

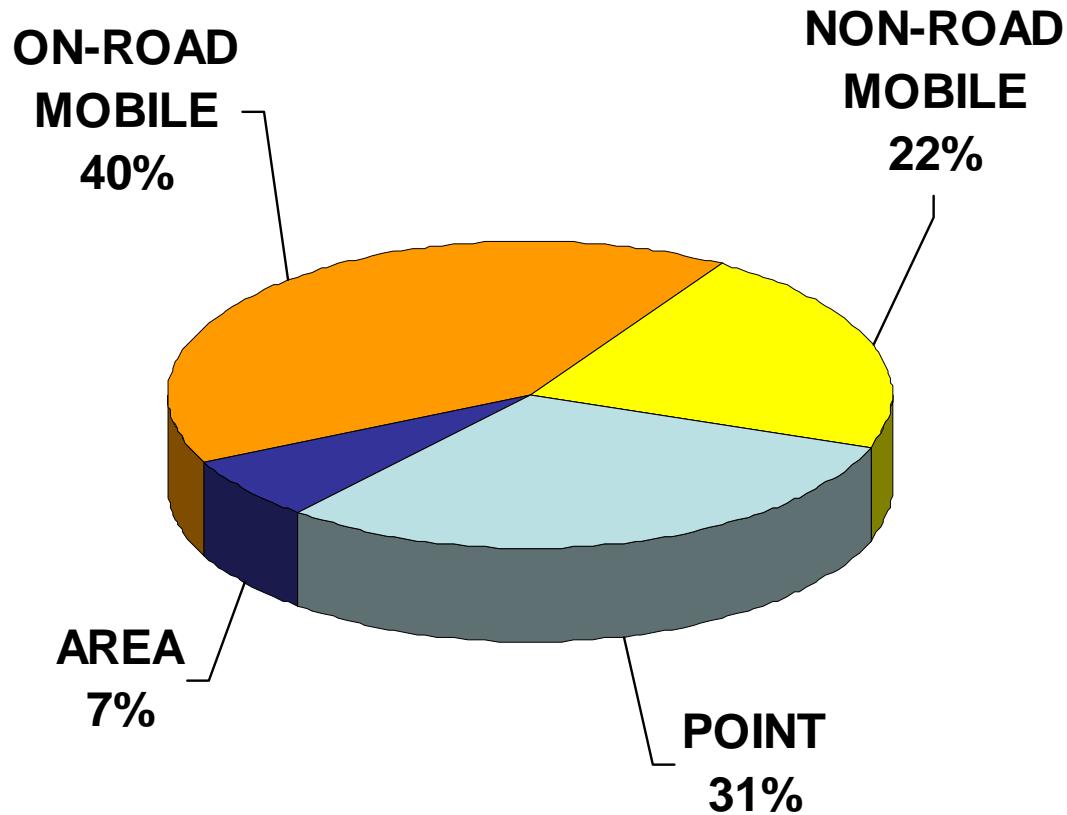
Emissions Reduction Strategies for the Marine Industry

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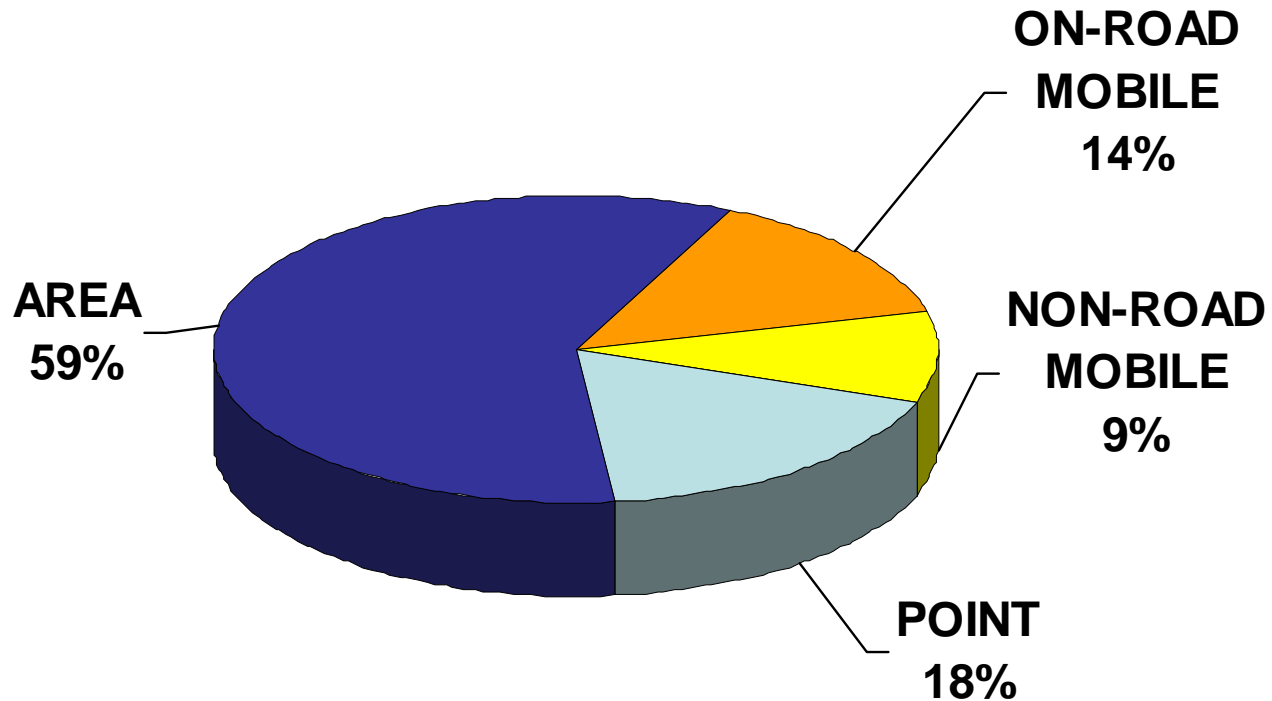
Houston-Galveston Area Council



