

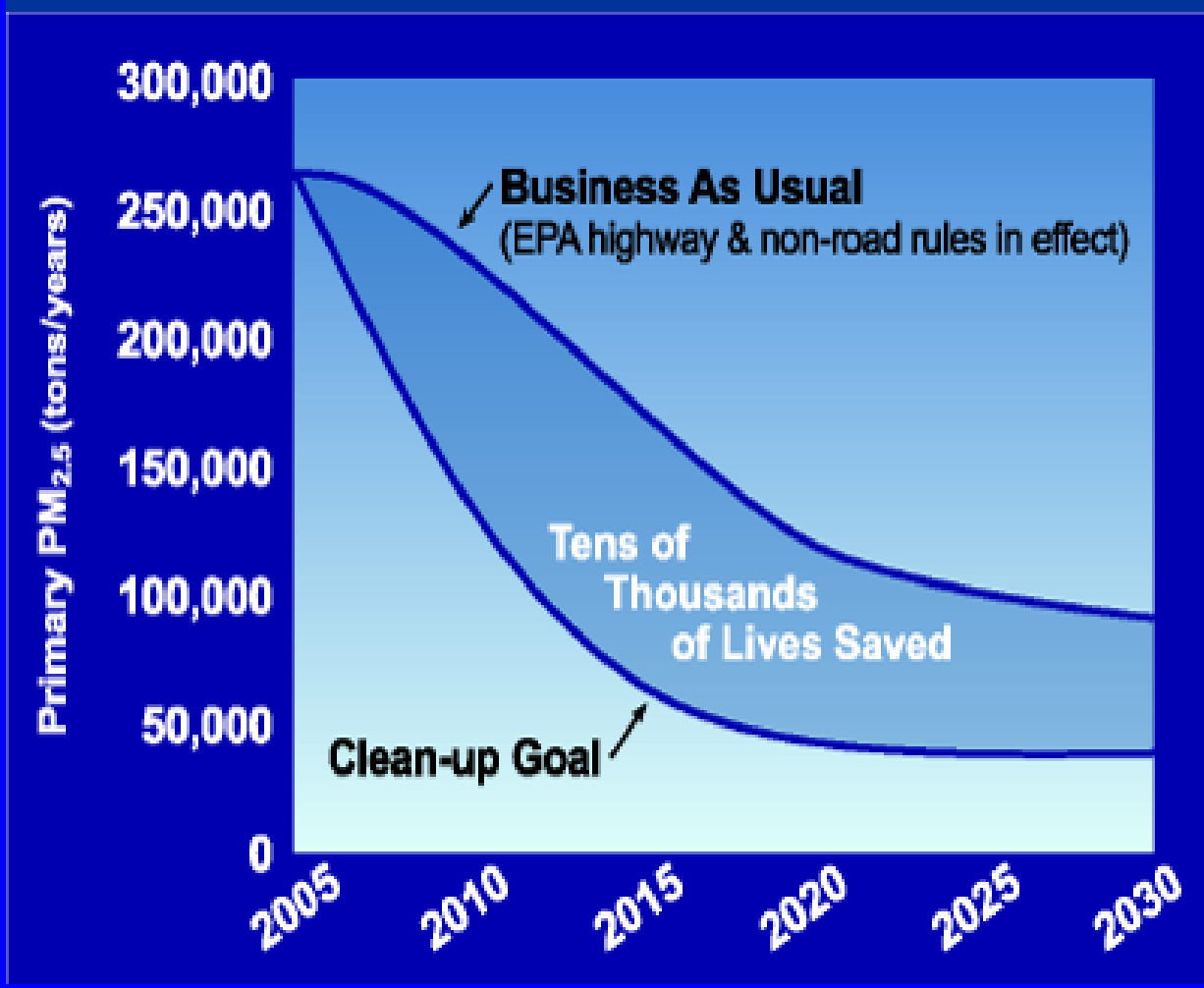
***Retrofitting
Existing Diesel Vehicles:
Determining the Proper Role for the
PCFV***

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Hypothesis: Retrofit/Existing Vehicles Programs Accelerate CF & V Benefits

