UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 11 2003

Ms. Betty Voights
Executive Director
Capital Area Planning Council
2512 IH 35 South, Suite 220
Austin, TX 78704

Dear Ms. Voights:

I am pleased to inform you that we received your letter dated June 12, 2003, forwarding the list of potential emission control measures for the Austin/San Marcos Metropolitan Statistical Area. The first important milestone under the 8-hour Ozone Early Action Compact program is to identify and describe local control measures being considered during the local planning process by June 16, 2003. Your list of potential control measures was received on time and meets the milestone requirement which is specified in the *Compact* guidance issued by U.S. Environmental Protection Agency (EPA) Assistant Administrator Jeff Holmstead on November 14, 2002.

The EPA recognizes that the 8-hour Ozone Early Action Compact program is ongoing and that the Capital Area Planning Council, in partnership with the Texas Commission on Environmental Quality and other local officials, continues to make good progress. We appreciate your commitment to the *Compact* program and to achieving cleaner air sooner. My staff and I are always available to assist you as we work together towards that goal.

Should you have any questions, please feel free to call me or Mr. Thomas Diggs of my staff at (214) 665-7214.

Sincerely yours,

Richard E. Greene
Regional Administrator

cc: Robert Huston, Chairman
Texas Commission on Environmental Quality

Capital Area Planning Council
2512 IH 35 South, Suite 220
Austin, Texas 78704
512.443.7653 (fax) 512.443.7658

June 12, 2003

Mr. Richard E. Greene
Regional Administrator (6RA)
Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

Mr. Robert Huston
Chair, Texas Commission on Environmental Quality
P. O. Box 13087, MC-100
Austin, Texas 78711-3087

Gentlemen:

On behalf of a coalition of elected officials in the Austin-San Marcos MSA and pursuant to the terms of our Early Action Compact with EPA and TCEQ, I am pleased to submit the following document:

- The list of emission reduction measures that will be considered for inclusion in the Austin-San Marcos Clean Air Action Plan. The complete plan will be submitted to EPA and TCEQ early in 2004.

We understand that the next milestone in our Early Action Compact Agreement is **November 30, 2003**. For this milestone we will be documenting completion of the:

- Initial Modeling Emissions Inventory;
- Conceptual Modeling; and
- Base Case Modeling.

Please feel free to contact me if you need additional information. I look forward to our continued work together on this important issue.

Sincerely,

Betty Voights
Executive Director

Bastrop • Blanco • Burnet • Caldwell • Fayette • Hays • Lee • Llano • Travis • Williamson Counties

LIST OF POTENTIAL EMISSION REDUCTION MEASURES
To be considered further for the

AUSTIN/SAN MARCOS MSA

Submitted by:

The Clean Air Coalition
of Elected Officials in the
Austin/San Marcos Metropolitan Statistical Area

June 12, 2003

Introduction

This document lists emission reduction measures the Austin/San Marcos Metropolitan Statistical Area (A/SM MSA) will continue to evaluate for possible incorporation into the Clean Air Action Plan (CAAP). This document is submitted on behalf of the Clean Air Coalition (CAC), a committee of local elected officials in the 5-county A/SM MSA. It fulfills the first milestone of the A/SM MSA's Early Action Compact. This proposed list of emission reduction measures is not final – the CAC may remove some measures and add others. In addition, not all measures are expected to apply to all jurisdictions.

The document contains two lists – mandatory measures requiring rule making and enforcement, and voluntary measures expected to improve air quality, but not necessarily to be quantifiable in photochemical modeling. Each list comprises four categories – on-road mobile sources, non-road mobile sources, area sources and point sources. Stakeholder groups representing these source categories have been instrumental in preparing and reviewing the measures for consideration. We will be requesting the Texas Commission on Environmental Quality (TCEQ) to adopt rules for many of these measures. In addition to the mandatory and voluntary measures proposed here, we are also considering regional (east half of the state) measures if local measures aren't enough to model attainment.

Emissions Inventory

The CAC uses the 1999 Emissions Inventory (EI) to guide measure evaluation and choice. The EI tables receive regular updates and are not yet final. These charts contain only anthropogenic sources, as controls for biogenic sources of NOx and VOC are not under consideration.

