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Diesel Exhaust Fluid Forum

EPA 2010: A Baseline of Perceptions

Tuesday, 11 November

For more information on the Diesel Exhaust Fluid Forum please contact
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EPA 2010



**UNDERSTANDING CURRENT MARKETPLACE
KNOWLEDGE AND PERCEPTIONS ABOUT EPA
2010 REGULATIONS AND TECHNOLOGIES**

Objectives

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- Gain insights into the following key questions:
 - Do truck buyers understand what is specifically included in the EPA 2010 regulations?
 - Do they know which emissions technology – SCR or increased EGR – delivers key benefits?
 - How important is environmental responsibility to the purchase decision?
 - Which emissions technology are truck buyers most likely to consider when making their next truck purchase?

Methodology

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- Online survey developed and analyzed by Quixote Group, managers and editors of FactsAboutSCR.com and TruckSCR.com
- Fielded by *Heavy Duty Trucking* magazine
- 828 total responses ($\pm 3.4\%$ margin of error)
- Designed to support the Communications Subcommittee of the North American H.D. SCR Stakeholders Group



FactsAboutSCR.com

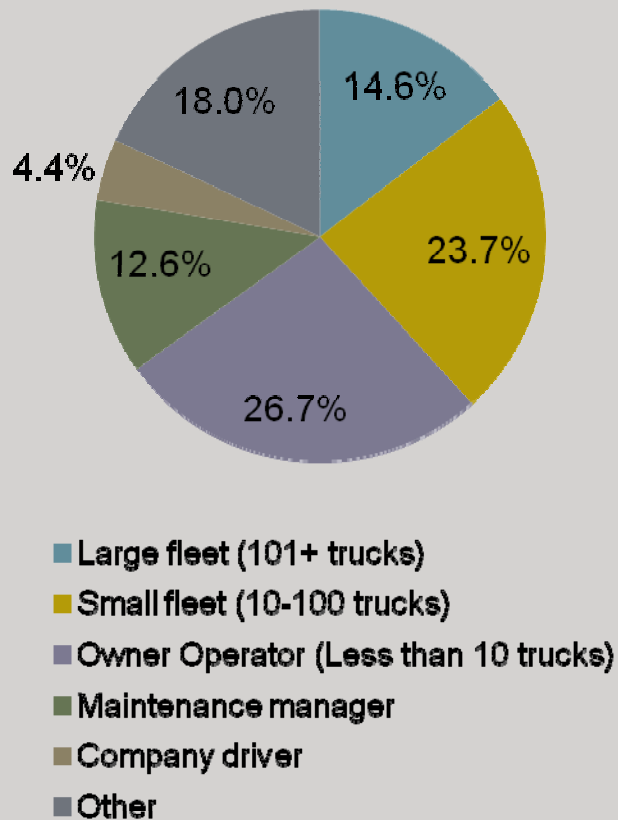
SCR, 1. *Selective Catalytic Reduction*: one of the most cost-effective and fuel-efficient vehicle emissions control technologies capable of reducing emissions to near-zero levels.



Respondent Makeup

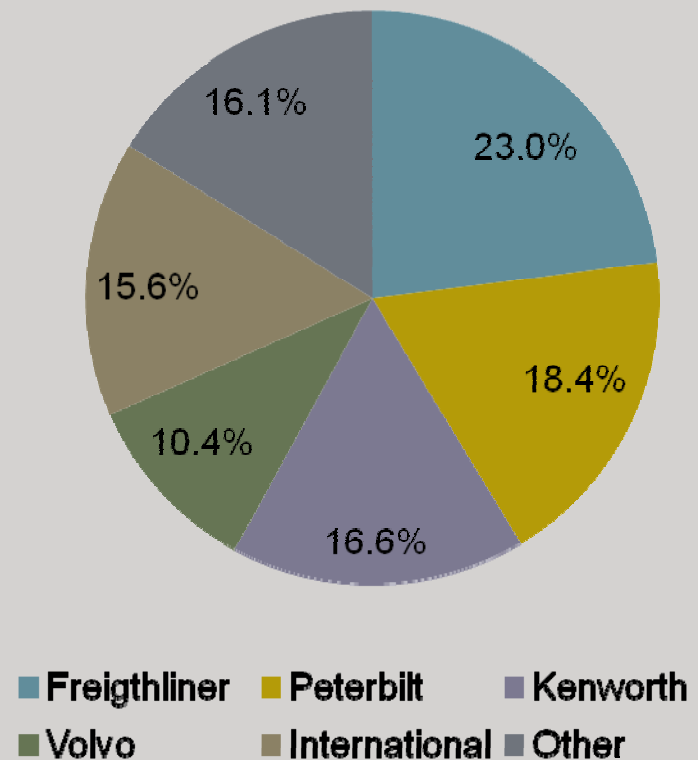
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Respondent Job Function



