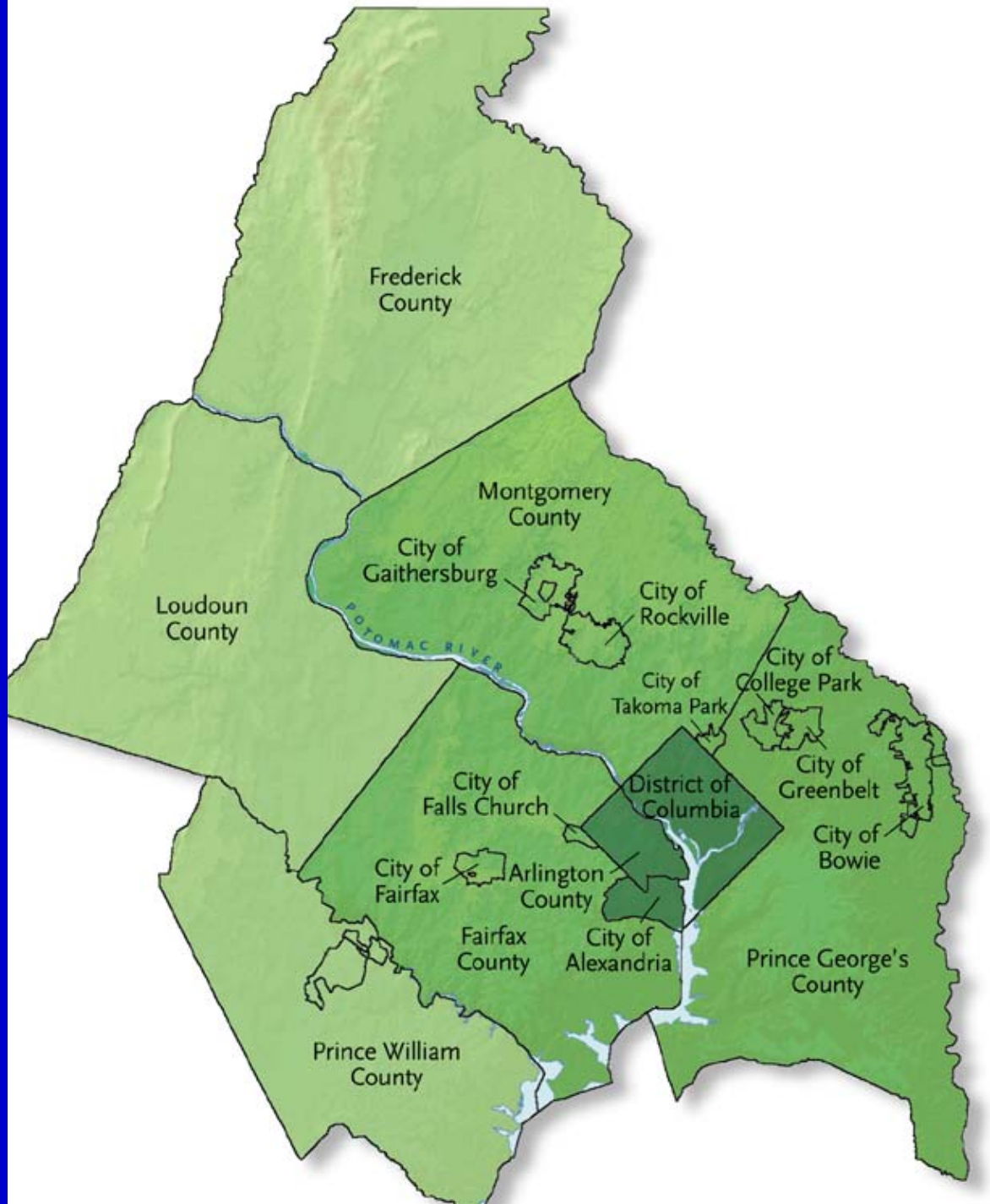
“Green” Power

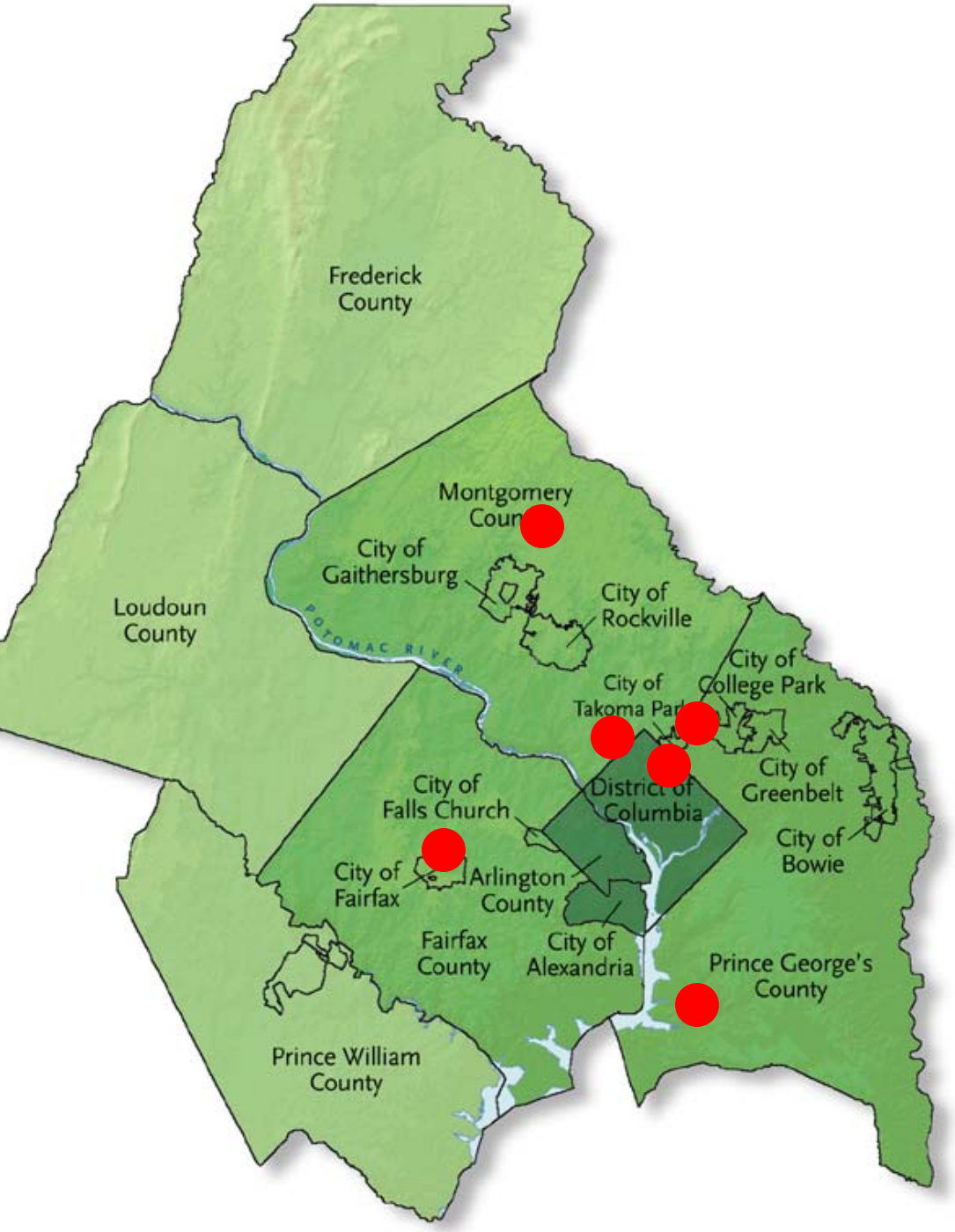
Everything Else

Getting to Green

- Cities for Climate Protection
- Green Power Partnership
- Wind Resolution
- State Implementation Plan

Metropolitan Washington Council of Governments (COG)



