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The Supreme Court and EPA
Carbon Rules

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Clean Air Act Title II – Mobile Sources

- CAA Section 202 – Emission standards for new motor vehicles or new motor vehicle engines
 - (a)(1) – “The Administrator shall by regulation prescribe (and from time to time revise) ... standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles ... which in his judgment cause, or **contribute to**, air pollution which may reasonably be anticipated to **endanger** public health or welfare.”

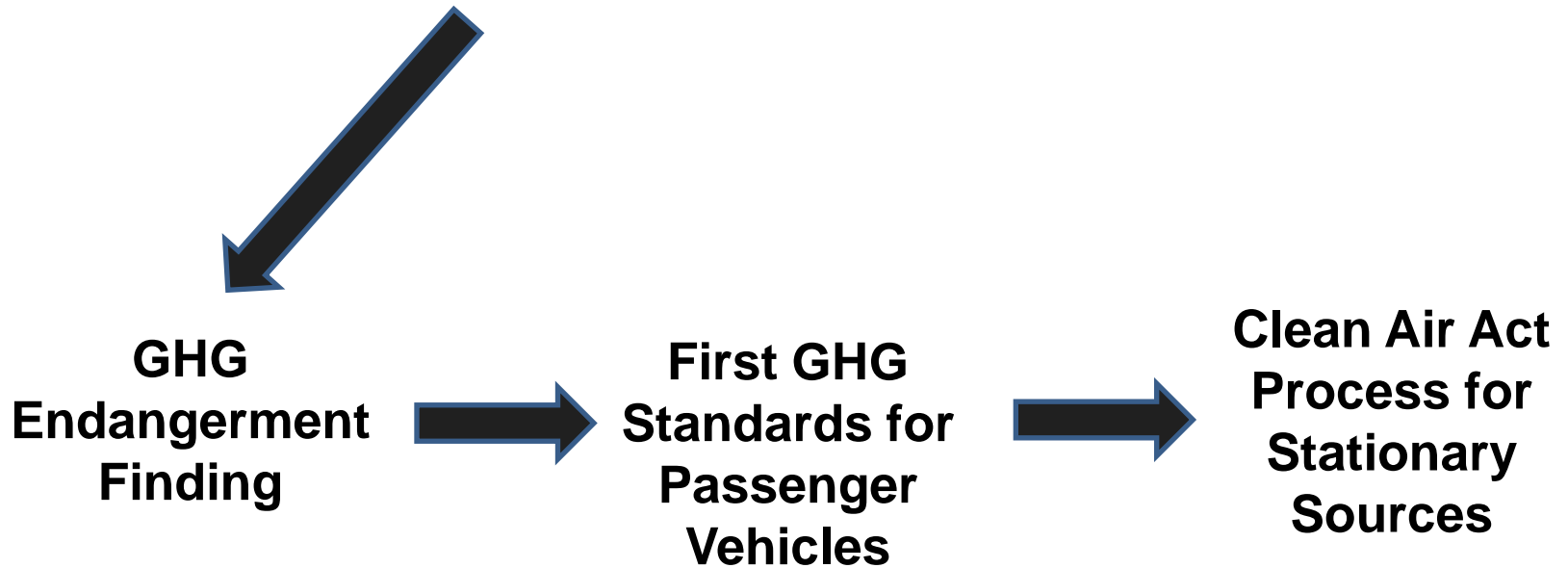
Clean Air Act Definition

CAA Section 302(g) -- “The term ‘air pollutant’ means any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive ... substance or matter which is emitted into or otherwise enters the ambient air.”



EPA Regulatory Actions on GHG Emissions

Massachusetts v. EPA



CAA Sections 160-169 -- Prevention of Significant Deterioration (PSD) of Air Quality (cont'd)

- 40 C.F.R. Sec. 52.21(b)(50) -- Applies to “regulated NSR pollutants”
 - “(i) Any pollutant for which a national ambient air quality standard has been promulgated...
 - (ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act..
 - (iv) Any pollutant that otherwise is subject to regulation under the Act...”