N=828

Majority of Class 8 Trucks Owned



N=828

Knowledge of the Regulations

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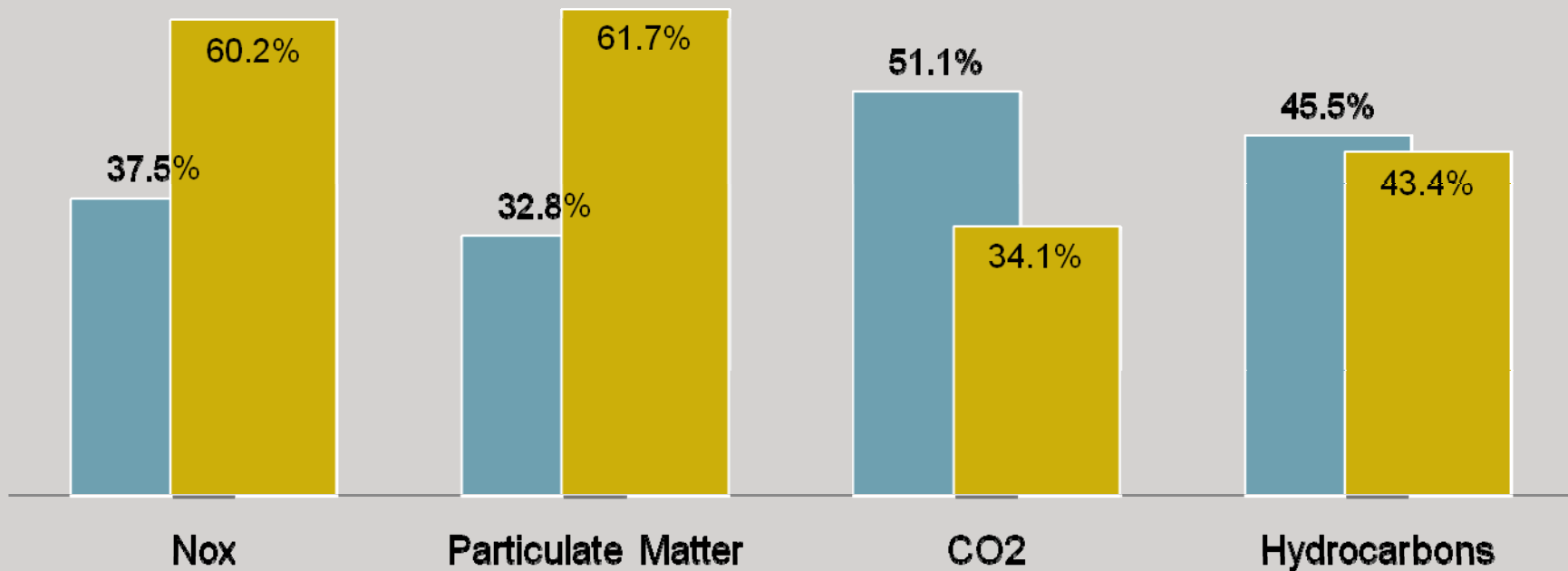
- Which of the following pollutants or components of exhaust emissions are specifically included as part of the EPA 2010 regulations?
 - NOx
 - CO2
 - Particulate Matter
 - Hydrocarbons
- Answer options:
 - Included in EPA 2010
 - Not included in EPA 2010
 - Don't know/Not sure

Knowledge of the Regulations

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Which of the following pollutants or components of exhaust emissions are specifically included in EPA 2010 regulations?

■ Don't Know ■ Included in EPA 2010



N=828

Knowledge of the Regulations

7

**Which of the following pollutants or components of exhaust emissions are specifically included in EPA 2010 regulations?
(% saying included)**

