

Technical Developments in the NONROAD Model: *Comparison of Model Results*

Draft NONROAD2002 Workshop

Ann Arbor, Michigan

November 5, 2002

NONROAD Model Versions

- * **June 1998:** Original Draft Release
- April 1999:** highway tier-2/gasoline sulfur rule
- * **June 2000:** 2007 HD Diesel Highway Rule & 1999 NEI/Trends v1.0. 1996 Diesel PM used in NATA.
- Nov 2000:** final finding & rec vehicle/large SI ANPRM & 2000 NEI & 1999 NTI. 1999 NEI v1.5 & draft v2.
- July 2001:** rec vehicle & large SI NPRM
- May 2002:** Draft NONROAD2002, NEI 1970-2001 various years (1999 final v2). NTI for 1990, 96, 99. (and basis for RV/LgSI FRM & nonroad diesel NPRM)
- * = publicly released model

NONROAD Model Versions

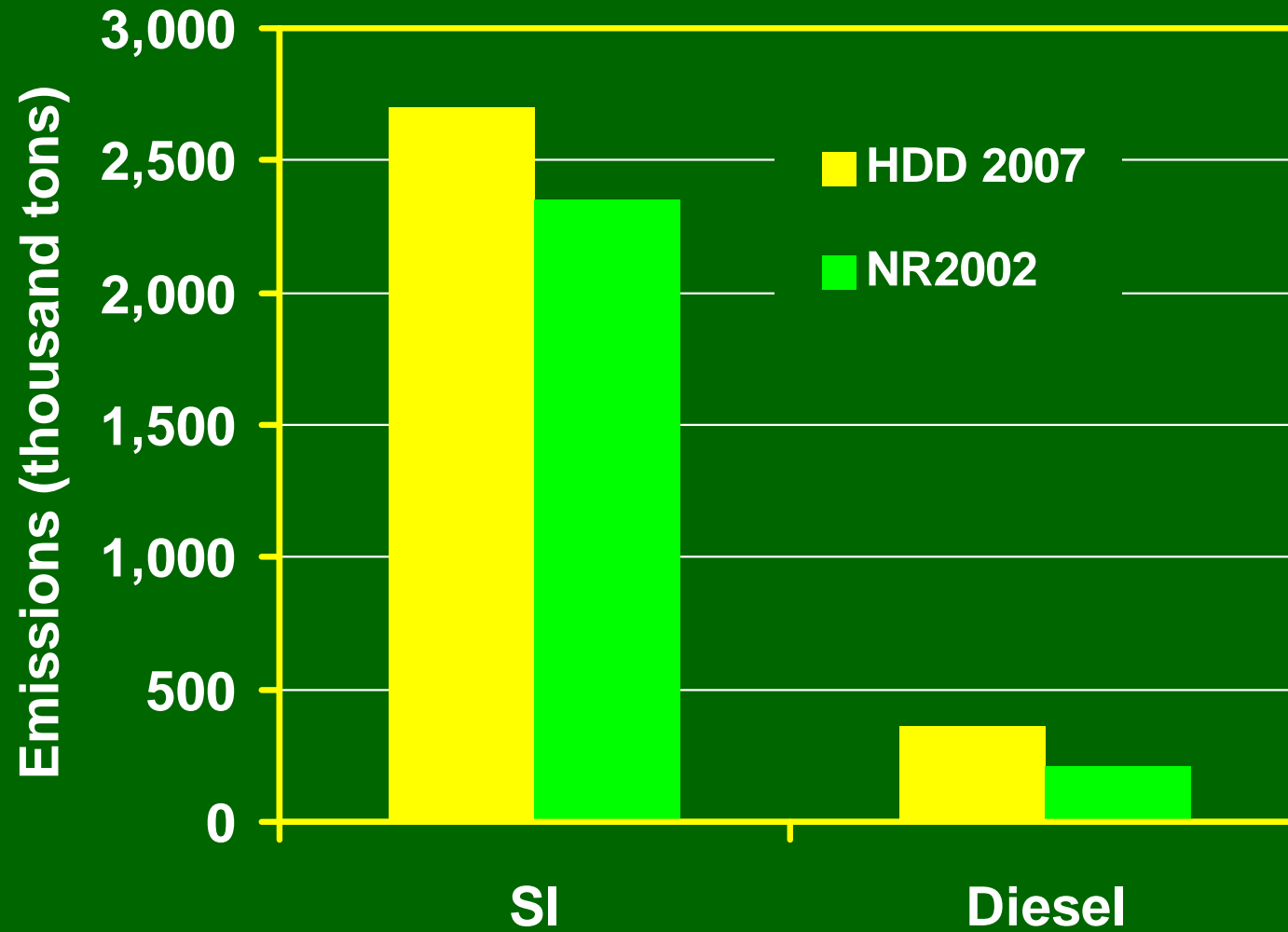
- **Original 1998 Draft => Tier 2:** Updated SI and CI pops; exponential to linear growth; SI EFs
- **Tier 2 => 2007 HD:** Major CI changes and minor SI changes
- **2007 HD => Final Finding:** Major SI changes (mostly rec equip and large SI)
- **Final Finding => RV/LgSI NPRM:** Minor SI changes
- **RV/LgSI => NONROAD 2002:** PM and SOx bug fix; major CI changes; moderate SI rec equip changes