CAA Sections 160-169 -- Prevention of Significant Deterioration (PSD) of Air Quality

- For attainment areas
 - CAA Sec. 169(1) -- “The term ‘major emitting facility’ means any of the following stationary sources of air pollutant which emit, or have the potential to emit, **one hundred tons per year** or more of any air pollutant from the following types of stationary sources: fossil-fuel fired steam electric plants of more than two hundred fifty million British thermal units per hour heat input, ... Portland Cement plants, Such term also includes any other source with the potential to emit **two hundred and fifty tons per year** or more of any air pollutant.”



Prevention of Significant Deterioration (PSD): Permitting Steps under the Tailoring Rule

EPA's 2010 "Tailoring Rule" phases in CAA permitting requirements for stationary sources of GHGs in several steps:

Step 1 - January 2, 2011 to June 30, 2011:

Only sources already subject to PSD "anyway"

New sources: 75,000 tons per year (tpy) of carbon dioxide equivalent (CO₂e)

Modifications: 75,000 tpy CO₂e

Step 2 - July 1, 2011 to June 30, 2013:

Continue Step 1 sources plus other large GHG emission sources

New sources: 100,000 tpy CO₂e

Modifications: 75,000 tpy CO₂e

Step 3 – Future Rulemaking:

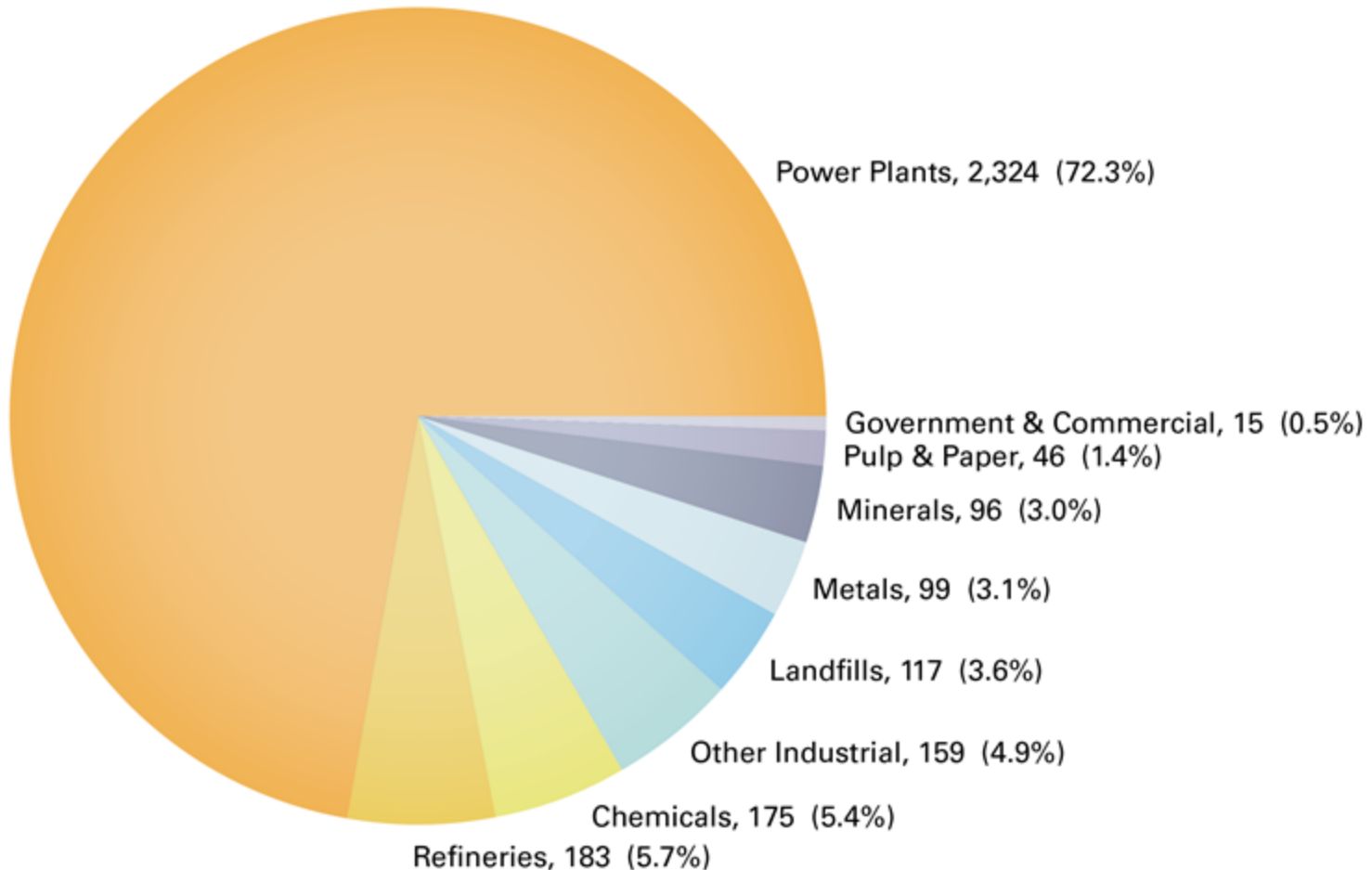
Evaluate whether additional sources of GHG emissions should also be subject to permitting req'mts., but the permitting threshold would be no lower than 50,000 tpy.

