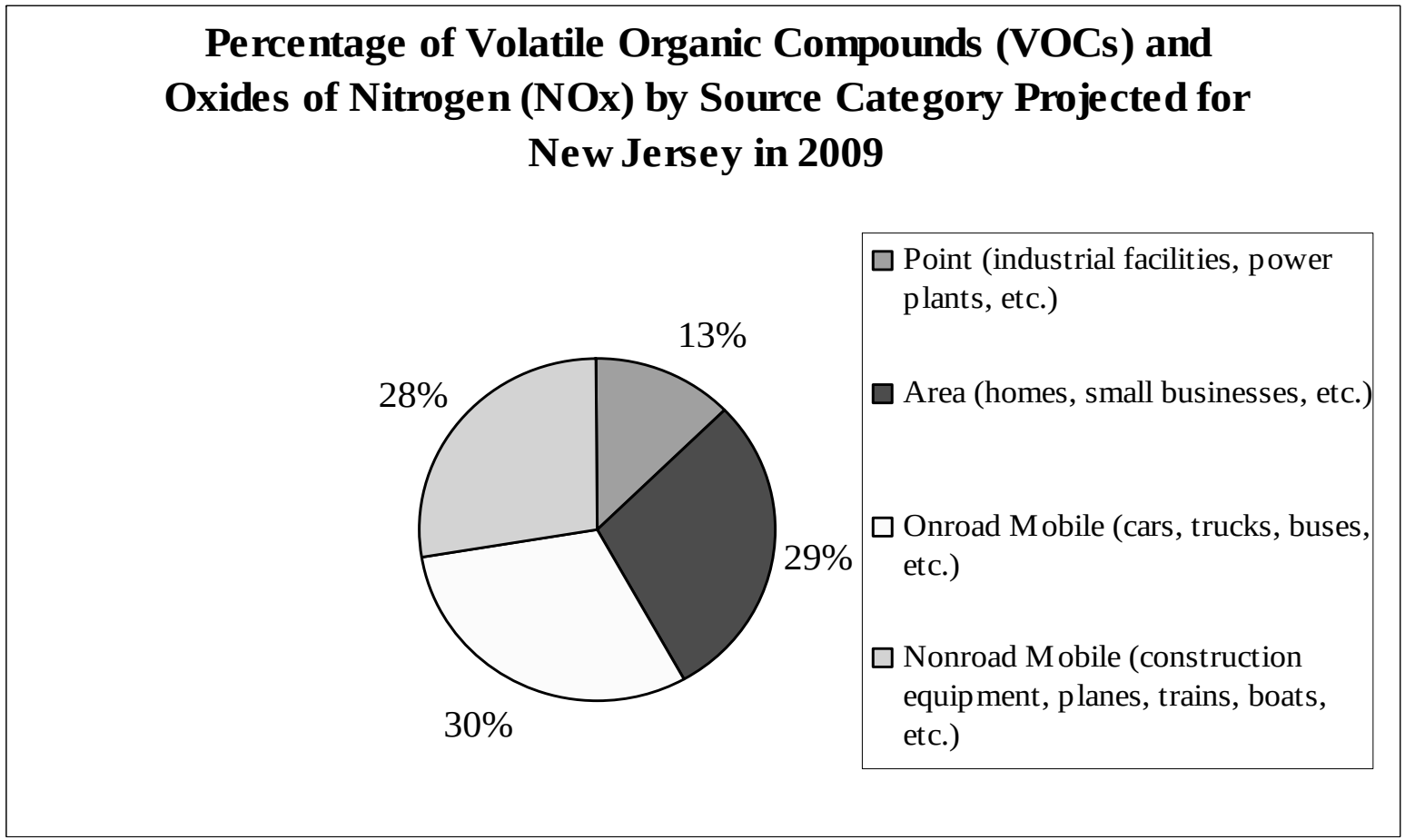
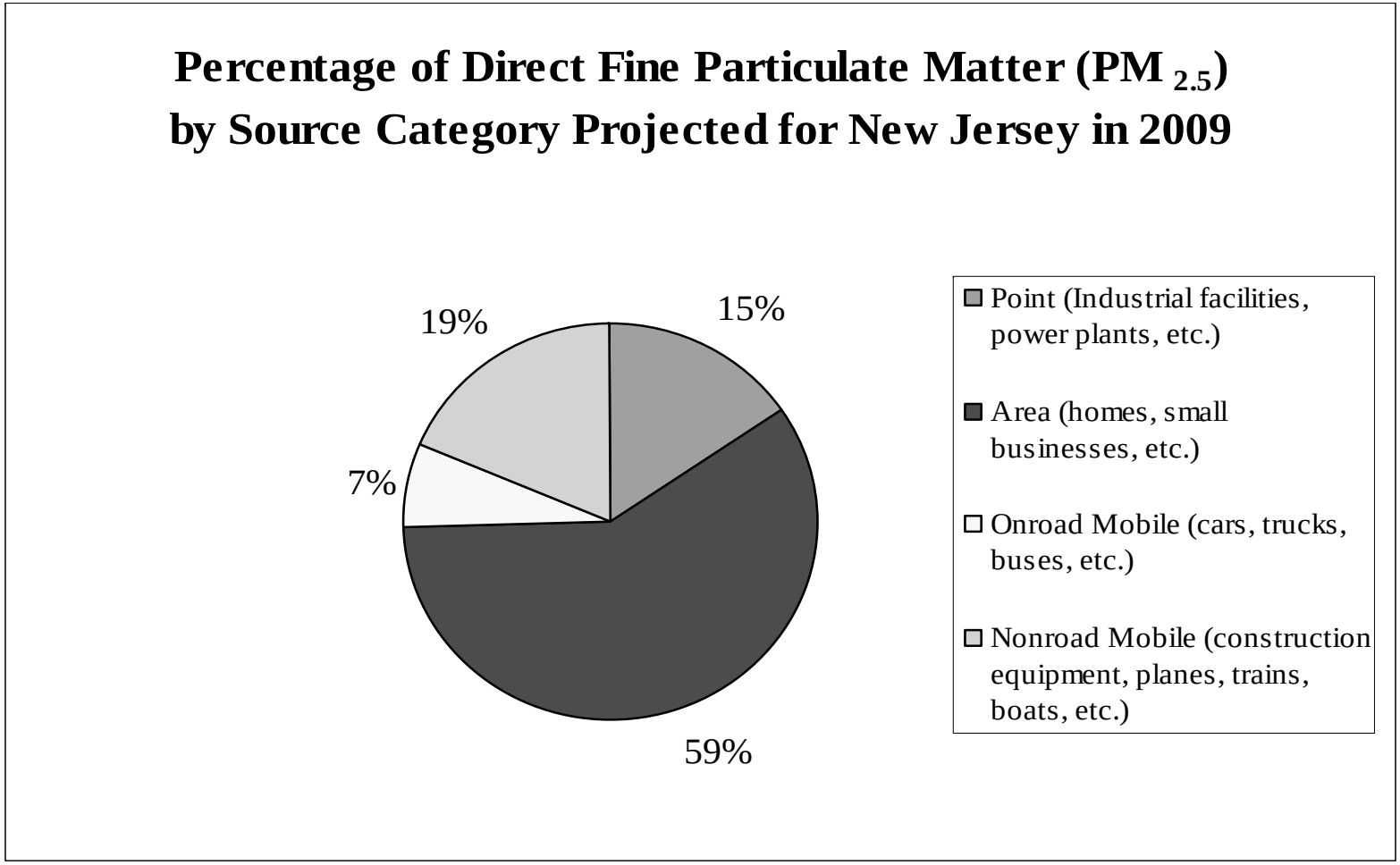
Impact of Transportation Emissions on New Jersey's Air Quality