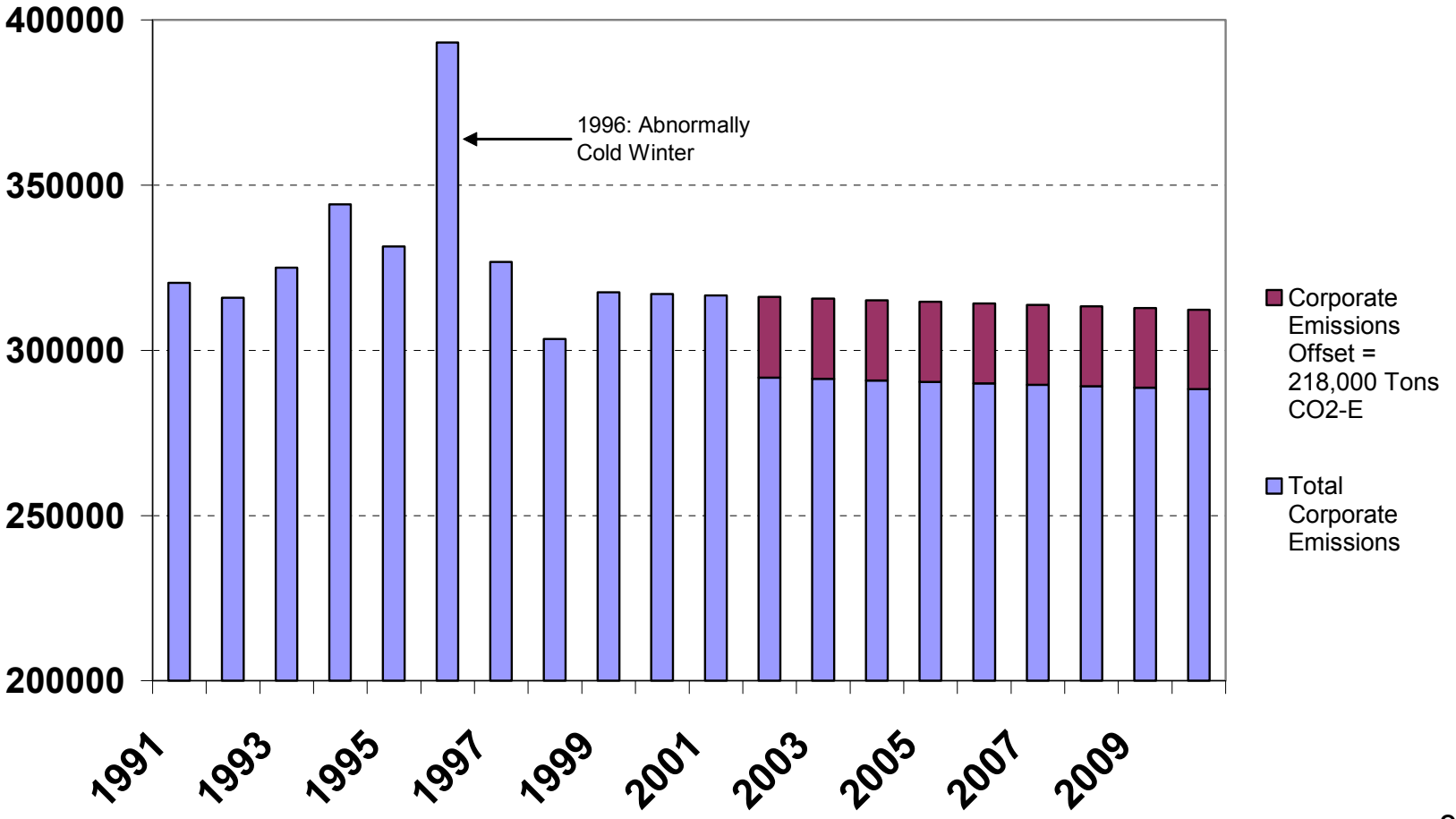


Cities for Climate Protection

- Montgomery County
- Arlington County
- Prince George's County
- College Park
- Takoma Park
- Mount Ranier

