

EPA Guidance Documents for Preparing EAC Control Measures
(Revised December 16, 2003)

Title of the Document	Description of the Document	Type of the Document	Potential Use in EAC Measures ¹
<p>1. Guidance on Incorporating Voluntary Mobile Source Emission Reduction Programs in State Implementation Plans (SIPs).</p> <p>http://www.epa.gov/oms/transp/trancont/vmep-gud.pdf</p>	<p>This document provides guidance on Voluntary Mobile Source Emission Reduction Programs</p>	<p>Other ²</p>	<p>Apply to Voluntary Programs</p>
<p>2. Guidance on Incorporating Voluntary Stationary Source Emission Reduction Programs Into State Implementation Plans</p> <p>http://www.epa.gov/ttn/ecas/innostra.html</p>	<p>EPA's final policy on the granting of State Implementation Plan credits for voluntary stationary source emission reduction programs.</p>	<p>Other</p>	<p>TBD</p>
<p>3. Voluntary Mobile Source Programs: Crediting Innovation and Experimentation Brochure. (EPA420-K-97-004)</p> <p>http://www.epa.gov/otaq/transp/vmweb/brochure.pdf</p>	<p>Examples of Potential Voluntary Mobile Source Emission Reduction Programs</p>	<p>Other</p>	<p>Apply to Voluntary Programs</p>
<p>4. EPA Economic Incentive Program Guidance (EPA-452/R-01-001, January 2001)</p> <p>http://www.epa.gov/ttn/oarpg/t1/memoranda/eipfin.pdf</p>	<p>This guidance provides the information you need to know to develop a discretionary EIP, submit it to the EPA, and receive approval from the EPA. This guidance pertains to discretionary EIPs that are or will be measures in SIPs.</p>	<p>Other</p>	<p>All EAC measures</p>

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5. Improving Air Quality Through Land Use Activities, EPA Guidance (EPA420-R-01-001, January 2001) http://www.epa.gov/otaq/transp/trancont/r01001.pdf	The goal of this guidance is to assist air quality and transportation planners in accounting for the air quality impacts of land use policies and projects which state and local governments <i>voluntarily</i> adopt.	Other	8.4
6. BACKGROUND INFORMATION FOR LAND USE SIP POLICY (EPA420-R-98-012) http://www.epa.gov/otaq/transp/trancont/siprptv3.pdf	This report summarizes work efforts by states to take SIP credit for land-use strategies and what EPA efforts are needed to support land-use SIP policies.	Other	8.4
7. Granting Air Quality Credit Land Use Measures: Policy Options, September, 1999 (EPA 420-P-99-028) http://www.epa.gov/otaq/transp/trancont/lupol.pdf	This document supports EPA efforts to reduce mobile source air pollution by providing tools to recognize and, where appropriate, credit these types of sustainable land use and transportation practices.	Other	8.4
8. The Effects of Urban Form on Travel and Emissions: A Review and Synthesis of the Literature , August 1997, (EPA 420-R-97-007) *copies are available from regional offices	This is a summary of research on the effect of land use on travel behavior. It includes before/after empirical studies that compare land use scenarios and simulation studies that have used computer models to examine the impact of hypothetical land use patterns on travel behavior and resulting emissions.	Other	8.4
9. Evaluation of Modeling Tools for Assessing Land Use Policies and Strategies, Oct 1997 (EPA420-R-97-007) http://www.epa.gov/otaq/transp/trancont/lum-rpt.pdf	This EPA-sponsored report includes: a brief discussion of land use strategies and their relationship to vehicle miles traveled (VMT) reduction; and an assessment of current travel demand and land use modeling tools.	Quantification	