Nitrogen oxides (NOx) and Volatile Organic Compounds (VOCs) are the chemical precursors to ozone. In the A/SM MSA, controlling NOx is more effective in reducing ozone than controlling VOCs. As shown in Figure 1, a large share of the region's NOx comes from on-road mobile sources. Point sources and non-road mobile sources also contribute significant NOx reductions. VOC emissions are predominantly from area sources, although on-road and non-road mobile sources also contribute to VOC emissions in the region (See Figure 2).

Figure 1: NOx Emissions in the Austin/San Marcos MSA

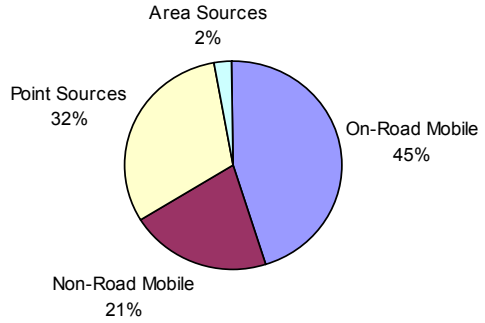
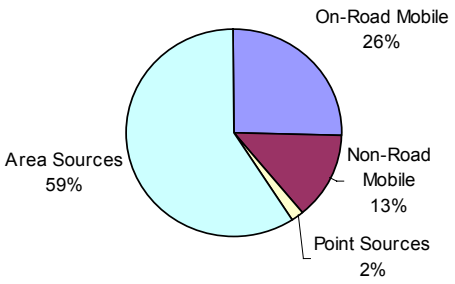


Figure 2: VOC Emissions in the Austin/San Marcos MSA



Mandatory Measures

The CAC recommends further consideration of the following emission reduction measures. Any of these mandatory measures selected for the CAAP will be implemented in addition to existing EPA and TCEQ regulations, ALCOA settlement agreements and O_3 Flex measures.

The list is grouped by type of measure then ranked subjectively by perceived relative attractiveness (most attractive to least attractive). The attractiveness ranking considers potential emission reduction and ease of implementation (public and stakeholder acceptance, legal authority, technical feasibility and cost-effectiveness). Please note that this is a preliminary, subjective ranking only and may change as a result of the measure evaluation process.

ON-ROAD MOBILE		
		Fuels-Related Measures
F1	**Low Sulfur Gasoline**	**NOx Reduction:** Implement 30 ppm Sulfur Gasoline before Federally required in 2006. The region's primary fuel supplier is expected to supply the 5-county region with the gas in 2003, as an alternative plan allowed to comply with the Texas Low Emission Diesel rule (30 TAC 114.312-114.319). Expected five county reductions are 3.26 tpd in 2003, 1.31 tpd in 2004 and 1.44 tpd in 2005.
F2	**Texas Low Emission Diesel (TxLED)**	**NOx:** Purchase TxLED for use in public sector fleets and operations. Also encourage TxLED use in the private sector. TxLED is a low sulfur diesel fuel with improved cetane and aromatics. Use results in a 5 to 7% NOx reduction from standard on-road diesel without vehicle retrofits. Use in new or retrofitted vehicles results in a dramatic NOx reduction. TxLED is currently available, but must be transported by truck to retain its low sulfur levels. It is very important that additional oil refiners and TCEQ work to make this fuel commercially available.
F3	**Low Reid Vapor Pressure Gasoline**	**VOC:** Lower the reid vapor pressure requirement from 7.8 to 7.0 in the eastern half of the state during ozone season (daylight savings time), significantly reducing both transported and locally generated VOC emissions.
		Vehicles-Related Measures
V1	**Inspection and Maintenance Program (I/M Program)**	**NOx and VOC**: Require a state I/M program in select counties. Implement either the current state I/M program or (if approved in the current legislative session) a locally developed state EAC IM program, including the state low-income vehicle repair assistance program component. The state EAC I/M program allows EAC counties additional program options, resulting in an I/M program best suited to the region's characteristics.