■ Hydrocarbons ■ Particulate Matter ■ CO2 ■ Nox



Knowledge of the Technologies

8

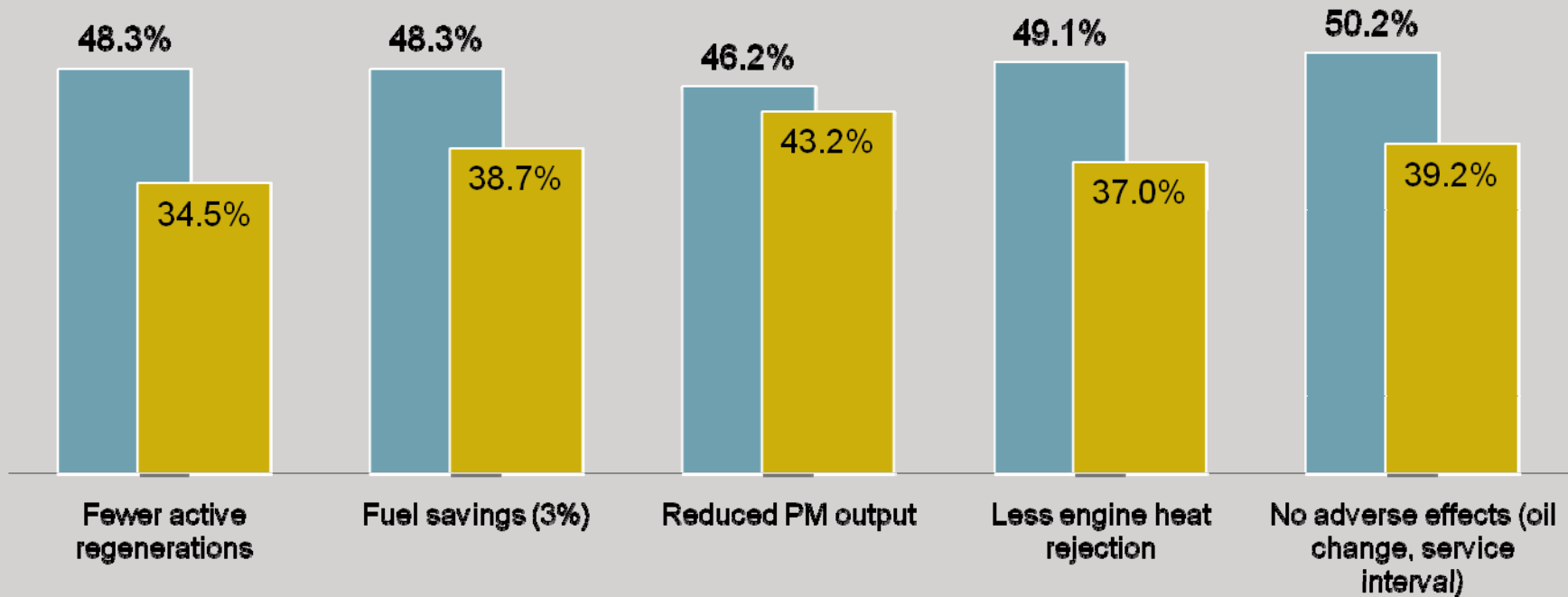
- The following are benefits offered by one of the two technologies that will be offered to meet the EPA 2010 emissions standards. Which technology - increased EGR or Selective Catalytic Reduction (SCR) - will deliver each of the following?
 - Fuel savings (approximately 3%)
 - Fewer active regenerations
 - Less engine heat rejection
 - Reduced particulate output
 - No adverse effects on oil drain or service intervals
- Answer options: SCR; Increased EGR; Don't Know/Not Sure

Knowledge of the Technologies

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Which technology – SCR or increased EGR – will deliver each of the following benefits?