2005 HOUSTON - GALVESTON - BRAZORIA NO_x EMISSIONS INVENTORY



2005 HOUSTON - GALVESTON - BRAZORIA VOC EMISSIONS INVENTORY



Creation of Mobile Source Emissions Reduction Plan

- Start with a wide range of strategy ideas (Master List)
 - Public input
 - Additional measures used elsewhere
- Describe/outline potential emission reduction strategies
- Focus on significant NO_x reduction strategies
- Less focus on implementation
- Create a shortened list of most effective control strategies

Master List

- Old Master List from 2006 stakeholder meetings plus supplementing a few additional measures that were thought of following the 2006-07 process and deleting unacceptable measures
- Specific measures suggested for the greater Houston area and others that have been developed
 - Commercial marine
 - Cargo handling equipment
 - Industrial mobile activities

Criteria for Inclusion as a Short List Strategy

- EPA minimum criteria for emission reduction strategies to be consider viable
 - Quantifiable: measurable reduction in activity or emission rates
 - Surplus: emission reductions not counted elsewhere in emission control plans
 - Federally enforceable: EPA could administer the program and therefore meets Federal guidance
 - Permanent: emission reduction strategy cannot be rescinded
 - Adequately supported: funding, personnel dedicated to administering the program

Criteria for Inclusion as a Short List Strategy

- Feasibility/practicality: technology or administrative structure available
- Public acceptance: stakeholder burden and general public interest
- Emission reduction potential
- Cost effectiveness

Creation of Short List

- Measures included will focus on:
 - Highest emission reduction control strategies
 - Strategies that deserved more attention and data
 - Strategies with fewer implementation barriers
 - Cost or feasibility

Control Strategies

- Some Examples:
 - Enact California marine vessel auxiliary engine rule
 - Enact California cargo handling equipment rule
 - Expand TxLED use in marine vessels
 - On-road diesel vehicle improvements
- See handouts for specific control measures

VMEPS and TCMs

- Both are commitments made in the SIP by local and regional governments
- Both result in mobile source emissions reductions
- VMEPs
 - Flexible, bottom-line commitments
 - Take the form of broad programmatic goals
- TCMs
 - Legally-binding specific commitments
 - Take the form of specific projects

Committed VMEPs

- All current VMEP commitments can be found below

Measure	Description
Regional Computerized Traffic Signal System	Average speed on local streets increased by 21%
Locomotives/ Clean Air Action	MOA
Commercial Marine/ Clean Air Action	Tugs/Tows–MOA Ferries–MOA
Vehicle Scrappage/ Clean Air Action	Emission reductions through repair or replacement of high emitting vehicles.

Committed VMEPs (cont.)

Measure	Description
Smoking Vehicle/ Clean Air Action	TCEQ program –marketing and advertising by H-GAC
Clean Cities / Vehicles Program	Public and private heavy-duty engine/vehicle replacement/ retrofit
Commute Solutions	Van pools, additional transit, alternative commuting, and other initiatives

Information

- Documentation:

<http://www.h-gac.com/taq/airquality/sip>

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