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<p>10. Comparing Methodologies to Assess Transportation and Air Quality Impacts of Brownfields and Infill Development, October 2001. (EPA-231-R-01-001, August 2001)</p> <p>http://www.epa.gov/otaq/transp/conform/compari.pdf</p>	<p>This document describes four methods for characterizing the air quality benefits resulting from infill development, compares these methodologies, and examines their advantages and disadvantages. This report is a companion piece to EPA's policy guidance entitled, "Improving Air Quality Through Land Use Activities" (EPA 420-R-01-001; January 2001).</p>	<p>Quantification & Other</p>	<p>8.4</p>
<p>11. COMMUTER Model</p> <p>http://www.epa.gov/otaq/transp/traqmodl.htm</p> <p>http://www.epa.gov/otaq/transp/comchoic/r00016.pdf</p>	<p>This model calculates the transportation and emissions benefits of Commuter Choice (Best Workplace) and other voluntary strategies to reduce solo commuting for urban areas.</p>	<p>Quantification</p>	<p>9.1, 9.2, 9.3</p>
<p>12. SIP Development Guidance: Using Emission Reduction from Commuter Choice Programs to meet CAA Requirement (EPA420-R-98-007) Dec. 1998</p> <p>http://www.epa.gov/otaq/transp/comchoic/sipguide.pdf</p>	<p>This guidance is to help states or agencies to calculate the emission benefits of Commuter Choice programs (Best Working Place for Commuters) and take credit for them in SIPs</p>	<p>Quantification & other</p>	<p>9.1, 9.2, 9.3</p>
<p>13. Assessing the Emissions and Fuel Consumption Impacts of Intelligent Transportation Systems (ITS) (EPA 231-R-98-007, December 1998).</p> <p>http://www.epa.gov/otaq/transp/fuelimpt.pdf</p>	<p>This study describes the types of modeling approaches needed to capture the short- and long-term transportation, emissions, and fuel consumption impacts of ITS deployment. It describes needed progressions in modeling approaches, including developments in travel demand, traffic simulation, and modal emissions modeling.</p>	<p>Quantification</p>	<p>8.4</p>

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14. Methodologies for Estimating Emission and Travel Activity Effects of TCMs - (EPA 420-R-97-004, July 1997) http://www.epa.gov/oms/transp/trancont/emtcm.pdf	This report provides a quantitative approach to estimate the travel and emissions changes from implementing a number of transportation control measures. The report includes equations for calculating changes in the number of trips, vehicle miles traveled, and speed, as well as methods for estimating emission effects of these travel activity changes.	Quantification	9.2, 9.3, 9.1
15. Transportation Control Measures Database http://www.epa.gov/otaq/transp/traqtcms.htm	Transportation Measures Program Information Directory--an on-line searchable database with records on operating TCM programs and overview documents about different types of TCMs.	Other	9.2, 9.3, 9.1
16. Index of Transportation Measure Quantification Efforts (A listing by transportation measure.) http://www.epa.gov/otaq/transp/vmweb/matrix.pdf	Index of reports and other documents which have attempted to quantify TCM emission reductions.	Quantification	9.2, 9.3, 9.1
17. Benefit Estimates for Selected TCM Programs (EPA420-R-98-002) March 1999 http://www.epa.gov/oms/transp/r98002.pdf	TCMs that have been implemented are quantified with methodologies for estimating emission and travel activity effects of TCMs	Quantification	9.1, 9.2, 9.3
18. Transportation Control Measure Information Documents (EPA420-R-92-006, March 1992) *copies are available from regional offices	This report contains information documents on the 16 broad categories of TCMs as required and described under Section 108(f) of the Clean Air Act. Each TCM categories is described in terms of its objectives, variations in implementation, examples, expected transportation and emission impacts, and other important considerations.	Other	9.2, 9.3, 9.1

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19. Transportation Control Measure: State Implementation Guidance. 1990 (EPA 450/2-89-020) *copies are available from regional offices	This document lists SIP-approval criteria specific to TCMs. It also directs States to follow general SIP approvability criteria and any additional guidance written on TCMs	Other	9.1, 9.2, 9.3
20. Technical Methods for Analyzing Pricing Measures to Reduce Transportation Emissions. (EPA 231-R-98-006) http://www.epa.gov/otaq/transp/anpricng.pdf	This report, jointly funded by the EPA and the DOT, provides technical assistance on best practice approaches for analyzing various transportation pricing policies.	Quantification	9.2, 9.3, 9.1
21. Opportunities to Improve Air Quality through Transportation Pricing Programs. September 1997 (EPA 420-R-97-004) http://www.epa.gov/otaq/market/pricing.pdf	This document is intended to give state and local air quality and transportation planners, and other interested parties background information needed to consider using pricing programs. Specifically, this document explains why pricing can make sense, the institutional relationships necessary for pricing measures to work, and some pitfalls to avoid in implementing a program.	Other	9.1, 9.2, 9.3
22. Guidance for the Implementation of Accelerated Retirement of Vehicles Programs (EPA420-R-93-018, February 1993) http://www.epa.gov/otaq/transp/trancont/scrapcrd.pdf	This guidance is to illustrate a methodology for calculating benefits and an administrative framework targeting on vehicles which have already been identified as high emitters.	Quantification and other	8.2
23. EPA Vehicle Inspection and Maintenance Website http://www.epa.gov/otaq/im.htm	This website includes EPA IM program regulation, policy guidance, and program evaluation.	Quantification and other	8.3