■ Don't Know ■ SCR



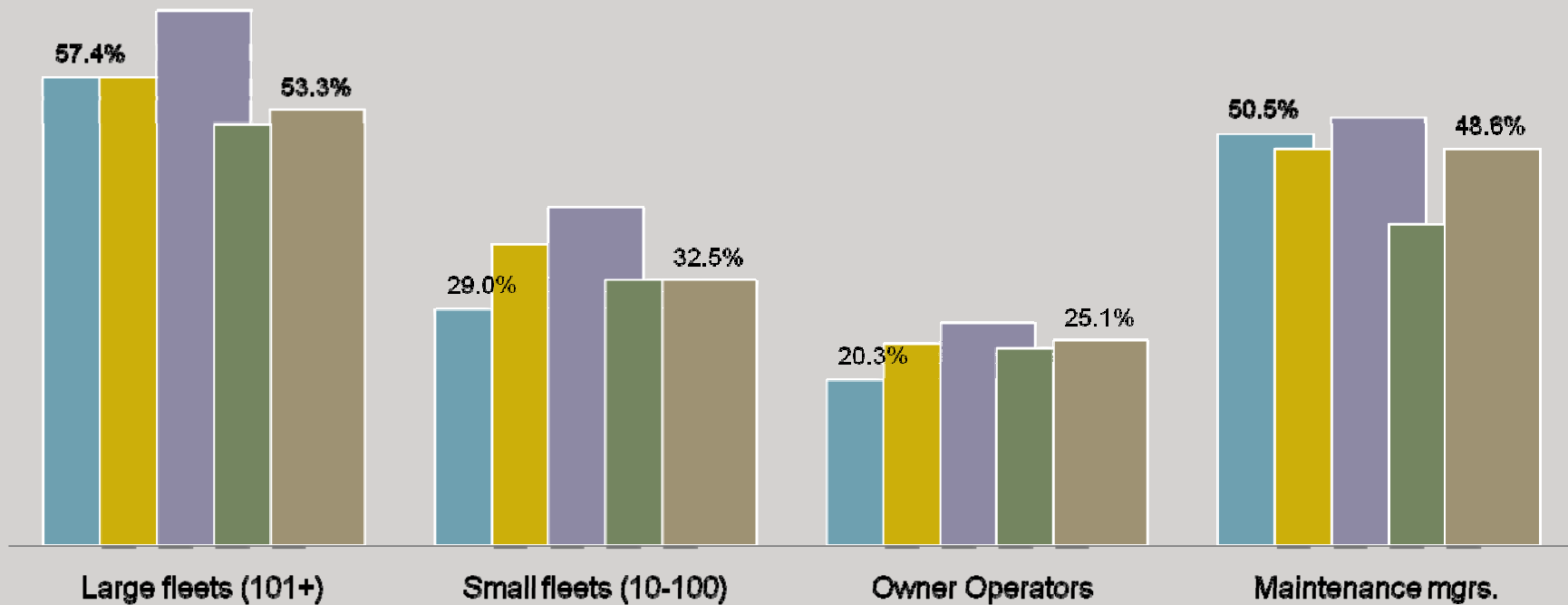
N=859

Knowledge of the Technologies

10

Which technology – SCR or increased EGR – will deliver the following benefits? (% saying SCR)

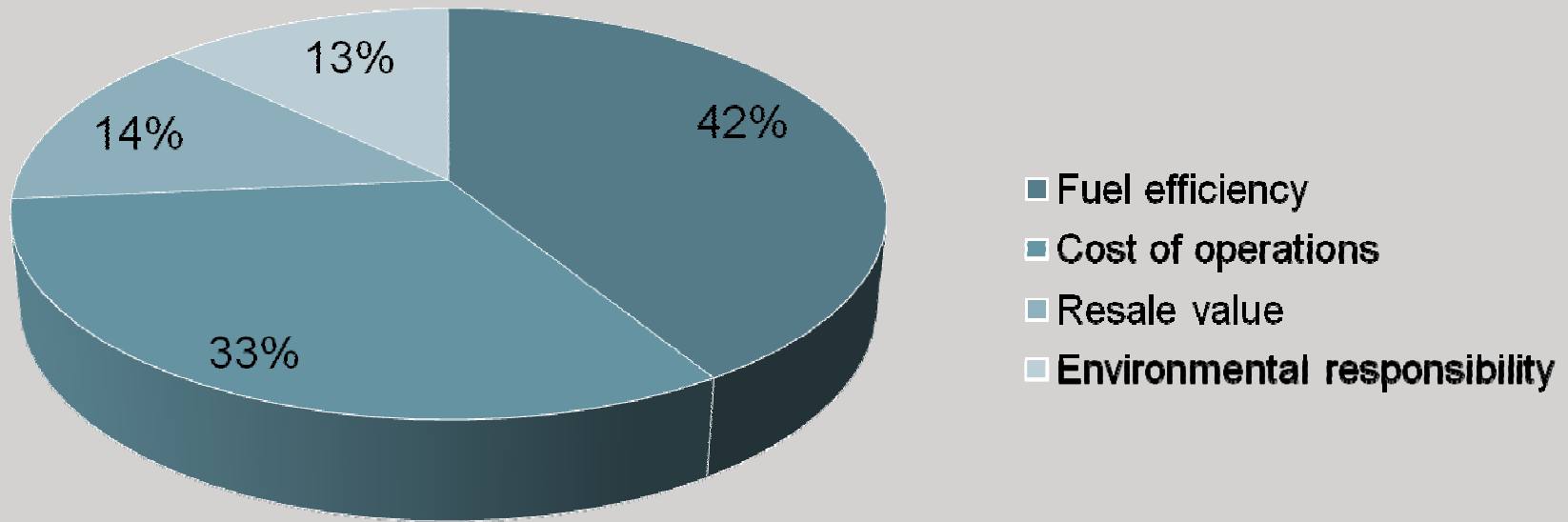
■ Fewer active regens ■ No adverse effects ■ Reduced PM ■ Less heat ■ Fuel savings



Importance of Environmental Responsibility

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**Please indicate how important each of the following are to you when considering the purchase of a new truck
[100 point constant sum]**



SCR = Good for business (improved fuel economy) = 42%
SCR = Good for environment (environmental responsibility) = 13%