Basis for Comparison

- **Time Period:** Calendar Year 1999
- **HDD 2007:** national estimates using June-2000 version with national defaults
 - current publicly available version
- **NR 2002:** national estimates from 1999 NEI, final version 2
 - sums of county inventories
 - recently released to states

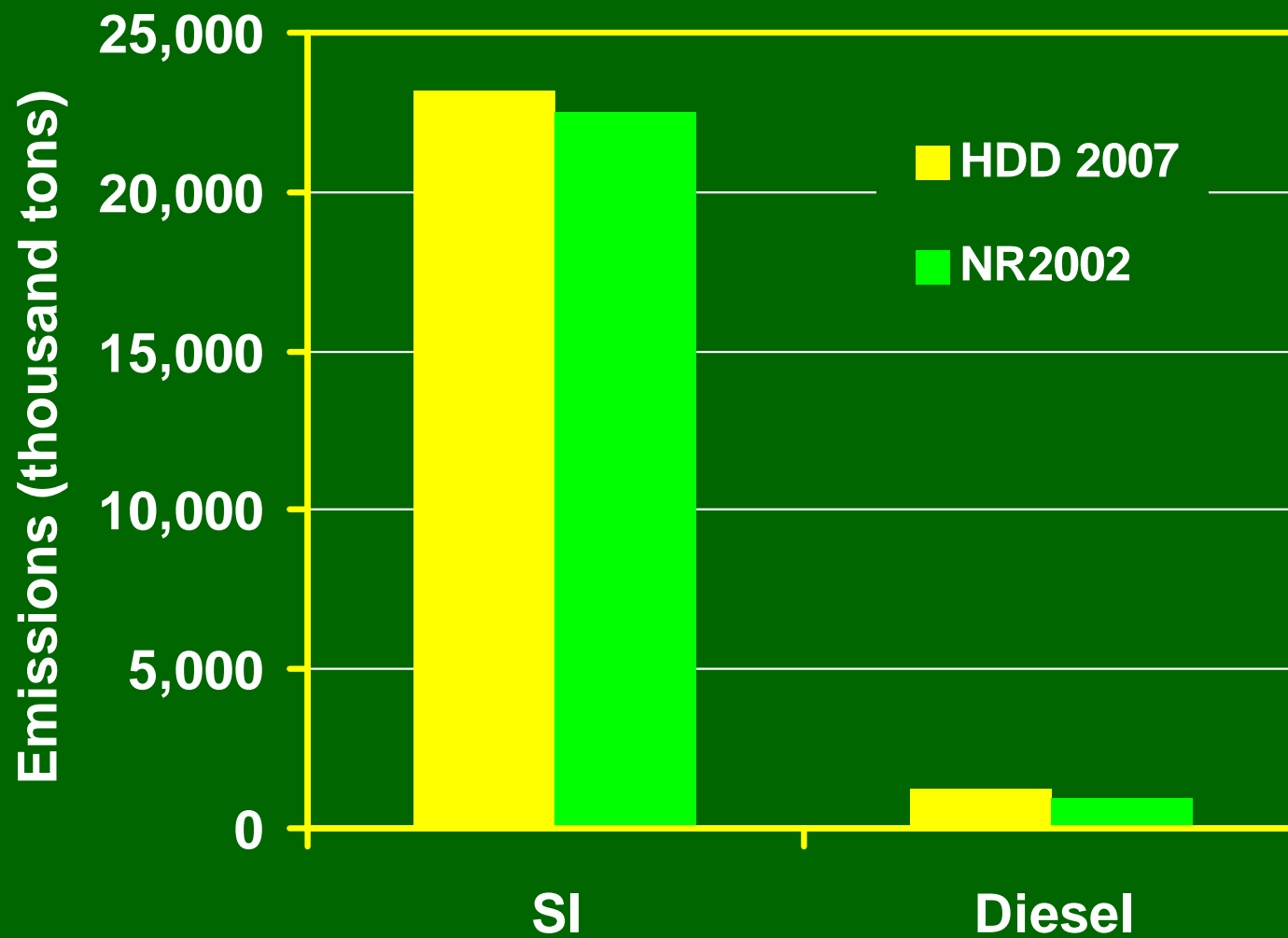