V2	**Texas Emission Reduction Program (TERP)**	**NOx and PM:** Secure all available TERP incentives/grants for equipment and fuels in the five county area. Expected available incentives/grants cover the incremental cost of cleaner on-road and off-road engines and equipment, cleaner fuel needed for the equipment and clean fuel infrastructure.
V3	**Idling Restrictions for Heavy Duty Vehicles**	**NOx and PM:** Restrict idling of gasoline and diesel-powered engines in heavy-duty motor vehicles greater than 8500 gross vehicle weight to five consecutive minutes when the vehicle is not in motion, with certain exceptions. Applies during ozone season (daylight savings time)
V4	**Heavy-Duty Diesels Limited Areas and/or Times**	**NOx:** Restrict heavy-duty diesels from driving in certain areas/and or times. This could reduce peoples' exposure to toxic diesel fumes, reduce congestion and the time that the NOx had to combine with VOC, cook and produce ozone. Additional definition needed.
V5	**Drive-Through Facilities on Ozone Action Days**	**NOx and VOC:** Require businesses with drive-through facilities to post signs on Ozone Action Days asking customers to park and come inside instead of using the drive-through facilities. Encourage the public to comply.
		Transportation System Related Measures
TS1	**Transportation Emission Reduction Measures (TERMs)**	**NOx and VOC:** Implement transportation projects and programs that reduce emissions. Projects and programs include improved transit options and level of service, intersection improvements, grade separations, signal synchronizations and/or improvements, peak and/or off-peak traffic flow improvements, park and ride facilities, bike/ped facilities, high occupancy vehicle lanes, rail, demand management, ped/bike facilities, intelligent transportation systems etc. Many TERMS are already planned and funded. CAMPO and TxDOT have called for additional TERM projects and efforts to identify additional funding are underway.
TS2	**Access Management**	**NOx and VOC:** Require local jurisdictions to consider adopting access management regulations for new development or re-development. TxDOT has proposed guidance available. Manage roadway access by limiting the number and location of allowable curb cuts and driveways. Consolidate access to multiple business through one main driveway, side road etc. Access management reduces congestion, vehicle delay and associated emissions.
		Trip Reduction Related Measures
TR1	**Trip Reduction Program**	**NOx and VOC:** Require every existing or future employer with 50 or more employees per location to implement a trip and/or VMT reduction program. Program requirements could include a specified reduction in trips and VMT or allow up to 50% of the requirement to be offset with

		equivalent emission reductions. Awards could be provided for those who exceed requirements. Needs further definition. A voluntary program called Clean Air Partners is already underway. The Commute Solutions Program provides tools and support for program implementation.
TR2	**Alternative Commute Infrastructure Requirements**	**NOx and VOC:** Require all new non-residential developments of 25,000 sq. ft or more and developments that increase their square footage 25% or more and have/expect 100+ employees on the site to include bicycle commuting facilities (parking/racks and showers) and preferential carpool/vanpool parking spaces.
TR3	**Expedited permitting for mixed use, transit oriented or in-fill development.**	**NOx and VOC:** Provide an expedited permitting process and other incentives for mixed use, transit oriented or in-fill development. Developments would have to meet certain performance criteria in order to qualify for expedited permitting.
TR4	**Reduced Public Workforce High Ozone Days**	**NOx and VOC:** Reduce public employee commute trips by 50% on specified high ozone days, not to exceed 2 consecutive days or 6 total days during August and September. Exempts public safety, essential operations and emergency management employees. This measure is a companion to the non-road limits to construction activities measure.
NON-ROAD MOBILE		
		Construction-Related Measures
C1	**Compliance with clean diesel fuel standards (30 TAC 114.312-114.319) (TxLED).**	Currently the clean diesel fuel standards are scheduled to go into effect in 2005. However, it is not clear how available TxLED will be in the area. It is the intent of this control measure that some level of exclusive TxLED fuel use would be mandated based upon fuel availability. Only TxLED (not other low sulfur diesel fuels) is expected to present opportunities for non-road mobile NOx reduction during the 2005-2007 timeframe. Highly effective measure.
C1a	**Possible alternative to C1.**	Mandated use of TxLED by Public Entities maintaining fueling operations for their own use. Most likely way to implement measure.
C1b	**Possible alternative to C1.**	Mandated use of TxLED by Public Entities maintaining fueling operations for their own use. And mandated use of TxLED by public works contractors under contract to these Public Entities via their supply. Feasible implementation.
C1c	**Possible alternative to C1.**	Mandated that only TxLED distributed in Central Texas area during Ozone season. Unlikely scenario, but most effective emissions reductions.
C2	**Limits to construction activities during high ozone days.**	Public Entities mandated to use contract provisions (public works related) to restrict non-road mobile activities, and to restrict their own non-road mobile activities on forecasted high ozone days. Anticipate that these provisions