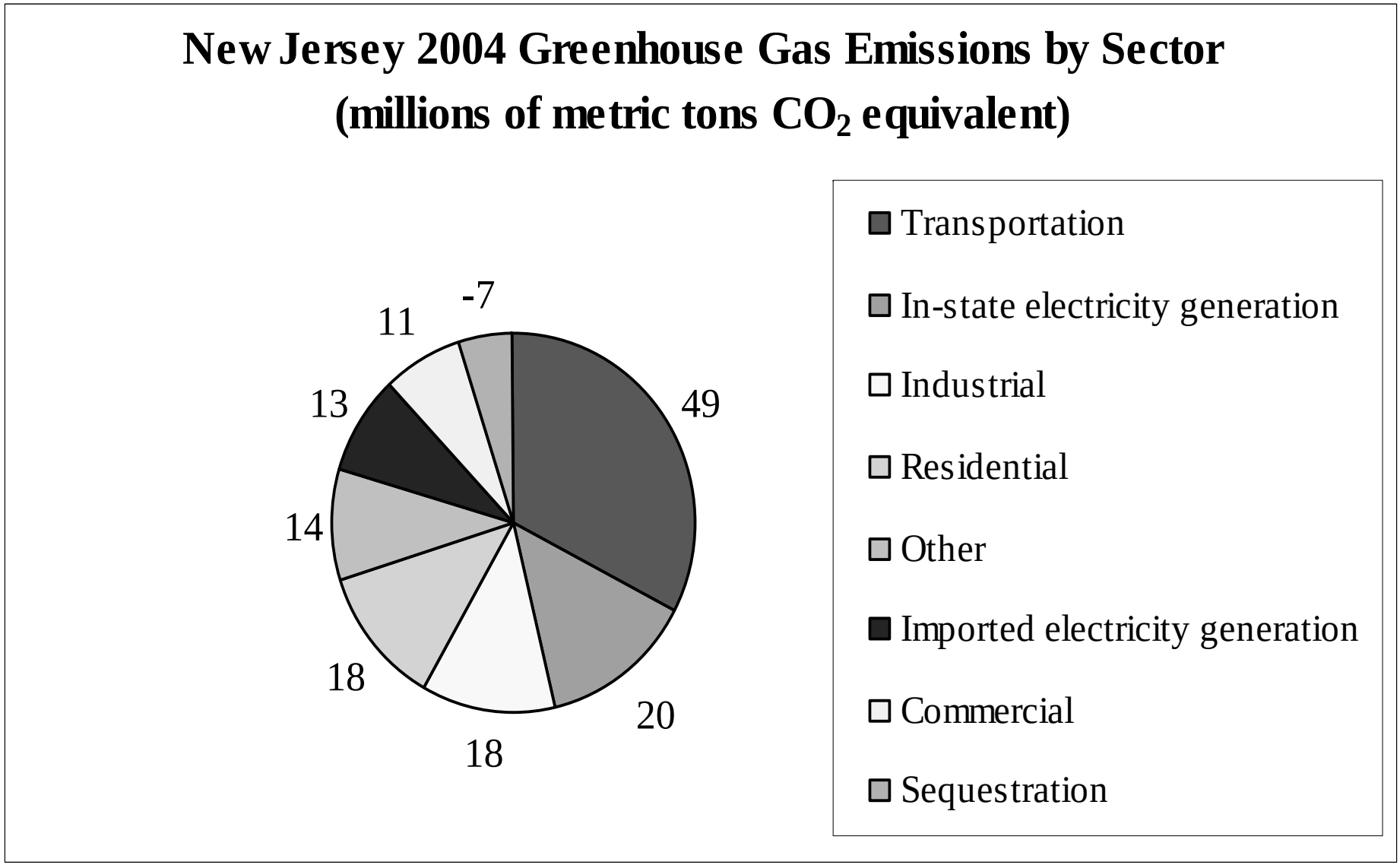
Sum of Ozone Precursors: VOC and NO_x Emissions

