



North Central Texas Council Of Governments

April 29, 2014

Ms. Heather Evans
Dallas-Fort Worth State Implementation Plan Coordinator
Texas Commission on Environmental Quality
PO Box 13087, MC 165
Austin, TX 78711-3087

RE: Reasonably Available Control Measure Ideas

Dear Ms. Evans:

In response to the Texas Commission on Environmental Quality's (TCEQ) request for Reasonably Available Control Measures, the North Central Texas Council of Governments (NCTCOG) is submitting a list of 206 emission reduction ideas we received from various sources over the past several months.

Last October, NCTCOG staff set out to solicit emission reduction ideas in preparation for a variety of initiatives, including: the upcoming 84th Texas Legislative session, potential availability of additional transportation funding, and the development of the 2015 Dallas-Fort Worth State Implementation Plan (SIP). NCTCOG extended a challenge to local governments and the general public, requesting ideas for emission reduction strategies for all source types. NCTCOG staff made presentations at the Regional Transportation Council, the Surface Transportation Technical Committee, the Air Quality Technical Committee, and several public meetings. An official "Request for Information" was published in the *Texas Register* on December 13, 2013. Although the deadline for submission was February 14, 2014, NCTCOG staff continues to receive feedback and incorporate ideas.

In order to organize the 206 ideas, they have been sorted into the following five bins: on-road, off-road, non-road, area, and point sources. In addition to this initial effort, NCTCOG staff is conducting a more in-depth analysis of the on-road transportation-related ideas to determine if these strategies are quantifiable, implementable, need legislative action, need promotion/education, need further research, etc. NCTCOG staff has also requested volunteers to conduct a similar effort for the other emission source categories.

NCTCOG appreciates the opportunity to submit the emission reduction ideas to the TCEQ for consideration in the development of the upcoming SIP. We look forward to working with the TCEQ over the coming months as the ideas are evaluated. If you have any questions, or need further information, please contact Jenny Narvaez at 817-608-2342, or jnarveaz@nctcog.org.

Sincerely,

Chris Klaus

JPL:ch
Enclosure

cc: Jenny Narvaez, Principal Air Quality Planner

Request for Information/Technologies as Potential Emission Reductions

ID	Emission Reduction Idea	Emission Reduction Bins					
		On-Road	Off-Road	Non-Road	Point	Area	To be Determined
1	All intersections above specific VMT threshold require dedicated right turn lanes	*					
2	Amazon partnered with UPS to deliver 7 days a week	*					
3	Drone package delivery by Amazon	*					
4	Vehicle aerodynamic improvements (from OEM or add ons)	*					
5	Alternative zoning requirements	*					
6	Impacts from yellow flashing arrows for left-hand turn lanes	*					
7	Reduce demand for animal-based products			*			
8	Promote purchasing of locally grown food and manufactured goods	*					
9	Truck delivery windows	*					
10	Specific parking spaces/areas for truck deliveries during certain daytime hours	*					
11	< 25 year-olds driving less	*					
12	Electronic cash payment	*					
13	Payroll/direct deposit	*					
14	Family activities, soccer, extracurricular activities not considered in earlier models	*					
15	Remote voting	*					
16	Mandatory telecommuting during high ozone days	*					
17	Zero car households by choice, fewer cars in households	*					
18	Vehicle-to-vehicle and vehicle-to-infrastructure connectivity; IT connected vehicles and autonomous vehicles provide safety opportunities	*					
19	Rideshare with mobile app technologies	*					
20	Construction with pre-cast concrete, faster			*			
21	No drive-thrus (banking, fast food, pharmacy, etc.)	*					
22	Possibility of telecommute by type of work	*					
23	Use of cell phone data to track commuting patterns	*					
24	Use of technology in reading newspaper; mobile changing way of life						*
25	Empty nesters - moving to urban areas	*					
26	Real time traffic info on phone to help make appropriate commuting decisions; Efficiently travel using Apps when using transit and the supply system	*					
27	Mixed-use and transit development		*				
28	Social interaction; Use of social media to socialize, dating, etc.	*					
29	Online education	*					
30	Roundabouts for safety benefits	*					
31	Evaluate technology assumptions that are not consistent; looking in the models to better consistency; assumptions not connected to models						*
32	Increase public perception of the system and social responsibility	*					
33	Effects of data on paths and vehicle technology to optimize system; gps timing/routing inaccuracies due to delay - congestion non-recurring	*					
34	Decline in birth rates, changes in demographics						*
35	Older people working longer	*					
36	Pay for the part of the transportation system that you use; Transportation as utility	*					
37	Hesitation to use transit due to crime	*					
38	Less kids in school buses; more drop-off at schools due to lack of busses, lack of safety when walking	*					
39	Changes in trips due to older generation volunteering	*					
40	Having longer commutes - travel behavior changes	*					