		would be applicable only during August and September; no more that 5 total days per year; no more than 3 days in a row; would have exemptions for critical operations as defined by the governmental body; etc. Specifics to be determined. Potentially very effective emissions reductions, but controversial to implement.
C3	**Texas Emission Reduction Program (TERP)**	Secure all available incentives for owners of non-road mobile equipment to replace or retrofit current equipment to reduce emissions, including fuel options. It is anticipated that the Central Texas area will have at the most $6M per year available during the 2005-2007 time frame. Per the Houston SIP we will claim "credits" for this dollar value of incentives.
C4	**Idling restrictions for engines of a specified type/size during ozone season**	Idling equipment is a source of NOx emissions, wasted fuel, and noise. Mandated idling restrictions during Ozone season would prohibit non-road mobile equipment (>150 hp) from idling more than a specified length of time (5 minutes). Anticipate limited emissions reductions (<0.1 tpd) from current practices.
		Lawn and Garden Related Measures
LG1	**Compliance (per other Texas nonattainment areas) with the commercial lawn and garden rule for spark-ignition equipment.**	The commercial lawn and garden rule for spark-ignition equipment states: No handheld or non-handheld lawn and garden service equipment powered by spark ignition engines of 25 horsepower (hp) and below shall be started or operated between the hours of 6:00 a.m. and noon during the time period from April 1 to October 31. The future of this rule is in flux and being challenged. Some groups feel that such a restrictive rule may not be appropriate for Central Texas.
LG1a	**Limits on commercial lawn and garden operations during high ozone days.**	Alternative to LG1 -- is not as restrictive and may not be as controversial. Mandated restrictions on the operation of commercial lawn and garden equipment on forecasted high ozone action days. Anticipate that these provisions would be applicable only during August and September; no more that 5 total days per year; no more than 3 days in a row; would have exemptions for operation of alternate fueled equipment. Specifics to be determined.
LG2	**New gas can sales in Central Texas to meet spill-proof, low emissions standards.**	Mandate that all new gas containers sold in the central Texas area meet spill-proof, low emission standards. Similar ordinance in place in Houston as part of their SIP. Anticipate 30% VOC reduction. Effective VOC control (1.6 tpd) supported by lawn and garden industry.
		Airport Related Measures
A1	**Use of electric or alternative fuels for airport GSE**	This category includes new and in-use ground support equipment (GSE) used in airport operations. GSE perform a variety of functions, including: starting aircraft, aircraft maintenance, aircraft fueling, transporting cargo to and from

		aircraft, loading cargo, transporting passengers to and from aircraft, baggage handling, lavatory service, and food service. The Air Transportation industry has informed Central Texas that they will oppose any requirements on their industry.
A1a	**ABIA Airside incentives for GSE use reduction**	ABIA has begun and will complete the addition of building supplied power and preconditioned air for all aircraft parked at the gate. This will eliminate the need to run on-board auxiliary power units (APUs), and air-conditioning (ACUs) and ground power units (GPUs) by the air carriers if they will participate. It is not clear if we can mandate their use, or if it will need to be on a voluntary basis. Implementation might require creating incentives or use restrictions. Estimated 0.16 tpd NOx reduction.
A2	**Integrate alternative fuels into City's aviation fleet**	Begin replacement of Aviation Fleet equipment with propane fuel starting FY2003. Purchase of 10 propane pro-turf mowers, and 4 propane non-road truck-alls. Planned purchases at this time. Future replace subject to budget provisions.
A3	**Operate alternative fueled surface parking lot shuttle buses**	ABIA currently operates 29 propane buses for passenger service between the terminal and the parking lots. Averages 25,000 gallons of propane per month. Estimated 60% NOx reduction. Take credit for current operations.
A4	**Use existing ABIA alternative fuel infrastructure for off-site parking shuttle buses**	Propane fueling infrastructure is available at ABIA that could be used to refuel off-site parking shuttle buses. Encourage or mandate these services to shift to propane by 2005. Estimated 60% NOx reduction.
A5	**Use existing ABIA alternative fuel infrastructure for off-site parking shuttle buses**	Propane fueling infrastructure is available at ABIA that could be used to refuel off-site parking shuttle buses. Encourage or mandate these services to shift to propane by 2005. Estimated 60% NOx reduction.
AREA SOURCES		
	Degreasing (2007 Inventory= 26.10 Tons/Day VOCs)	
D1	**Degreasing / Surface Cleaning / Solvents Controls**	Adopt rules regulating degreasing operations. These rules can include establishing a vapor pressure limit for the solvents, requiring that suppliers provide a low vapor pressure degreasing solvent to users in the region and keep transaction records. Users would be required to use only low vapor pressure solvents and to keep records of their purchases. Other rules include requiring small degreasing operations such as gasoline stations, autobody paint shops, and machine shops to use less polluting degreasing solvents. Other rules require product reformulation. Degreasing operations are a common source of VOC emissions. Degreasing is a process that uses a solvent to remove grease, oil, or dirt from the surface of a