Emissions Reductions

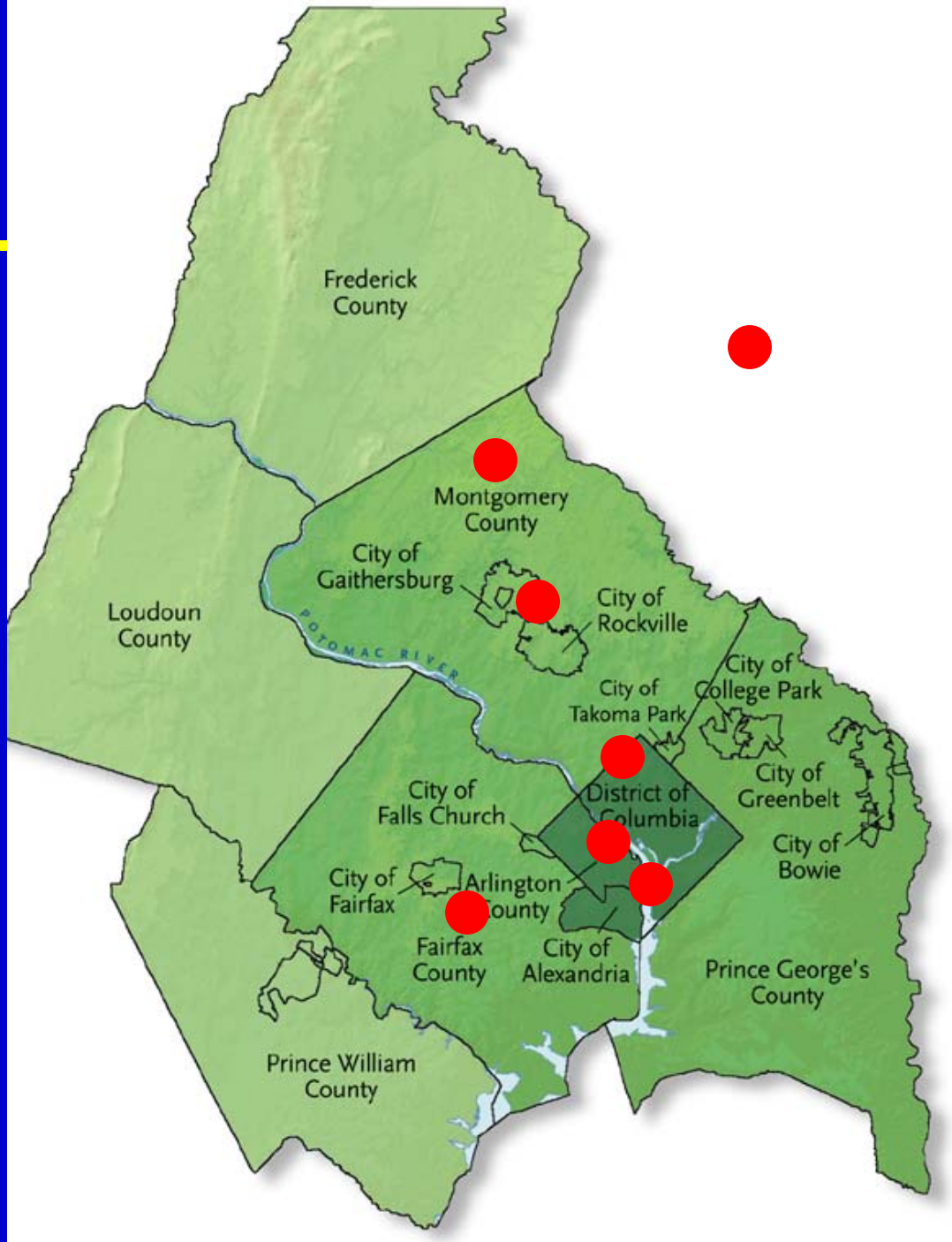
1991-2010 Montgomery County, MD Corporate CO2-E Emission Reductions From Proposed 5% Wind Purchase (In Metric Tons)