Utility Air Regulatory Group v. EPA

Question Presented

“Whether EPA permissibly determined that its regulation of greenhouse gas emissions from new motor vehicles triggered permitting requirements under the Clean Air Act for stationary sources that emit greenhouse gases.”

Breakdown of Reported GHG Emissions (MMT CO₂e) from Stationary Sources by Industry Type - 2010*



All data is as reported by facilities on 12/16/11.

* This figure shows total reported GHG emissions by industry type reported to the Greenhouse Gas Reporting Program (GHGRP) in 2010. Note this figure does not represent total U.S. emissions, and percentages only imply the percent of total emissions reported by facilities in the GHGRP. The GHGRP covers the vast majority of U.S. emissions from the electric power and industrial sectors. Emissions from the transportation, residential, commercial and agricultural sectors are not reflected in these totals.

	New Source Performance Standards (NSPS)	New Source Review (NSR)	Prevention of Significant Deterioration (PSD)
Applicable standards	Best system of emissions reduction adequately demonstrated (BSER)	Lowest achievable emissions rate (LAER)	Best available control technology (BACT)
Applicability	Everywhere	Nonattainment areas	Attainment areas
Scope	Nationwide	Facility-specific	Facility-specific
Trigger	New, reconstructed, modified facilities	New facilities or major modifications	New facilities or major modifications
Standard set by	U.S. EPA	States (usually)	States (usually)

CAA Section 111 -- Standards of performance for new stationary sources

- Sec. 111(b)(1)(A) -- “The Administrator shall ... publish (and from time to time thereafter shall revise) a list of categories of stationary sources. He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”
- Sec. 111(b)(1)(B) -- “[T]he Administrator shall publish proposed regulations, establishing Federal standards of performance for new sources within each category.”

NSPS for New Power Plants

CAA 111(b)

- April 13, 2012 – Initial EPA proposal
- September 20, 2013 – Revised EPA proposal
- Separate standards for natural gas and coal plants
- Coal plants would require carbon capture and sequestration
- No clear timetable for final rule
- Is anyone building new coal plants anyway?

Clean Air Act Section 111(d)

(d) Standards of performance for existing sources; remaining useful life of source

(1) The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which

(A) establishes standards of performance for any existing source for any air pollutant

(i) for which air quality criteria have not been issued or which is not included on a list published under section 7408 (a) of this title or emitted from a source category which is regulated under section 7412 of this title but

(ii) to which a standard of performance under this section would apply if such existing source were a new source, and

(B) provides for the implementation and enforcement of such standards of performance. Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.

NSPS for Existing Power Plants

CAA 111(d)

- EPA must act through states
- Mandated schedule:
 - June 1, 2014 – EPA must propose guidelines
 - June 1, 2015 – EPA must finalize guidelines
 - June 30, 2016 – States submit SIPs

BACT/NSPS: Issues

- Require fuel switching?
- Carbon capture and sequestration?
- Role of energy efficiency?
- Significance threshold for modified sources?
- Time and resources to promulgate?
- Should EPA pick technologies?