		part prior to surface coating or welding. In cold cleaning, the part is dipped into or sprayed with a solvent. Sources that commonly have cold cleaning degreasers include auto repair shops, autobody shops, and industries.
		Service Stations (2007 Inventory: 23.9 Tons/Day)
S1	**Vapor Recovery**	Lower the throughput requirement that triggers required use of vapor recovery equipment. Vapor recovery systems recover the gasoline vapors generated while fueling vehicles in a service station.
S1a	Stage I Vapor Recovery	This control measure requires Stage I Vapor Recovery RACT regulations. RACT for gasoline storage/handling requires tank trucks refilling underground storage tanks at service stations use a vapor recovery system to return the vapors from the underground tank to the tank truck.
		Surface Coating (2007 Inventory= 22.60 Tons/Day)
CS1	**Architectural and/or Industrial Surface Coatings Controls**	Adopt the federal rule for Architectural and Industrial Maintenance. This regulates the use of certain surface coatings (e.g., paints) applied by industry, contractors and homeowners to coat houses, buildings, highway surfaces and industrial equipment. Because the users of these coatings are small and widespread, requiring the use of add-on control devices is technically and economically infeasible. Reductions in VOC emissions must therefore be obtained through product reformulation.
CS2	**Autobody Refinishing/Coatings Controls**	Regulate VOC emissions from autobody refinishing through requirements to lower the VOC content of the products used, improve the application technique so that less coating is used and control the use of clean-up solvents (proper handling of gun cleaning and clean-up solvents). Emissions occur at all three process stages (surface preparation, painting and equipment cleaning) due to evaporation of the solvents in the primers, paints and other coatings, and in the cleaning solutions.
CS3	**Wood Furniture Coating Operations**	Require the use of reformulated product for the series of coating steps and application methods used in finishing wood products. Coatings are usually applied in the following order: stain, wash coat, filler, sealer, highlight coat and topcoat. Emissions occur primarily from the solvents used during the coating process.

		Asphalt (2007 Inventory = 15.47 Tons/Day)
AS1	**Cut-back Asphalt Restrictions / Promotion of Low-Emission Emulsion Asphalt**	Prohibit the sale/transport of "conventional cut-back asphalt" in the Austin/San Marcos MSA. Conventional cut-back asphalt releases VOC for over a year after application. Also encourage the use of low-emission emulsion asphalt and hot-mix asphalt by reducing VOC upper limit in the definition of "Exempt Cut-back Asphalt" as lower emission asphalt becomes available.
		Oil & Gas (2007 Inventory: 13.66 Tons/Day)
O1	**Oil & Gas**	Upset Controls. Any oil or gas production facility, carbon dioxide separation facility, or oil or gas pipeline facility consisting of one or more tanks, separators, dehydration units, free water knockouts, gunbarrels, heater treaters, natural gas liquids recovery units, or gas sweetening and other gas conditioning facilities, including sulfur recovery units at facilities conditioning produced gas containing less than two long tons per day of sulfur compounds as sulfur are permitted by rule.
		Solvent Miscellaneous (2007 Inventory: 10.62 Tons/Day)
M1	**Low VOC Striping Material**	Require use of reformulated striping material products (I.e., water-based paints or thermoplastic) to achieve VOC reductions.
		Waste Disposal (2007 Inventory: 9.46 Tons/Day)
W1	**Landfill Controls**	Adopt control strategy for municipal solid waste landfills based upon the EPA's New Source Performance Standard (NSPS) and Guidelines. The control expects to promulgate a regulation according to the NSPS and Guidelines. A municipal solid waste landfill is a disposal facility in a contiguous geographical space where household waste is placed and periodically covered with inert material. Landfill gases are produced from the aerobic and anaerobic decomposition and chemical reactions of the refuse in the landfill. Landfill gases consist primarily of methane and carbon dioxide, with volatile organic compounds making up less than one percent of the total emissions. Although the percentage for VOC emissions seems small, the total volume of gases is large.
W2	**Open Burning Restrictions**	Amend and/or adopt state regulations to ban the open burning of such items as trees, shrubs, and brush from land clearing, trimmings from landscaping, and household or business trash, during the peak ozone season. The measure would be authorized by state regulations, but