Source: Montgomery County, MD Department of Finance using Torrie Smith/ICLEI CCP Software Version 5.0

Green Power Partnership

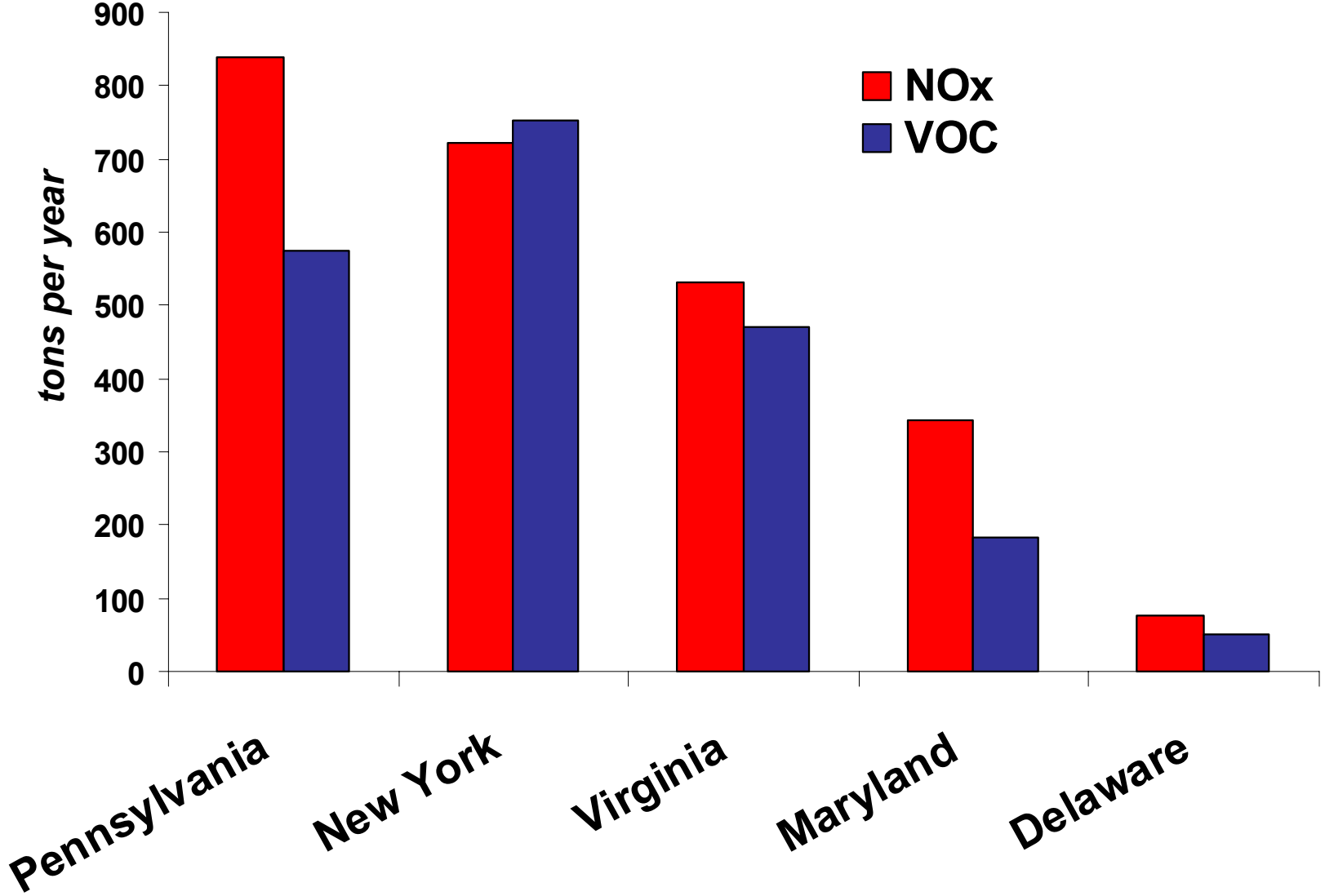
- Montgomery County
- Arlington County
- State of Maryland
- District of Columbia (Reeves Center and 2 public schools)
- Catholic University
- DOE Headquarters & Germantown Faciltiy
- US. Army (Walter Reed, etc.)