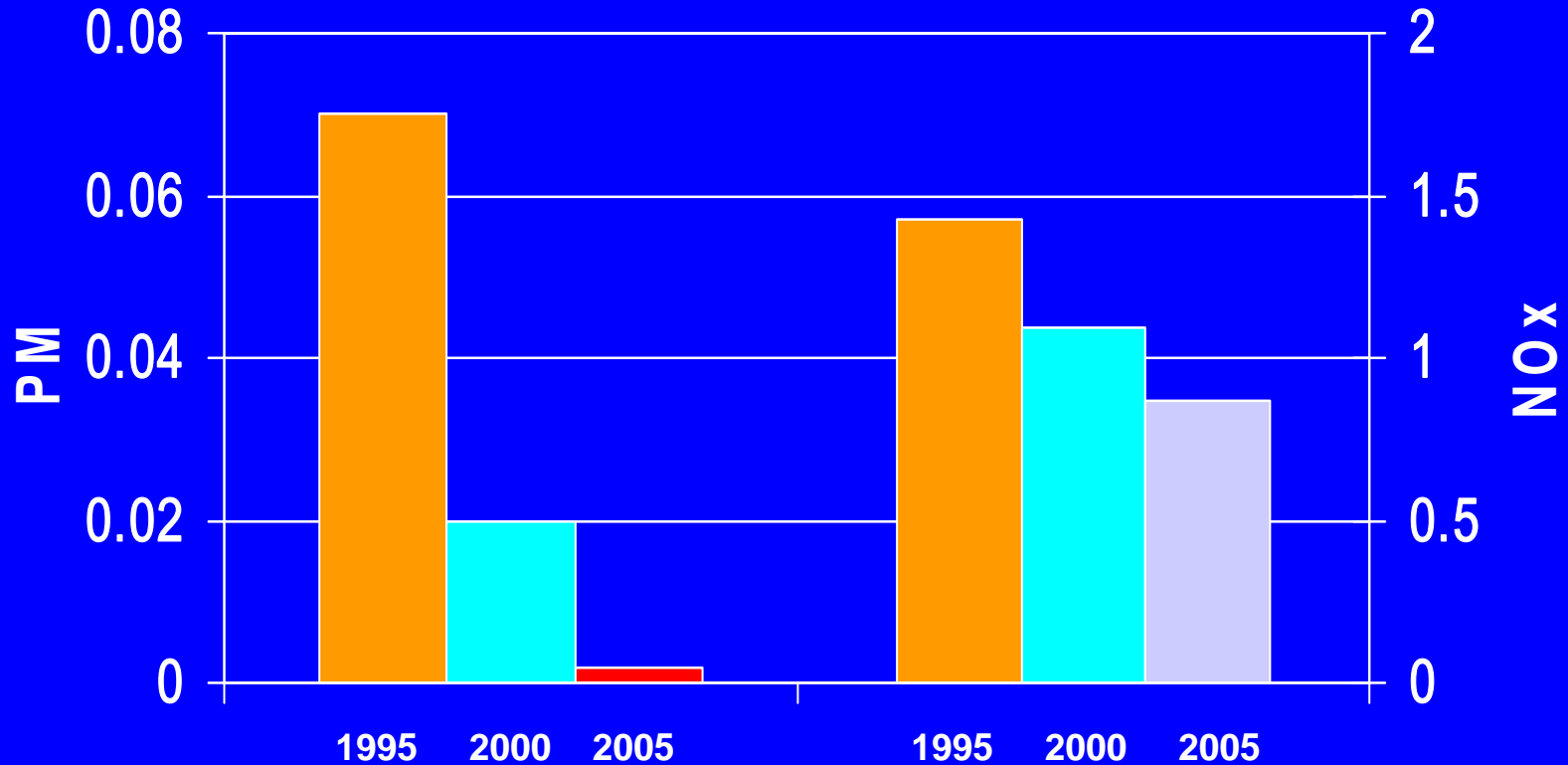
- ❑ Diesel engines can last for decades
- ❑ Without existing vehicles programs, full benefits of reduced sulfur and new engine emission standards won't be felt for 25 years or more
- ❑ Existing vehicles programs can accelerate these benefits dramatically
 - Urban retrofit programs, accelerated retirement and replacement programs, idling reduction, I & M, etc.
- ❑ *A specific focus on retrofitting existing vehicles would be within the PCFV mandate*

Can We Help Fill The Gap?