Inventory Comparison: VOC

National Estimates for 1999



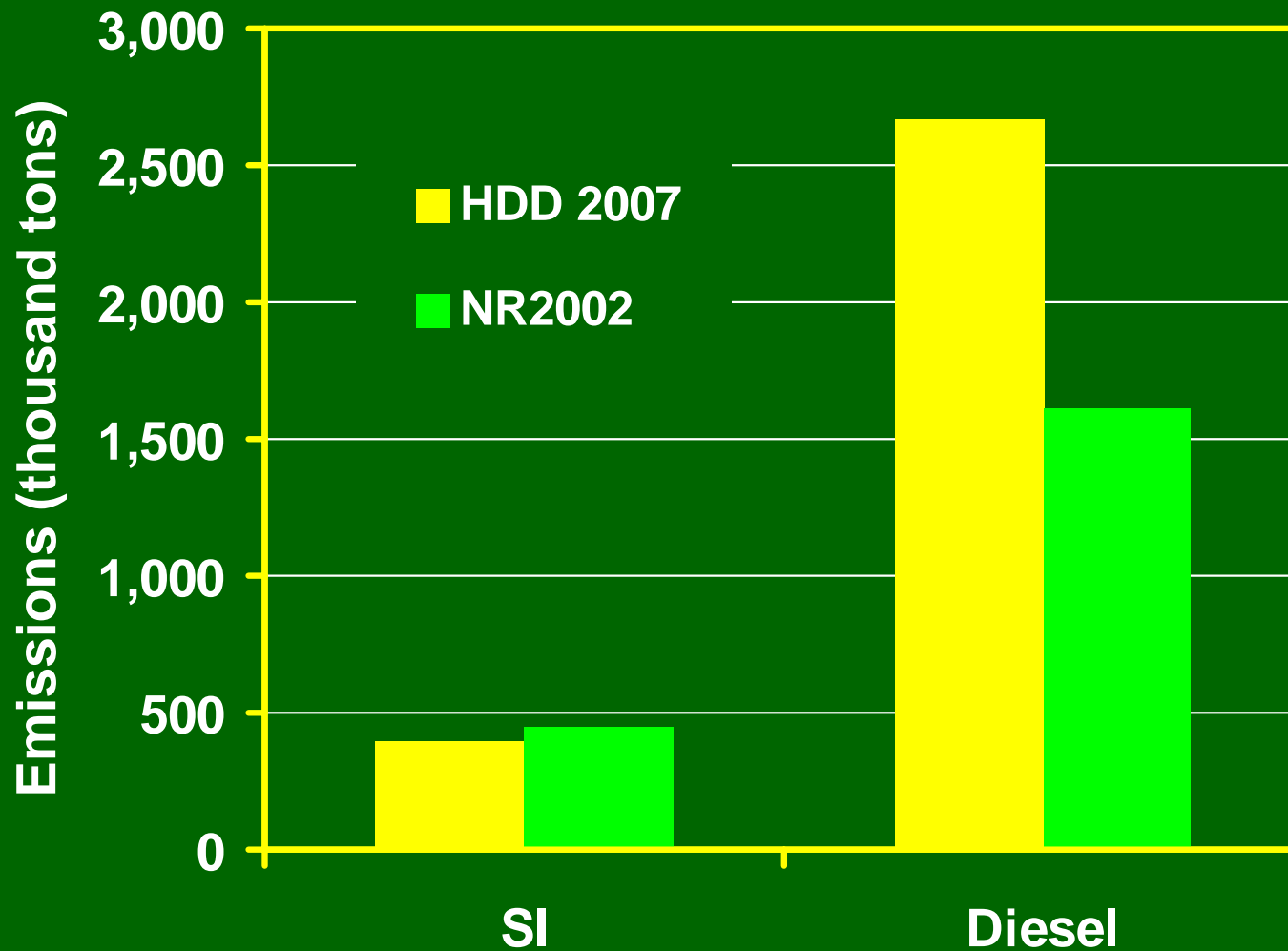
Inventory Comparison: CO

National Estimates for 1999



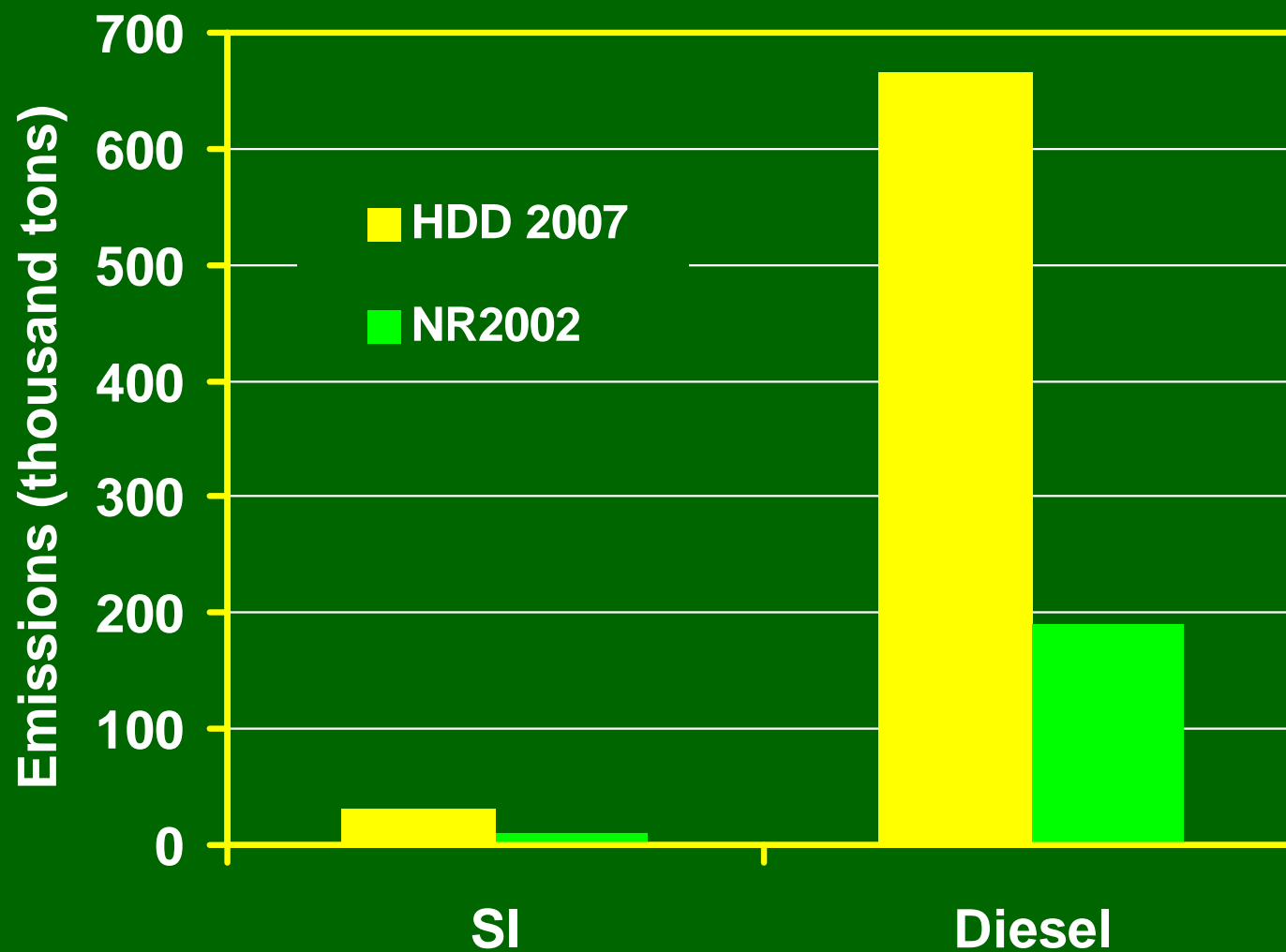