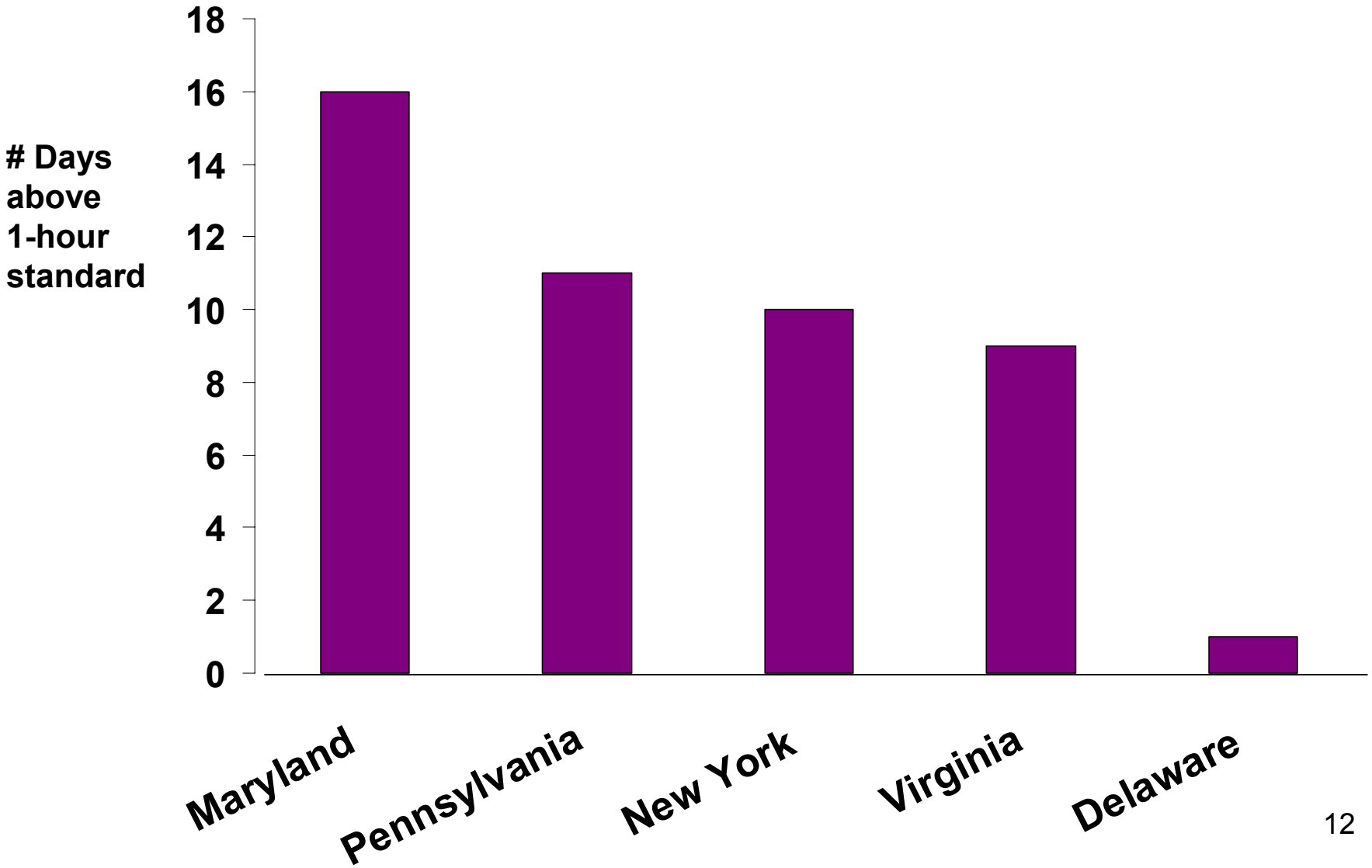
State Implementation Plan (SIP)