Pending Non-GHG Rules Relevant to Coal-Fired Power Plants

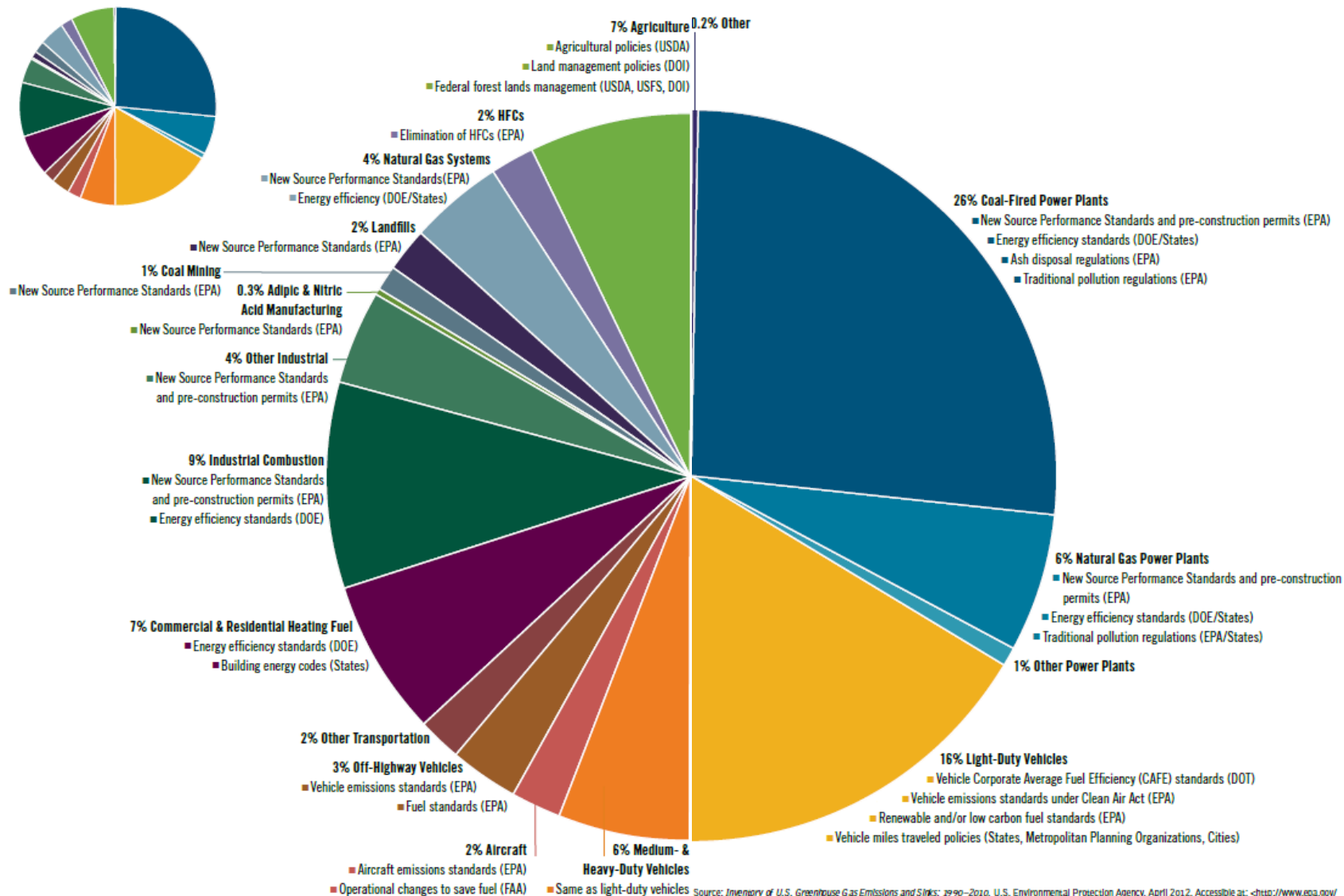
Clean Air Act

- Mercury and Air Toxics Standards
 - White Stallion Energy Center v. EPA (upheld rule) – argued in DC Circuit on December 10, 2013
- Cross-State Air Pollution Rule (SO_x, NO_x)
 - EPA v. EME Homer City Generation (overturned rule) -- argued in Supreme Court on December 10, 2013
- Ozone National Ambient Air Quality Standard
- PM 2.5 standard implementation