		enforced by the local governments. It reduces VOCs and NOx.
		Fuel Storage (2007 Inventory: 6.05 Tons/Day)
FS1	**Storage Tanks**	Regulate emissions from fixed roof storage tanks, bulk storage terminals, external floating roof tanks, and VOL storage. Tanks under 500 gallons (or other specified size) would be exempt, as would all portable storage tanks.
FS2	**Portable Fuel Container Spillage Control Measure**	Require that portable fuel containers and/or spouts be equipped with an automatic shut-off device that stops fuel flow before the fuel tank overflows, and an automatic device that closes and seals when it is removed from the fuel tank. This reduces VOC emissions.
FS3	**Off-Road Equipment Fuel Tank (OREFT) Program**	Require reductions in evaporative and permeation emissions from small off-road equipment fuel tanks (OREFT). Specifically, this applies to gasoline-powered engines that are less than 25-horsepower.
FS4	**Volatile Organic Liquid (VOL) Storage**	Require that fixed roof storage tanks install seals to prevent escape of VOC vapors.
		Dry Cleaning (2007 Inventory: 5.86 Tons/Day)
D1	**Dry Cleaning**	Require emissions controls at dry cleaning establishments. The owner or operator of any dry cleaning facility that uses petroleum-based solvents could not operate the facility unless the following requirements were satisfied. The owner or operator of a dry cleaning facility shall either: (A) Install, maintain, and operate a solvent-recovery dryer that recovers at least 85% by weight of the used petroleum solvent; (B) Install, maintain, and operate a petroleum dry-to-dry dryer that recovers at least 85% by weight of the used petroleum solvent; or (C) Route the exhaust air stream from the standard dryer to any other properly functioning control device that reduces the total emissions of volatile organic compounds (VOC) to the atmosphere by at least 85% by weight.
		Graphic Arts (2007 Inventory: 0.71 Tons/Day)
G1	**Graphic Arts Controls**	Require the use of control devices and low vapor pressure VOC materials at certain print shops. This will reduce VOC emissions.
		Minimize Energy Consumption (2007 Inventory not quantified)
E1	**Ozone Reducing Controls on Air Conditioning Units**	Require application of a paint-like coating to the surface of the heat exchanger to convert ozone-laden air to oxygen. This

		technology is experimental.
E5	Tree Planting	Implement landscaping ordinances to require additional urban tree planting. Reforestation improves air quality and energy efficiency.
POINT SOURCES		
1	**Offsets program for new sources**	Implement an emissions offsets program for Central Texas to ensure there is no increase in total emissions from point sources in the areas. The New Source Review process in nonattainment areas requires significant new sources to arrange for "emission offsets" (i.e., emission reductions achieved by other point sources). This strategy would involve adopting an emissions offsets program for Central Texas even though the area's nonattainment status under EAC does not require an emissions offset program.
2	**Additional controls on existing power plants**	Require additional emission controls, beyond those already required by the state, on existing power plants. In compliance with state legislation, power plants in Central Texas have initiated programs to reduce emissions. This rule would require additional control strategies beyond those required by the state.
3	**Extend energy efficiency requirements beyond SB5 and SB7.**	Require additional energy efficiency measures beyond SB5 and SB7, such as building design, revisions to codes and standards, and energy management programs for large commercial facilities. Rule would require TCEQ rule making or legislative changes. SB5 only applies to 40 counties; SB7 only applies to investor-owned utilities. SB7 also does not address energy conservation opportunities beyond traditional energy efficient appliances. Extensions to these requirements could provide significant reductions in energy demand and demand-related emissions.
4	**Earlier shutdown of Holly power plant**	This measure would require shutdown of the Holly Street facility sooner than scheduled. Units 3 and 4 are scheduled for closure in 2009, or sooner, at the discretion of the Austin City Council. Emission levels at new Austin Energy facilities will be 90% less than produced at the Holly Street facility.
5	**Shift the electric load profile**	Require commercial facilities to develop overnight the reservoir of cold water needed to meet air conditioning needs the following day. Total energy consumption and emissions are not reduced, but the emissions are not generated during the day, reducing the potential for ozone formation.
6	**Environmental dispatch of power plants**	To meet peak demands, this strategy would involve "ramping up" power generation facilities that are either cleaner than normally used or located away from high NOx-producing areas (e.g., plants in Bastrop and Marble Falls rather than the Decker or Holly Street plants in downtown Austin).
7	**Accelerate timetable for use of microturbines and fuel cells**	This strategy involves increased use of microturbines and fuel cells as alternatives to meeting new power demands through a central power source. LCRA has installed microturbines to power a single commercial facility. Microturbines do not have lower emissions than conventional power generation facilities, but placement and use away from high NOx producers can provide power without increasing emissions at a central facility. Fuel cell technology is currently expensive, but will have zero NOx emissions.
8	**Ensure emission reductions in SEPS, BEPS and similar agreements**	Ensure that the primary impact of all air quality related SEPs, BEPs or similar agreements applicable to the EAC area is to reduce emissions and improve air quality. EPA and/or TCEQ will consult, to the extent possible, with the local EAC signatories when developing any air quality related environmental mitigation agreement, such as a SEP, BEP or other similar agreement.