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24. EPA Draft Technical Report, Impacts of Lubrizol's PuriNOx Water/Diesel Emulsion on Exhaust Emissions from Heavy-Duty Engines (EPA420-P-02-007, December 2002) http://www.epa.gov/otaq/models/p02007.pdf	A technical analysis of the effect of Lubrizol's PuriNOx diesel/water emulsion on exhaust emissions from diesel-powered vehicles. This Technical Report represent the current understanding of this specific technical issue, and are subject to re-evaluation at any time.	Quantification	4.4
25. Guidance on Use of Opt-in to RFG and Low RVP Requirements in Ozone SIPs, April 1, 1999. http://www.epa.gov/otaq/regs/fuels/rvpguide.pdf	The purpose of this guidance is to help the regional offices respond to state SIP submissions containing fuel control measures. This guidance should also help states to understand the different statutory requirements concerning state actions on fuel controls and to decide whether and how to use fuel measures for ozone control.	Quantification & Other	4.2
26. EPA Guide to Federal and State RVP Standards for Conventional Gasoline. (EPA420-B-03-002, March 2003) http://www.epa.gov/otaq/regs/fuels/b03002.pdf	This guide is intended for quick reference purposes only. Federal volatility regulations (40 CFR 80.27) apply to designated volatility nonattainment areas and to designated volatility attainment area as defined in 40 CFR 80.2(cc) and 80.2(dd), respectively. In this document, we have listed RVP limits by county, which may not coincide precisely with the borders of a nonattainment or attainment area.	Other	4.2
27. EPA Reformulated Gasoline (RFG) program http://www.epa.gov/otaq/rfg.htm	This website includes EPA published document on approved methodology, guidance, and question & answer to RFG program.	Quantification & other	4.1
28. Low-Sulfur Fuels http://www.epa.gov/otaq/tr2home.htm#guidance	This website includes EPA published document on guidance and question & answer to EPA Low-Sulfur Fuel program	Quantification & Other	4.3

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29. Technical Support for Development of Airport Ground Support Equipment Emissions Reductions and the Airport Ground Support Emissions (GSE) Model (EPA420-R-99-007) http://www.epa.gov/otaq/transp/vmweb/vmairgnd.htm	This study discusses program design and the potential for achieving emission reductions from airport ground support equipment. The Ground Support Emissions(GSE) model also was developed as a prototype user- friendly emission reduction estimation tool.	Quantification & Other	
30. 2002 Base Year Emission Inventory SIP Planning: 8-hr Ozone, PM _{2.5} and Regional Haze Programs, 11/18/02 http://www.epa.gov/ttnchie1/eidocs/2002baseinven_102502new.pdf	Directs states to use 2002 as the base year inventory for SIP planning purposes under the new standards. Of note in this memorandum is the point made that EPA cannot provide “double credit” for an emission reduction for purposes of RFP or ROP. Post-2002 emission reductions that benefit ozone, PM _{2.5} and regional haze can be credited toward RFP requirements.	Quantification & Other	TBD
31. Near-Term Discretionary Emission Reductions for Ozone NAAQS, 10/12/00	Provides guidance on how EPA will allow credit for implementation of near-term, discretionary reductions that reduce 1-hour ozone as well as 8-hour ozone levels—well in advance of a nonattainment designation.	Quantification	TBD
32. Near-Term Discretionary Emission Reductions for Ozone NAAQS-Clarification, 1/29/01	Clarifies to EPA Regional Administrator Gregg Cooke OAQPS’ policy of allowing States to take credit for emission reductions that occur after the 2002 base year inventory, including reductions that occur before the deadlines for submission of SIPs under the new ozone and PM _{2.5} standards.	Quantification & Other	TBD