Purchase Consideration

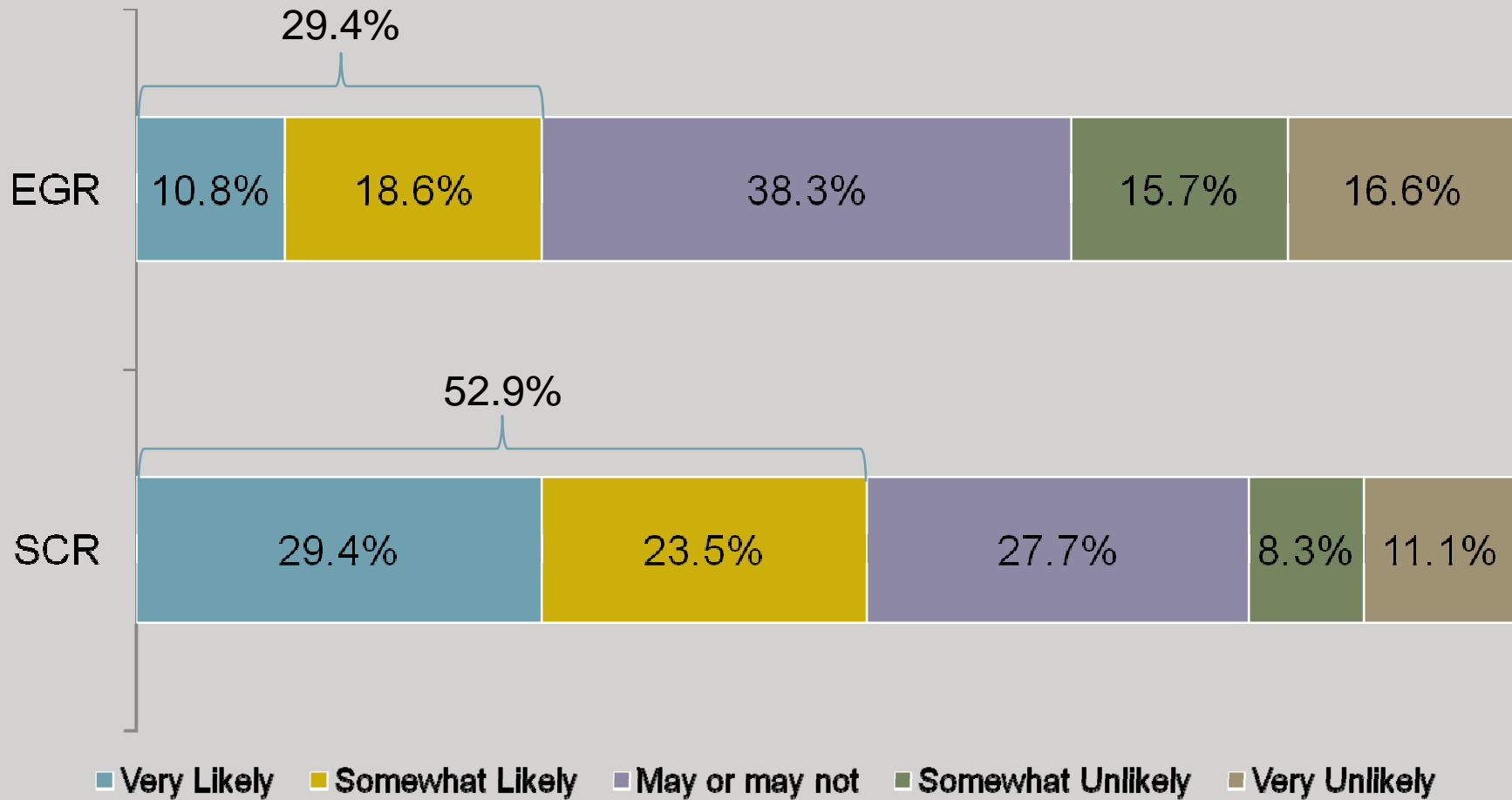
12

Considering the following choices for EPA 2010:

- Selective Catalytic Reduction (SCR) requires the addition of diesel exhaust fluid (available at truck stops), yet results in a fuel savings of approximately 3% and fewer active regenerations.
- Increased EGR does not require the addition of diesel exhaust fluid, but will likely result in a fuel penalty of 1-2% and will not reduce active regenerations.
- *How likely are you to consider each of the above technologies for your next truck purchase?*