Voluntary Measures

The CAC recommends further consideration of the following voluntary measures, with the understanding that they may or may not be quantifiable commitments despite their expected emissions reductions. Some of the measures listed below are currently being implemented in some areas in the A/SM MSA and could be expanded for further reductions.

The list is also grouped by source type and then ranked subjectively by perceived relative attractiveness (most attractive to least attractive). The attractiveness ranking considers potential emission reduction and ease of implementation (public and stakeholder acceptance, legal authority, technical feasibility and cost-effectiveness). Please note that this is a preliminary, subjective ranking only and may change as a result of the measure evaluation process.

ON-ROAD SOURCES		
1	**Clean Fuel Incentives**	**NOx and VOC:** Encourage and/or provide incentives to implement fuels that are cleaner than conventional gasoline and diesel, including alternative fuels, lower sulfur gasoline and low sulfur diesel
2	**Low Emission Vehicles**	**NOx and VOC:** Encourage and/or provide incentives for the purchase and use of Tier 2 Bin 3 or cleaner vehicles for fleets and private use.
3	**Adopt-a-School-Bus Program**	**NOx and VOC:** Encourage local school districts to participate in this CLEAN AIR Force sponsored program to replace or retrofit old diesel school buses with new, cleaner buses. Replacements and retrofits are implemented using 50% corporate sponsorship funds and 50% school district funds. EPA provides seed money to the CLEAN AIR Force for a fundraiser and program administration.
4	**Police Department Ticketing**	**NOx and VOC:** Implement **a**ggressive police enforcement by local agencies of speed limits 55 mph or more and smoking vehicle restrictions. If the smoking vehicle is fixed within 60 days, the ticket could be waived.
5	**EPA Smart Way Transport Program**	**NOx:** EPA sponsored voluntary partnership with freight carriers and shippers to reduce fuel consumption and emissions through strategies such as idle reduction, improved aerodynamics, improved logistics management, automatic tire inflation systems, wide-base tires, driver training, low-viscosity lubricants, reduced highway speed and lightweight vehicle components. Participating carriers and shippers will meet voluntary performance goals and track progress. EPA will provide a calculation and tracking software tool and technical support. Several carriers and shippers have already signed up.
6	**Retrofit or replace HD Diesel Vehicles With LNG, Hybrid Electric or other technology**	**NOx:** Retrofit or replace fleets of heavy-duty diesel vehicles with heavy-duty LNG vehicles, electric hybrid or other technology. May require specialized fueling infrastructure. Retrofits, differential costs, infrastructure may be eligible for incentives. A few companies in TX are currently using heavy-duty LNG vehicles.