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33. "Beyond VOC RACT CTG Requirements" EPA-453/R-95-010, April 1995, http://www.epa.gov/ttnca1/dir1/byndract.pdf	Identifies and compares, by CTG source category, examples of State and local agency rules that exceed or may exceed the RACT requirements that are specified in the Federal CTGs.	Other	TBD
34. Guidance for Mobile Emission Credit Generation by Urban Buses. January, 1993. http://ntl.bts.gov/DOCS/BUS.html http://www.epa.gov/otaq/hd-hwy.htm#rtrb	This is a program guidance which ensures particulate matter emissions are reduced for 1993 and earlier model year urban buses. It authorized the development of requirements reflecting the best retrofit technology and maintenance practices reasonably achievable.	Quantification & Other	8.5, 8.6
35. Frequently Asked Questions on 8-Hour Ozone Early Action Compacts, Vol. 1 May 15, 2003 http://www.epa.gov/ttn/naaqs/ozone/eac/20030515_eac_faq_vol-1.pdf	EPA's response to questions received from State and local agencies requesting clarification on previously issued EPA guidance and its application to EACs.	Other	
36. Frequently Asked Questions on Implementing the DRAFT 8-Hour Ozone Modeling Guidance to Support Attainment Demonstrations for Early Action Compact (EAC) No date	EPA's clarification on how the modeling guidance is applied in EAC SIPs due in 2004.	Other	
37. <u>EPA Truck Idling guidance</u> http://www.epa.gov/otaq/smartway/documents/420b04001.pdf	This guidance is for quantifying and using long duration truck idling emission reductions in State Implementation Plans and Transportation Conformity.	Quantification and other	

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38. <u>EPA Locomotive Idling guidance</u> http://www.epa.gov/otaq/smartway/documents/420b04002.pdf	This guidance is for quantifying and using long duration switch yard locomotive idling emission reductions in State Implementation Plans and Transportation Conformity.	Quantification and other	
<i>Additional Guidance under Development</i>			
39. EPA Idling website http://www.epa.gov/otaq/retrofit/idling.htm 40. <u>EPA Energy Efficiency guidance</u>	This website includes EPA published document on verified idling technology, approved methodology to quantify emission benefit, and SIP credits This guidance is for crediting emission reductions from electric sector energy efficiency and renewable energy projects.	Quantification and other Quantification and other	8.5 TBD
41. EPA Draft Technical Report: "The Effect of Cetane Number Increase Due to Additives on NOx Emissions from Heavy-Duty Highway Engines" (EPA420-S-02-012 June 2002) http://www.epa.gov/otaq/models/analysis/s02012.pdf 42. <u>EPA Cetane guidance</u> anticipated completion date: 2/29/2004	Quantification report to estimate the NOx emission factors for the Texas diesel fuel program based on EPA's method. This Technical Report represent the current understanding of this specific technical issue, and are subject to re-evaluation at any time. The Technical Report quantifies the benefits of diesel cetane improver additives in terms of a percent change in NOx emissions from heavy-duty diesel engines. The Guidance Document will describe the various factors that should be taken into account to translate the Technical Report's percent change in NOx values into a reduction in NOx tons for a specific area.	Quantification Quantification	4.4 4.4

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43. EPA Voluntary Diesel Retrofit Program website http://www.epa.gov/otaq/retrofit/index.htm	This website include EPA published document on verified retrofit technology, approved methodology to quantify emission benefit, and SIP credits.	Quantification & Other	8.5, 8.6
44. <u>EPA Diesel Retrofit guidance</u> anticipated completion date: Spring 2004	Guidance for quantifying and using heavy-duty truck retrofit emission reductions in State Implementation Plans and Transportation Conformity.	Quantification & Other	

NOTE:

1. The numbers listed refer to the EAC control measure category ID shown in the first column of the attached table. See the spreadsheet http://www.epa.gov/ttn/naaqs/ozone/eac/20030616_eac_measures_full_list2.pdf for details on each Mobile Source EAC measure.
2. The category of “other” includes documents that address general requirements for SIP credits, for example, EIP, VMEP, etc.