Inventory Comparison: NO_x

National Estimates for 1999



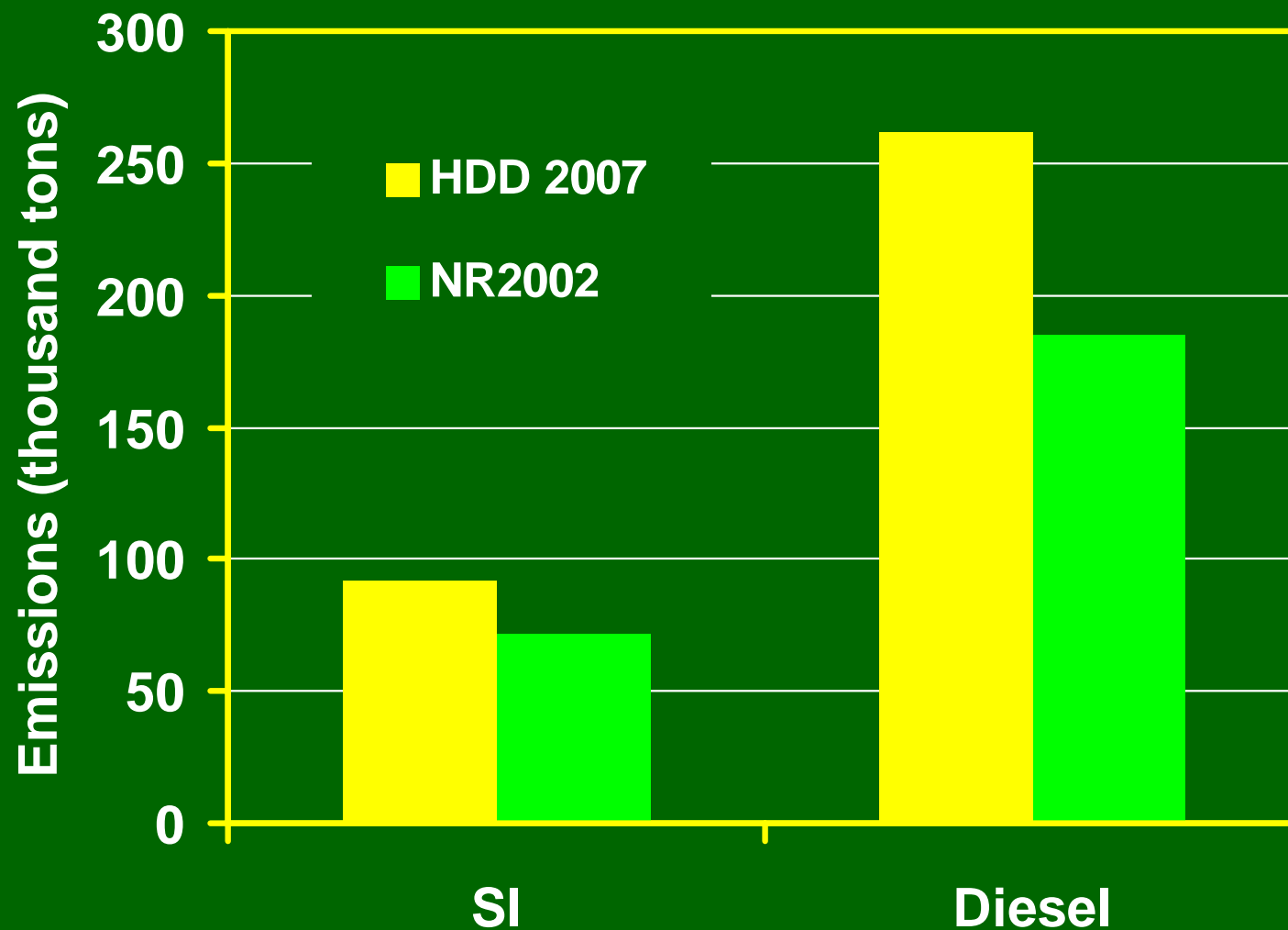
Inventory Comparison: SO_x

National Estimates for 1999