Purchase Consideration

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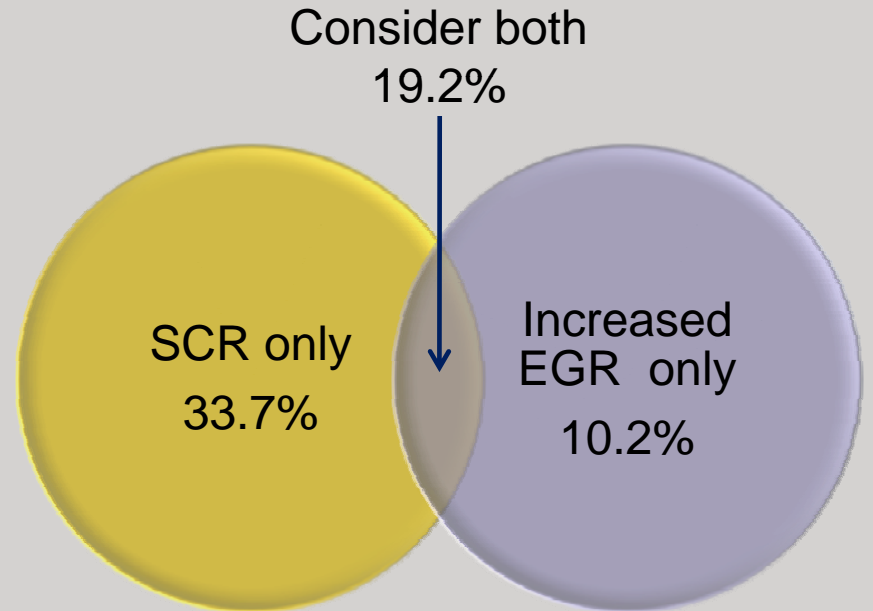
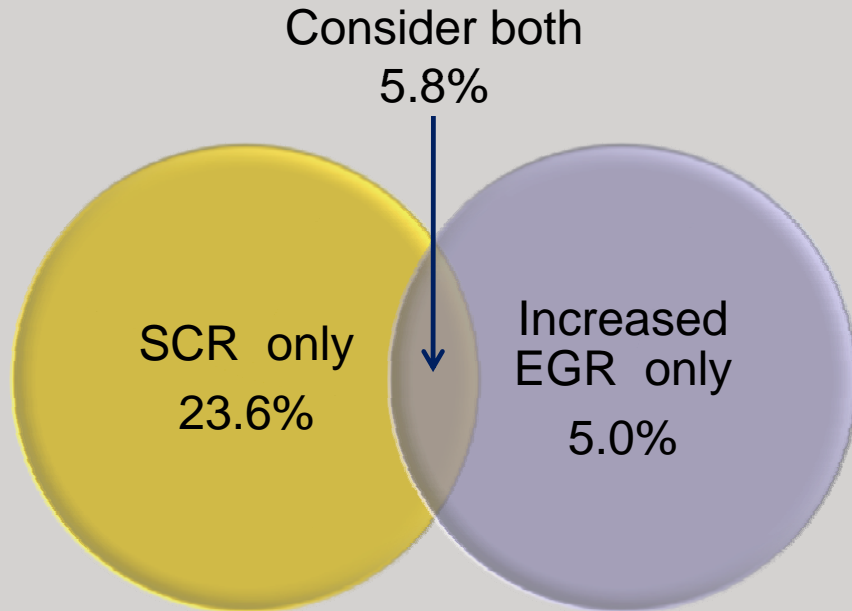
N=828