- Compliance with Clean Air Act
- Reduce ground-level ozone by reducing precursors: NOx and VOC
- Safeguard federal transportation dollars

Emissions


900
800
700
600
500
400
300
200
100
0
tons per year
NOx
VOC
Pennsylvania
New York
Virginia
Maryland
Delaware

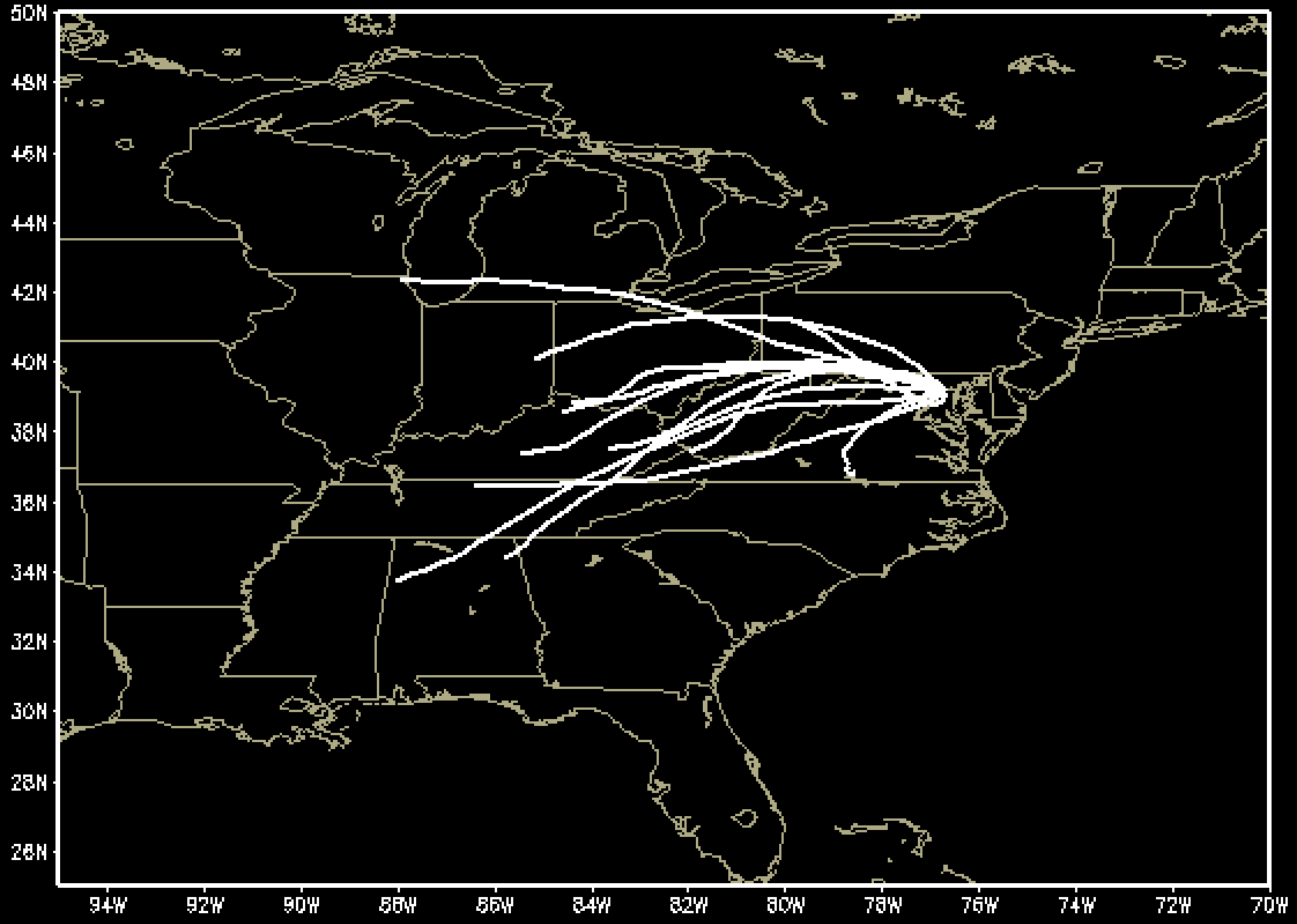
Ground-Level Ozone



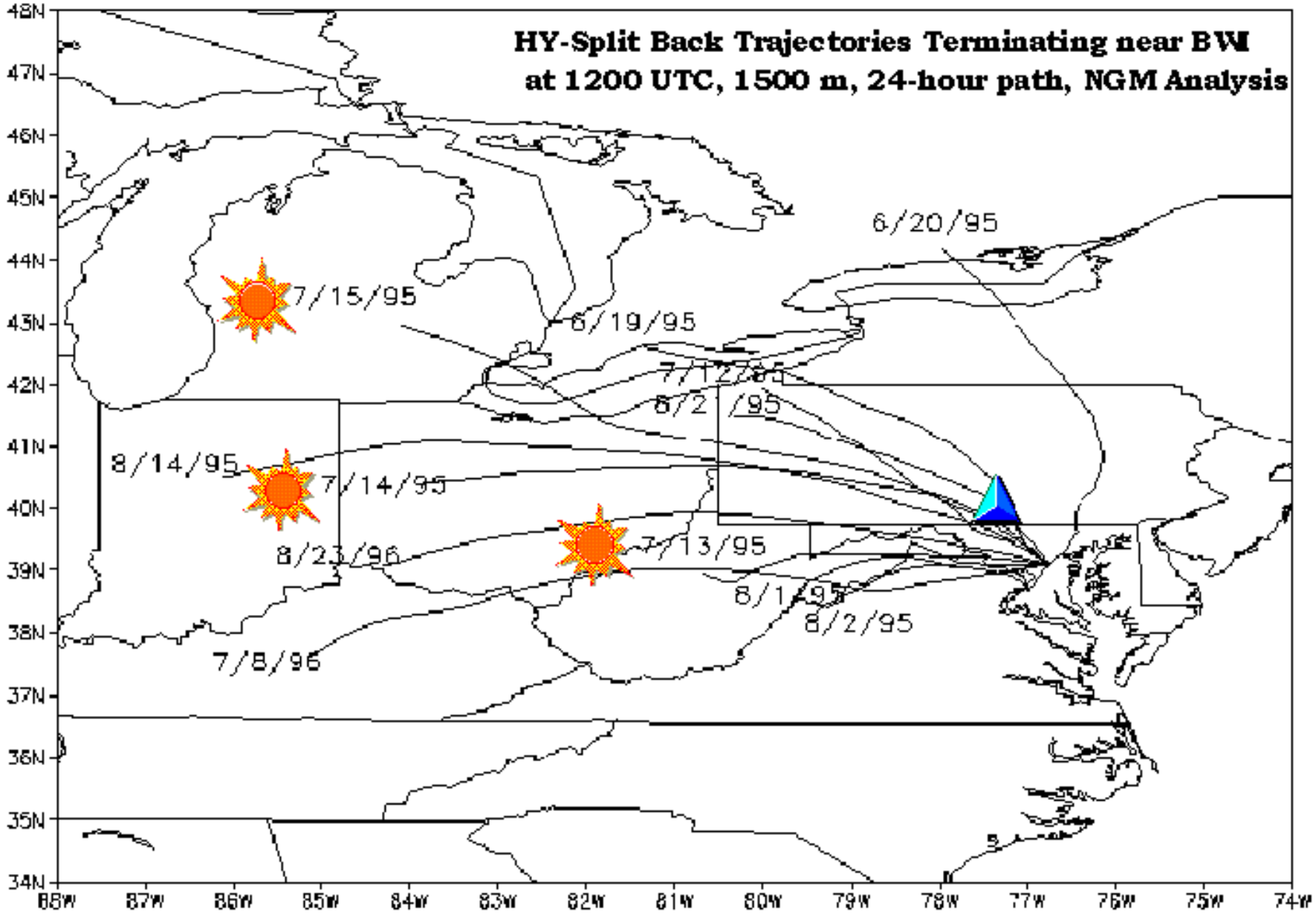
So, where does the ozone come from?