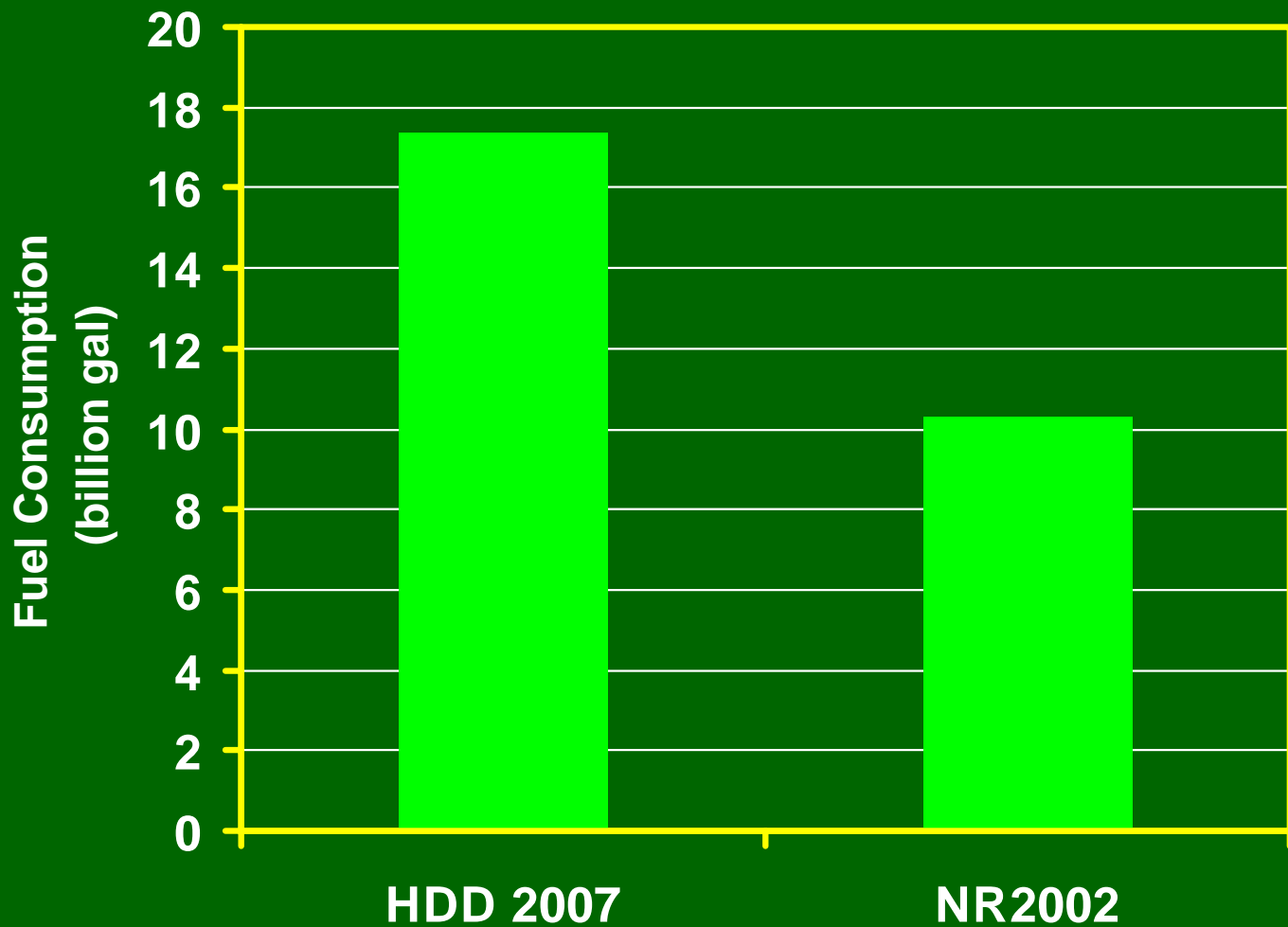
Inventory Comparison: PM_{10}

National Estimates for 1999



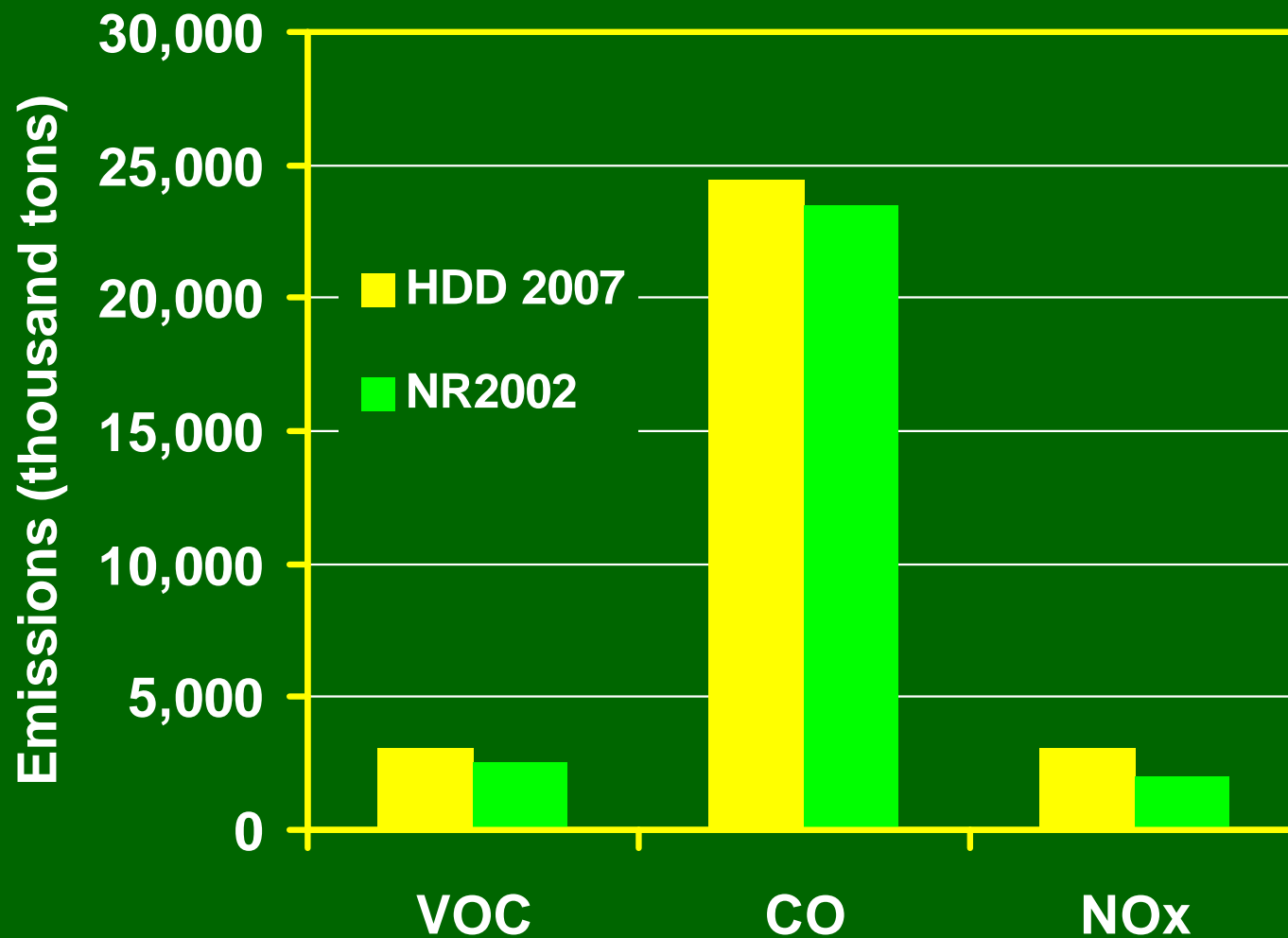
Inventory Comparison: *Diesel Fuel Consumption*

National Estimates for 1999



Inventory Comparison: SI + Diesel

National Estimates for 1999



Inventory Comparison: SI + Diesel

National Estimates for 1999