7	**Business Evaluation of Fleet Usage, Including Operations and Right Sizing**	**NOx and VOC:** Evaluate and improve the efficiency of fleet usage, including using alternative or clean fueled vehicles, using the cleanest vehicle appropriate for the job, consolidating and coordinating trips etc
8	**Parking Incentives for Alt Fuel or SULEV vehicles**	**NOx and VOC:** Provide parking incentives for Tier2 Bin 3 or cleaner vehicles. These clean vehicles could be allowed to park for free at parking meters, have designated parking spaces. This would encourage the use of these cleaner vehicles.
9	**HOV Lane Access, Carpool Lane Access**	**NOX and VOC:** Allow use of High Occupancy Vehicle lanes and freeway ramps by Tier2 Bin 3 or cleaner vehicles. Use of these lanes normally requires that vehicles have at least two occupants. In order to use these lanes with only one occupant, eligible vehicle owners must first obtain an identification sticker from the Department of Motor Vehicles.
10	**Commute Solutions Programs**	**NOx and VOC:** Encourage and provide tools to implement Commute VMT reduction programs (e.g. Teleworking, compressed work week, carpooling/vanpooling, bus fares, subsidized transit pass, flextime, carpool or alternative transportation incentives etc.). The Commute Solutions program provides information and tools to implement these programs. Could be used to support a trip reduction regulation.
11	**Direct Deposit**	**NOx and VOC:** Offer employees direct deposit potentially saving at least one vehicle errand per pay period.
12	**e-Government and/or Available Locations**	**NOx and VOC:** Provide web-based services, both for information and transactions, and/or multiple locations for payments, etc., Reduces VMT and associated emissions.
NON-ROAD SOURCES		
1	**Voluntary use of APUs for locomotives operating in Central Texas.**	**NOx and VOC:** Controls for locomotives are pre-empted by Federal law, but voluntary controls might have some success, since using Auxiliary Power Units (APUs) also decreases fuel costs to the railroad companies. CSX has been looking at the use of APUs to reduce fuel usage.
2	**Operating options for recreational watercraft on Ozone Action Days**	**NOx and VOC:** This strategy would restrict certain recreational watercraft activities on Ozone Action Days. These restrictions would be targeted toward those activities that release ozone precursors.
3	**Operating options for recreational off-road vehicles on Ozone Action Days**	**NOx and VOC:** This strategy would restrict certain off-road recreational vehicle activities on Ozone Action Days. These restrictions would be targeted toward those activities that release ozone precursors.
AREA SOURCES		
1	**Commercial and Consumer Products Requirements**	**VOC:** Promote the use of reformulated consumer products in homes and institutions to achieve VOC reductions. "Consumer product" means a chemically formulated product used by household and institutional consumers, (e.g. detergents; cleaning compounds; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings.)
2	**Fueling of Vehicles in Evening**	**VOC**: Promote fueling vehicles after peak hot periods of the day have passed during ozone season.
3	**Energy Efficiency Measures**	**NOx and VOC:** Promote energy efficiency measures. Energy efficiency measures not only decrease NOx and VOC emissions but also can have significant reductions in oxides of sulfur, air toxics, and CO_2. These various efficiency measures when combined have the potential to add up to significant energy savings and emission reductions thereby contributing to the overall goal of clean air for Texas.
4	**Urban Heat Island/Cool Cities Program**	**NOx**: Develop and implement Urban Heat Island (UHI) mitigation strategies. Since ozone forms at higher temperatures, the purpose of this

		strategy is to keep the city as cool as possible, through vegetation, cool roofing and light colored pavement. Houston has attempted to get SIP credit for UHI mitigation, but modeling is difficult and EPA has not recognized the validity of those models.
5	**Resource Conservation**	**NOx and VOC:** Expand and quantify ongoing resource conservation programs (materials recycling, water and energy conservation, etc.).
POINT SOURCES		
1	**Increase investments by Central Texas electric utility providers in energy demand management programs**	**NOx:** This measure would involve the development of energy demand management programs in areas outside the Austin Energy service area. Austin Energy offers financial incentives to commercial and residential customers for installation of energy efficient appliances and technologies and they report a good correlation between their demand programs and reduced emissions at their power plants. This measure would encourage other utility providers in the region to develop similar programs.
2	**Alter production processes and fuel choices**	**NOx:** This strategy involves exploring opportunities to improve efficiency, to make changes in certain combustion processes, and/or to alter fuel choices where cost-effective. Some point sources in the area (e.g., Austin White Lime) are using natural gas for cost reasons. Given their production processes, using natural gas results in higher NOx emissions than using coal. Representatives have expressed interest in examining their production process and/or revisiting their fuel choices, particularly during the ozone season. Other point sources such as LeHigh Cement are also looking at rescheduling and fuel changes to reduce NOx.