1	Reduce Emissions from the Storage, Distribution and Dispensing of Fuels and Solvents
1.1	●●● Implement Stage I Vapor Recovery Program
1.2	●●● Implement Stage II Vapor Recovery Program
1.3	●●● Use New Low-Emission Fuel Containers
1.4	●●● Implement Gas Cap Replacement Program
2	Modifications in Equipment Design, Operating Procedures and Practices
2.1	●●● Implement Leak Detection and Repair Programs
2.2	●●● Institute Service Contracts That Emphasize / Require Environmentally Friendly Equipment and Methods
3	Seasonal, Ozone Action Day and Time-of-Day Scheduling Strategies
3.1	●●● Ban or Restrict Open Burning and Other High-Emission Activities on Ozone Action Days
3.2	●●● Reduce or Time-Shift Vehicle Travel and Use of Off-Road Vehicles on Ozone Action Days
3.3	●●● Reduce and/or Strictly Enforce Speed Limits on Ozone Action Days
3.4	●●● Shift Construction Work and Lawn Mowing to Afternoon Periods
4	Increase the Use of Modified Fossil Fuels
4.1	●●● Use Reformulated Gasoline and/or Bio-Fuels
4.2	●●● Use of Low Reid Vapor Pressure Fuels
4.3	●●● Use of Low-Sulfur Fuels
4.4	●●● Use Cetane and Other Additives or Catalysts in Diesel Fuels
5	Expand the Use of Alternative Fuels and Energy Sources
5.1	●●● Implement Truck Stop Electrification Program
5.2	●●● Convert Off-Road Vehicles and Other Equipment Engines to Electric or Propane
5.3	●●● Increase the Use of LEV and SULEV Vehicles
6	Reduce Energy Demand through Conservation and Energy Efficiency
6.1	●●● Implement Programs to Increase Conservation and Improve the Energy Efficiency of Buildings
6.2	●●● Implement Programs to Increase the Use of Energy Star "Green" Products
6.3	●●● Implement Energy Efficiency in the Operation and Design of Facilities and in the Purchase and Use of Equipment
6.4	●●●
7	Reduce Air Quality Impacts through Better Land Use Management
7.1	●●● Plant Trees and Use Landscaping and Other Techniques to Reduce the "Heat Island Effect"
7.2	●●● Implement a Smart Growth Program
8	Reduce the Emissions from Vehicles
8.1	●●● Implement Programs to Increase Fleet Turnover to Newer Vehicles
8.2	●●● Establish Programs to Identify and Repair or Replace High-Emitter Vehicles
8.3	●●● Implement and/or Expand Vehicle Inspection and Maintenance Programs
8.4	●●● Utilize Transportation System Design and Traffic Flow Control Methods to Reduce Vehicle Emissions
8.5	●●● Restrict the Idling Time of Vehicles
8.6	●●● Implement Retrofit Programs for Diesel Engines
9	Reduce the Vehicle Miles Traveled
9.1	●●● Implement Programs to Increase Walking and Bicycling Modes of Travel
9.2	●●● Implement Programs to Increase Carpooling, Ridesharing and the Use of Public Transportation

9.3	●●● Develop Workplace Programs as Telecommuting and Flexible Scheduling to Reduce Travel Demands
10	Provide Educational Programs for Stakeholders and the Public on Environmental Issues and Awareness
10.1	●●● Implement and Publicize an Ozone Action Day Program
10.2	●●● Establish a Point-of-Contact and Support Resources for Stakeholders and the Public to Obtain Air Quality and Other Environmental Information
10.3	●●● Develop and Implement Educational Programs to Promote Environmental Awareness and Action
11	Support and/or Expand Existing Federal and State Air Quality Programs
11.1	●●● Support Clean Skies Program
11.2	●●● Expand Controls on Facilities Beyond Existing State Requirements
11.3	●●● Participate in the Clean Cities Program
11.4	●●● Early Implement of VOC and NOx RACT
12	Organize Committees and Associations of Stakeholders to Coordinate Air Quality Improvement Efforts
13	Restrict or Eliminate Specific Activities Impacting Air Quality
13.1	●●● Restrict or Ban Outdoor Burning
14	Reduce VOC and/or NOx Emissions from Stationary Sources and Other Source Categories
15	Reduce the Emissions from Non-road Vehicles and Related Equipment
16	Adopt New Technologies