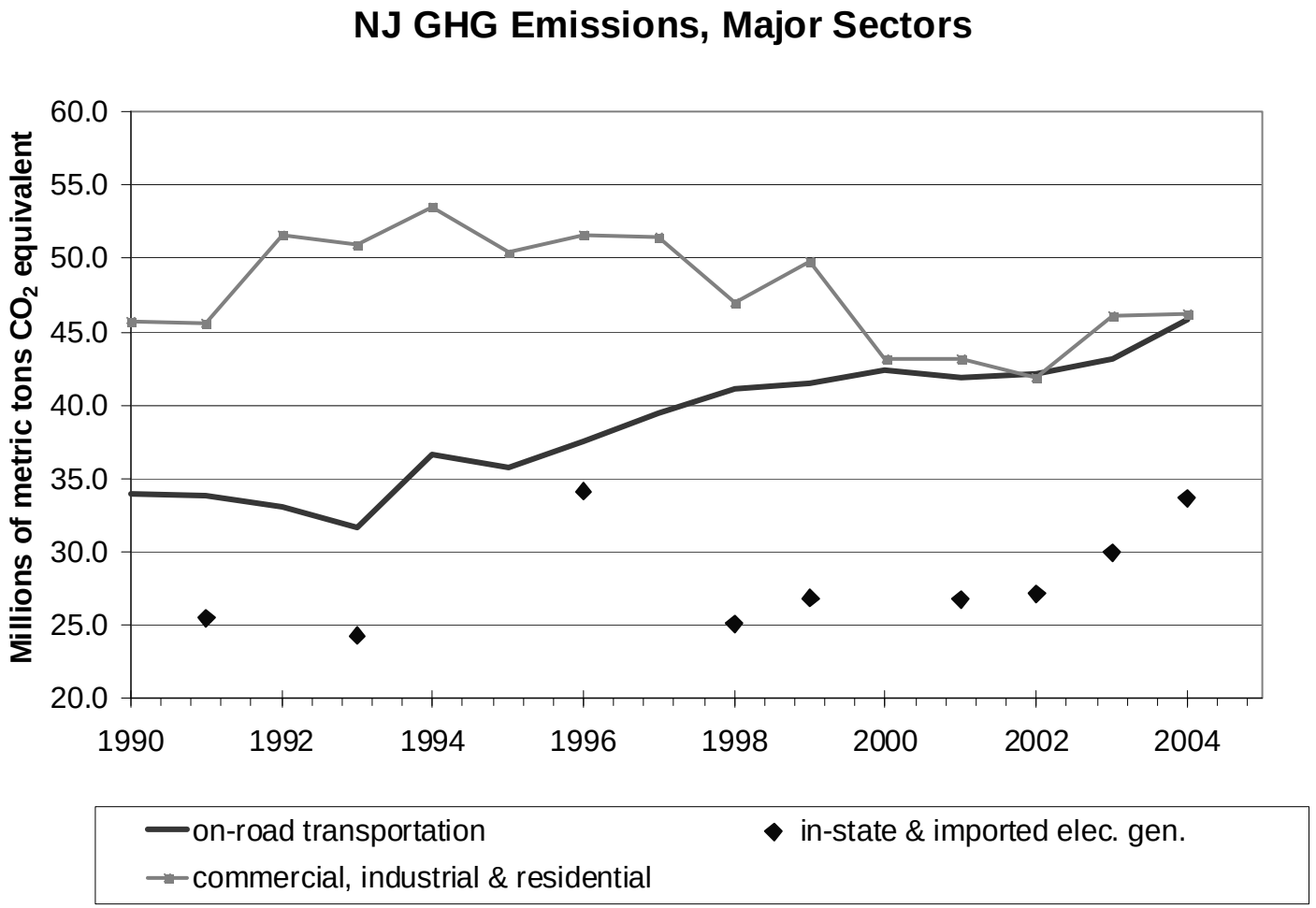


Direct Fine Particulate Matter Emissions (without air transport of emissions into NJ)



New Jersey Greenhouse Gas Emissions




NJ GHG Emissions, Major Sectors
Millions of metric tons CO_2 equivalent
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
1990
1992
1994
1996
1998
2000
2002
2004
on-road transportation
in-state & imported elec. gen.
commercial, industrial & residential

Control Measures and Benefits

- Federal Control Measures (including New Vehicle Standards and fuel standards)
  - 144 tons per day of VOC
  - 251 tons per day of NO_x
- New Jersey Gasoline Vehicle Inspection Maintenance Program
  - 27 tons per day of VOC & NO_x
- New Jersey Low Emission Vehicle Program
  - 0.1 tons per day of VOC
  - 0.2 tons per day of NO_x

Control Measures and Benefits

- New Jersey Diesel Retrofit Program (includes publicly owned and privately owned garbage trucks used in pubic contracts, publicly owned onroad and nonroad diesel vehicles, NJ Transit, and privately owned commercial transit buses)
    - 1.58 tons per day of VOC
    - .44 tons per day of NO_x
    - 155 tons per year Direct Fine Particulate Matter ($PM_{2.5}$)

- New Jersey Diesel Idling Rule Changes
    - 6 tons per day of NO_x
    - 100 tons per year of Direct $PM_{2.5}$

- New Jersey Diesel Inspection Maintenance Program
    - .01 tons per year Direct Fine Particulate Matter ($PM_{2.5}$)

Land Use Planning: Lessons Learned from Modeling Air Quality Impacts

- Port of Newark/Elizabeth: ships, cargo-handling equipment, trucks, harborcraft, locomotives show some local impacts
  - Port Clean Air Strategy will reduce GHG and all air emissions
- Truck stop in Hunterdon County: Idling of 150 trucks next to a school resulted in air quality concerns and safety concerns
- NJ Transit Rail Yard in Raritan Borough: Idling of 9 locomotive engines 24 hours/day resulted in air quality standard violations
  - NJ Transit implemented Idle Reduction Policy to reduce emissions by approx. 80%
- Recommend a buffer zone around these concentrated sources of diesel emissions of 1000-1500 feet

NJDEP's Local Government Greenhouse Gas Reduction Grant Program

- www.nj.gov/dep/opsc/ghggrant.html
- $2.5 million funded by RGGI
- Applications were due 9-4-09, will be a new grant program next year
- Program will fund projects to improve energy efficiency, renewable energy, distributed energy and sustainable land use planning
  - Idling education, green fleets, climate-friendly site plans & zoning
- NJBPU will pay municipalities $8000/hybrid car