Considering Dual Technologies

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Very Likely to Consider

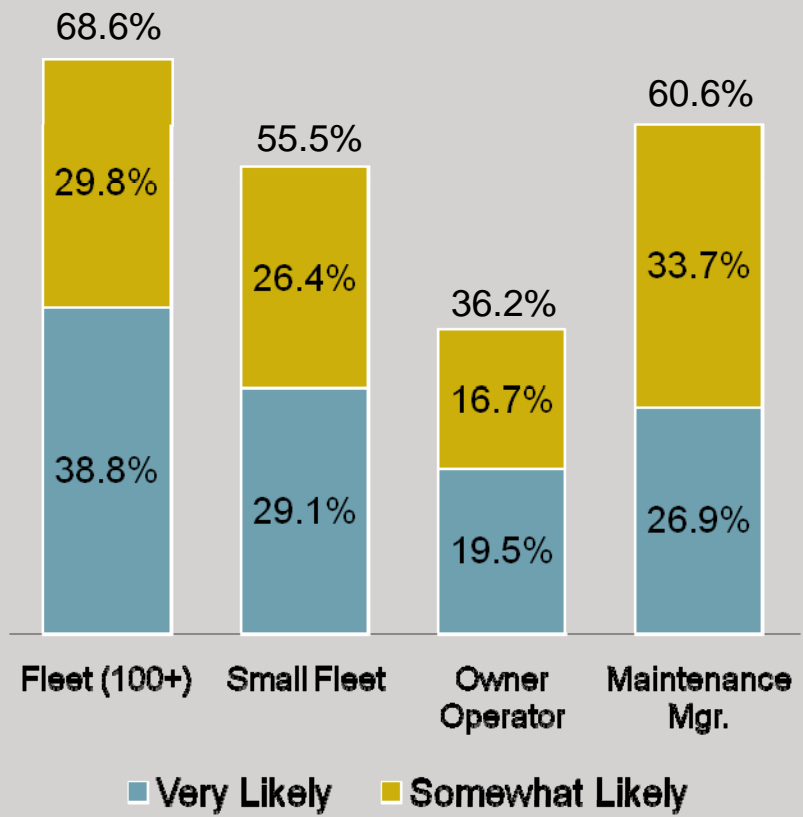
Somewhat/Very Likely



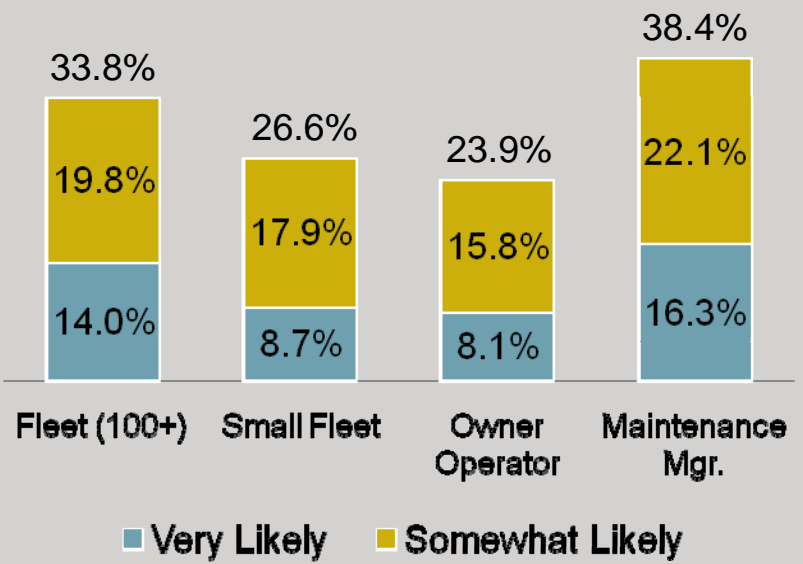
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Purchase Consideration by Job Function