Other Authorities

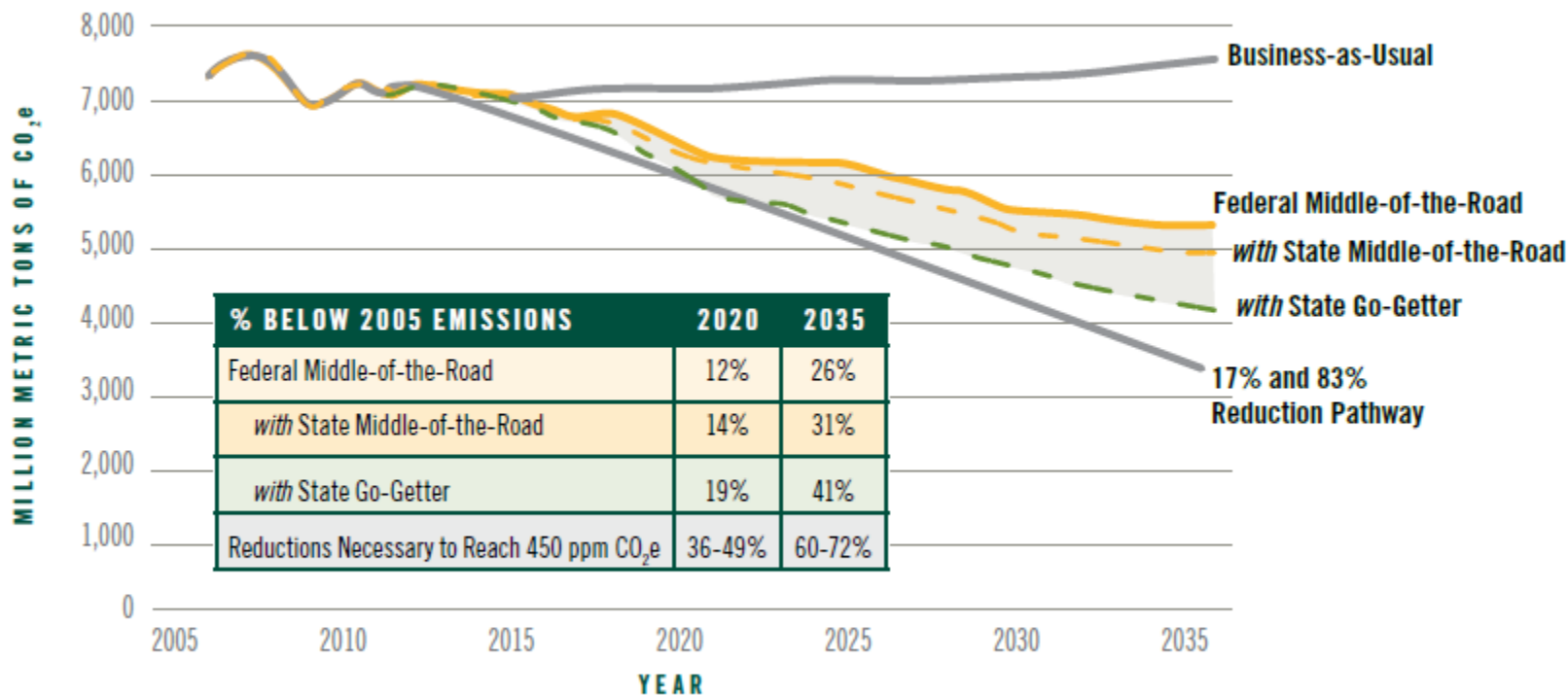
- Coal ash (Resource Conservation and Recovery Act)
- Cooling water (Clean Water Act)

FIGURE 5 U.S. Greenhouse Gas Emissions by Sector and Corresponding Federal Authorities, 2010



Source: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010. U.S. Environmental Protection Agency, April 2012. Accessible at: <<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>>; Clearing the Air on Shale Gas Emissions: Assessing and Reducing the Carbon Footprint of Natural Gas. James Bradbury, Michael Oberler, Laura Draucker, Wen Wang, and Amanda Stevens. World Resources Institute, Working Paper, forthcoming.

FIGURE 2 Projected U.S Emissions with State Action Coupled with Middle-of-the-Road Federal Action



Note: Due to modeling limitations, this figure depicts HFC consumption, which is generally thought to be equivalent to life-cycle emissions.