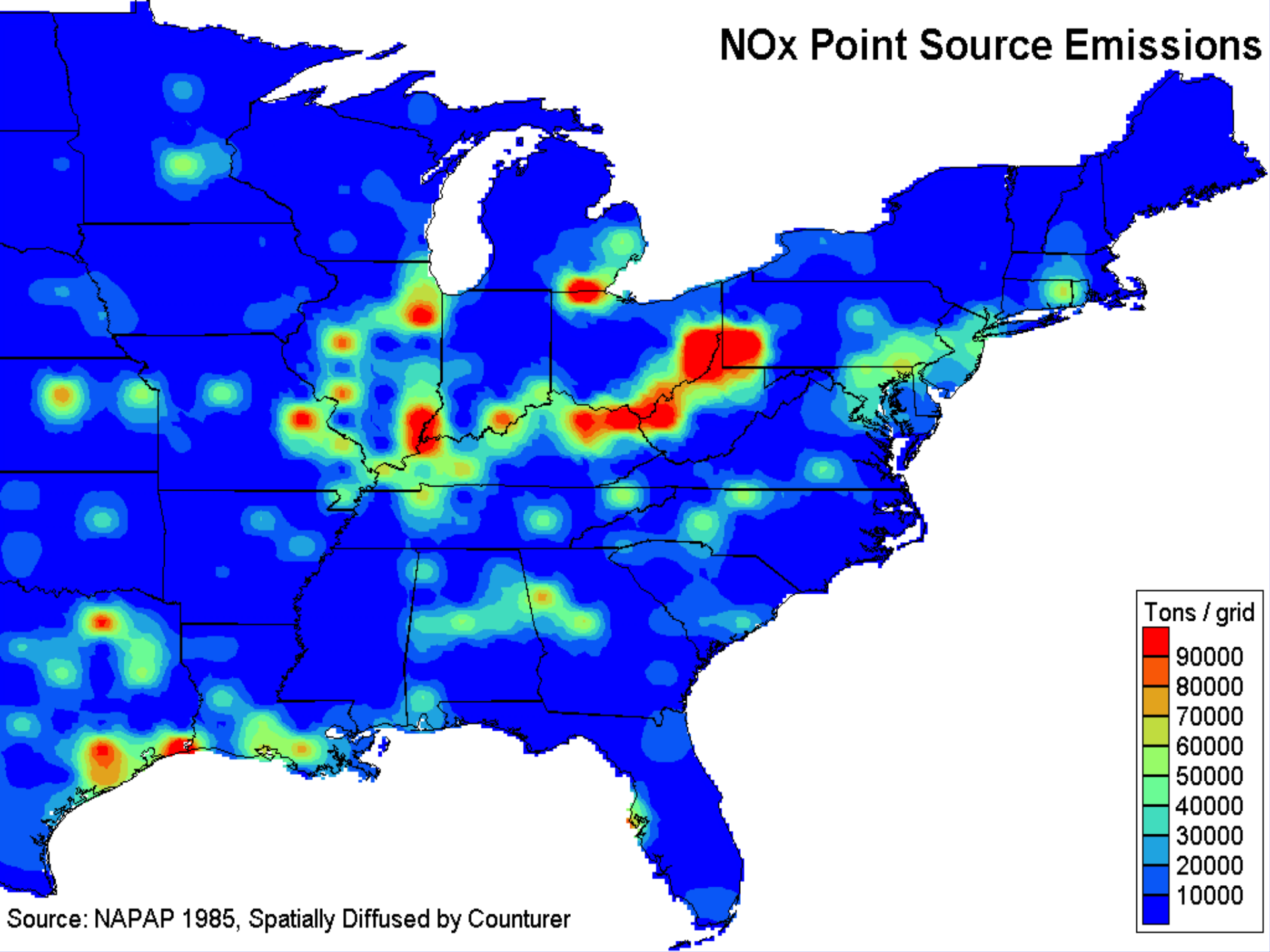
“Ozone Transport”

Back Trajectories 90th Percentile BWI 2000 (500 m)



Highest Ozone Cases 1995–1996 (1500 m)




NOx Point Source Emissions
Tons / grid
90000
80000
70000
60000
50000
40000
30000
20000
10000
Source: NAPAP 1985, Spatially Diffused by Counturer

Emissions "Offset"

- We buy wind from area where NOx emissions occur (ozone transport)
- Wind power "offsets" some coal power generation
- MDE (or equivalent) awards NOx "allowances"
- Allowances are retired
- Credit for "allowances" taken in SIP

Cost of Wind Power

Price Premium: (for 5% or >700,000 kWh/yr.)

1.5 ¢ ⟷ 2 ¢ (per kWh)

Price for Wind Depends On:

- Size of purchase
- Contract Term
- NOT electricity rates

Cost by Agency

	Annual Use (kWh)	Annual Cost ($)	5% Use (kWh)	Wind @ .016 per kWh	Wind @ .018 per kWh
Montgomery County Public Schools	187,627,535	$12,796,643	9,381,377	$150,102	$168,865
Washington Suburban Sanitary Commission	206,670,931	$10,051,745	10,333,547	$165,337	$186,004
Montgomery County Government	67,284,362	$3,780,244	3,364,218	$53,827	$60,556
Maryland National Capital Park & Planning	15,101,734	$1,035,889	755,087	$12,081	$13,592
Montgomery College	25,597,788	$1,570,572	1,279,889	$20,478	$23,038
Total	502,282,350	$29,235,093	25,114,118	$401,826	$452,054

Average cost per kWh = $.0575

Cost Effective NOx Reduction

Control Measure	Cost (ton/year)
Wind Energy	$32,000
CNG Refueling Stations	$54,701
55 CNG Busses	$103,063
1967 Bike Lockers	$247,111

Time Frame

- Letter of Commitment to COG – Now! (include size of purchase in kWh/year)
- Montgomery County issues RFP to pre-qualify vendors – Mid December 2004
- Prequalification complete, usage data finalized, and signatory approved by end of January 2004.
- Bidding takes place in February or March 2004, depending on market conditions.

Potential “Model” for Future “Green” Energy Procurements

Yuk yuk…..

The End