NYC Transit Shows Benefits of Retrofit/Replacement Programs

NYC Transit PM and NOx Emissions



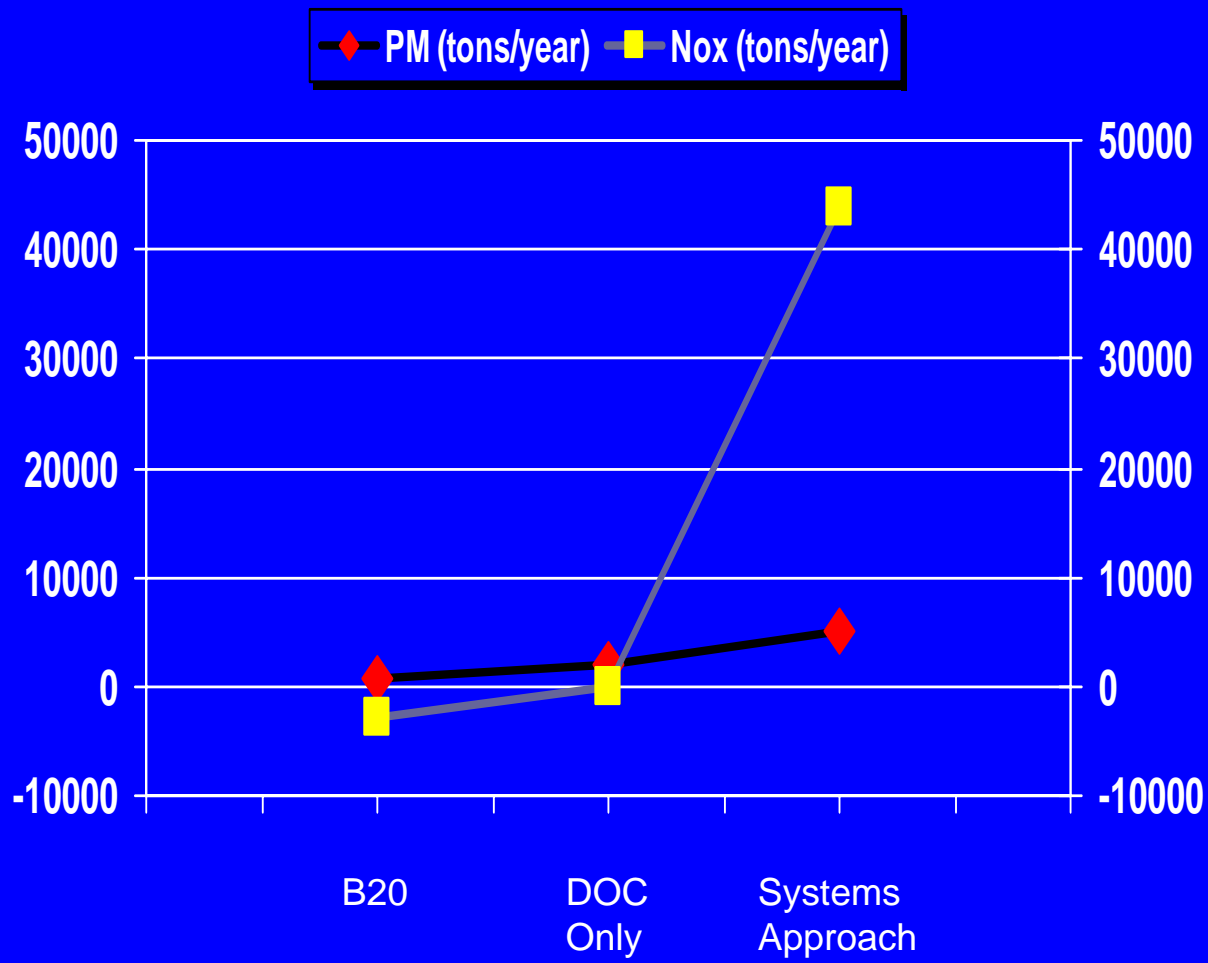
1995: 500 ppm, no DOC

2000: 500 ppm, DOC, approx. 1000 new vehicles

2005: 30 ppm, DPFs, 3200 new vehicles

Source: NRDC Analysis of NYC Transit data
Emissions measured in grams/mile

Sao Paulo Modeling Shows Results Can Be Replicated



Lessons Learned

- ❑ **To accelerate emissions and health benefits, reducing emissions from existing vehicles are critical.**
- ❑ **Key components include:**
 - ✓ RETIRE the oldest and dirtiest diesels as soon as possible
 - ✓ REPLACE with the cleanest fuels and technologies, using a “systems approach”
 - ✓ RETROFIT remaining vehicles with PM controls, using the “systems approach” to match pollution control equipment to available fuel

Next Step: Determine Proper Role for PCFV Retrofit/Existing Vehicles Work

□ Options include:

- New work group?
- Support retrofit and/or other in-use existing vehicle projects at local/national/regional levels?
- Incorporate into PCFV workshops, meetings, etc.?
- Develop educational materials on options for retrofits and/or other in-use programs?
 - ✓ Report, brochure, fact sheets?
 - ✓ Web materials and links?