SCR Purchase Likelihood

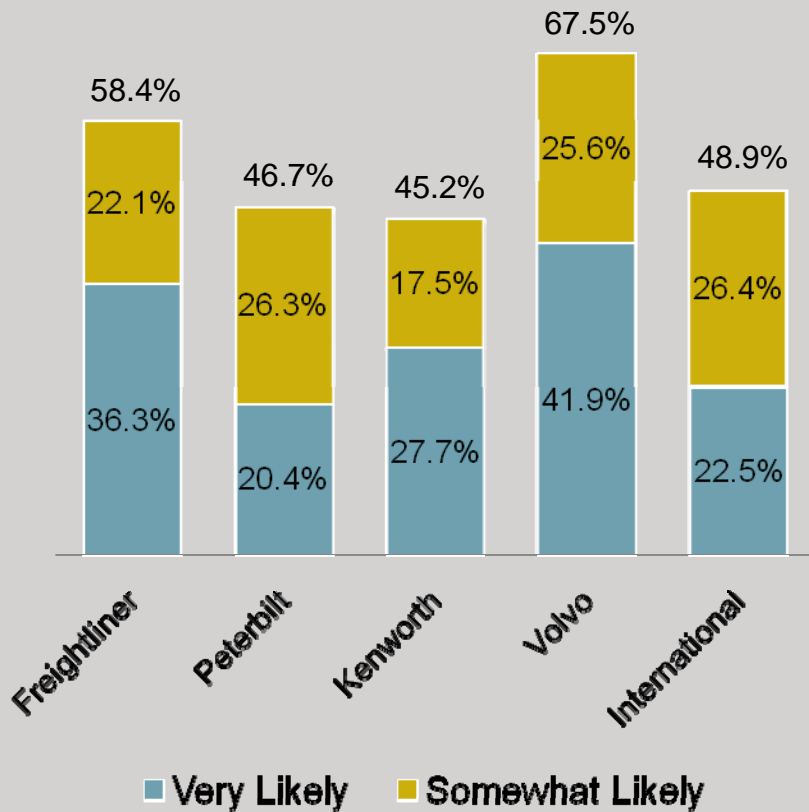


EGR Purchase Likelihood

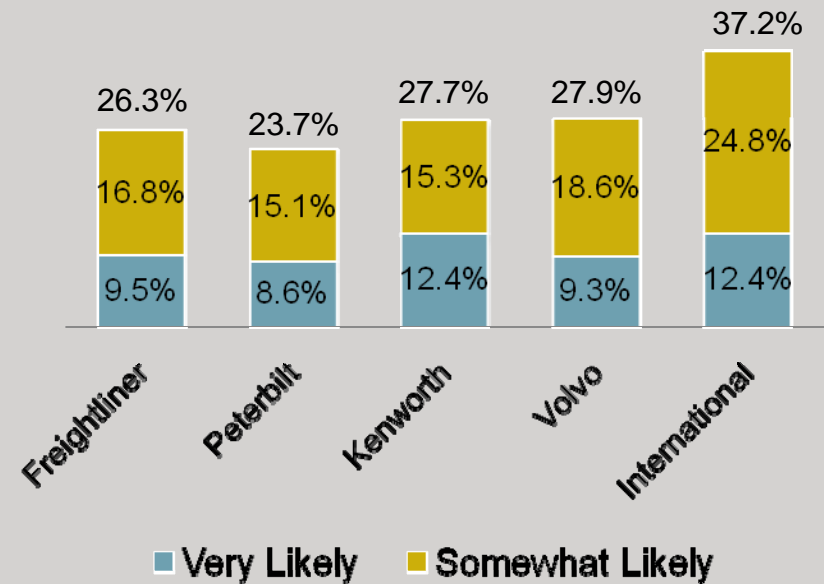


Purchase Consideration by Truck Make Owned

SCR Purchase Likelihood

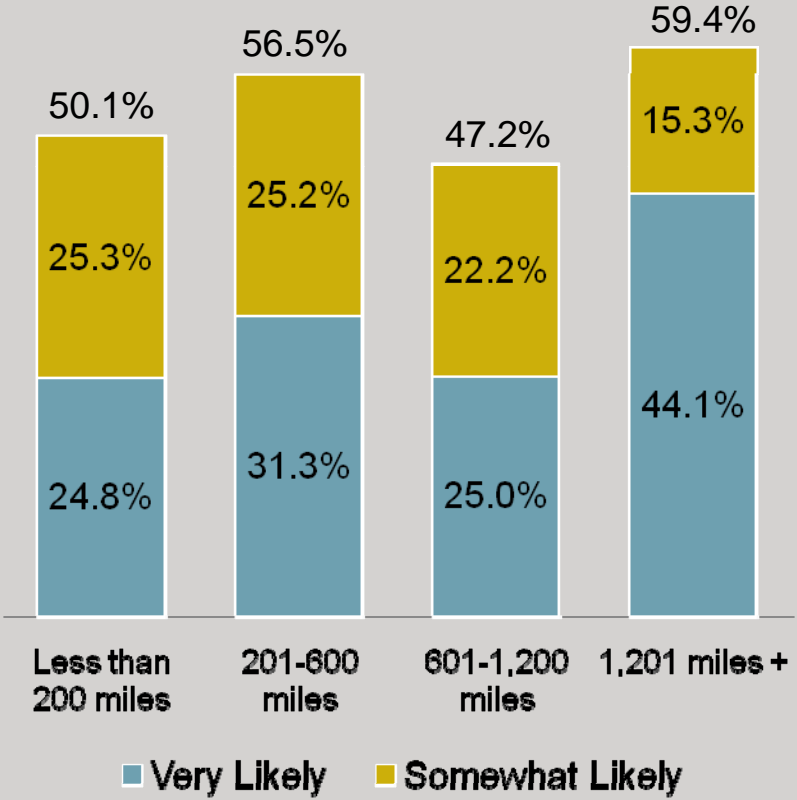


EGR Purchase Likelihood

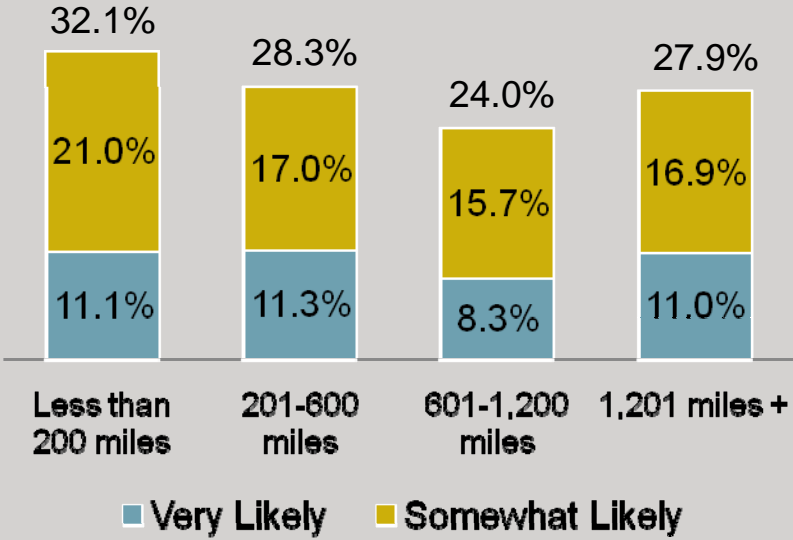


Purchase Consideration by Length of Haul

SCR Purchase Likelihood



EGR Purchase Likelihood



The Questions...Answered

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- Do truck buyers understand what is specifically included in the EPA2010 regulations?
 - Not yet – nearly 4 out of 10 claimed not to know if NOx is specifically included in the regulations
 - Indicates a need to continue to communicate what is and isn't included to minimize confusion

The Questions...Answered

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- Do they know which emissions technology – SCR or increased EGR – delivers key benefits?
 - Not yet – nearly half claimed not to know which technology delivers key environmental and business benefits
 - However, large fleet owners and maintenance managers are the most likely to know which technology delivers key benefits
 - Indicates the need to focus communications that link the benefits of SCR to other purchase drivers, such as fuel savings and lower cost of operations

The Questions...Answered

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- How important is environmental responsibility to the purchase decision?
 - Although environmental responsibility is as important as resale value, it is not nearly as important as fuel economy or cost of operations
 - Indicates the need to communicate the fuel savings advantages of SCR – *first time that doing something good for the environment is also good for their business*

The Questions...Answered

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- Which emissions technology are they most likely to consider when making their next truck purchase?
 - Consideration of SCR-only holds a nearly 5:1 advantage at the “very likely to consider” level over EGR-only, and a nearly 3:1 advantage at the combined “somewhat/very likely to consider” level
 - Regardless of criteria (job function, truck make owned, length of haul), purchase consideration for SCR is statistically higher than EGR at the 95% confidence level
 - *SCR wins when the conversation is about fuel savings and fewer active regenerations; loses when it is about the need for DEF only*

Questions?



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