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		On-Road	Off-Road	Non-Road	Point	Area	To be Determined
41	Movement to bicycling/car share; bicycle, car rental and vehicle ownership; Ubiquitous	*					
42	Bullet trains and hyper-loops	*					
43	Incentives for employees to stay inside during lunch	*					
44	Electric vehicles & battery environmental impacts	*					
45	Mandate/shift to zero emission vehicles	*					
46	College graduates moving back to parents' house	*					
47	Vehicle efficiencies will allow more capacity; technology in automobile, increase in capacity	*					
48	Economics of demand management	*					
49	UPS right turn policy	*					
50	No heavy-duty vehicle during ozone days	*					
51	Other innovative funding sources						*
52	Online purchasing	*					
53	Predicting affects of the economy on Travel Model						*
54	More compressed natural gas in state				*		
55	Automated/Autonomous vehicles & technology to optimize overall system	*					
56	Offer incentives to use managed lanes with environmentally friendly cars; zip car incentives & HOV/managed lanes	*					
57	Social security in future - work longer; younger generations might not retire as early	*					
58	Increase in home-based business; stimulate home-based business	*					
59	Print at home/3D printing	*					
60	Additional freight due to purchasing online	*					
61	Mileage based penalizing of trips	*					
62	Freight moving off peak/night	*					
63	Strategically placed pods of unmanned aircraft to take photos of accident scenes	*					
64	Training more regional teams to clear traffic incident	*					
65	Help making older cars more reliable to make the performance of the system better (safety and pollution)	*					
66	Account for more distracted drives due to telephones	*					
67	Inland port/coordination to deliver goods; use of or changes in technology to make movement of goods more efficient	*					
68	Rental car usage	*					
69	Consider the price of new technology to users might be too high						*
70	Technology cause & effects with Smart Cars vs. dumb cars	*					
71	Apps to block use during driving; use of technology to minimize distracting	*					
72	PAYD insurance; distance based automobile insurance	*					
73	Alt. fuel vehicle education	*					
74	More information from health community; health community, obesity in transportation	*					
75	Mode share shift between cars and bikes	*					
76	What is driving us to leave the house; investigate on motivations to leave the house and make a trip	*					
77	Detailed knowledge about special use vehicles	*					
78	Eco-driving to use your vehicle more efficiently	*					
79	More people are eating out more	*					
80	Only low emitting vehicles for high congested areas	*					

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81	How to retrofit existing system for better technology; retrofit business to adopt to changing technology					*	
82	Impacts of electric vehicles and other alt fuels on the environment	*					
83	Review vehicle sizing/capacity and users	*					
84	Use of dynamic signs to regulate speed	*					
85	Delivery methods in local distribution; coordination of distribution centers	*					
86	Car sharing effect for congestion, rent or not	*					
87	Increasing/introducing parking pricing	*					
88	Better toll tag readers/technology	*					
89	Economic incentives for district development; effects of local government codes or downtown plans how they may change trips	*					
90	Shift in population location to fringes and high income to CBD. High emitting vehicles travelling far	*					
91	Flexible schedule on-line education; real estate market trend shifts	*					
92	Time of day changes in congestion; congestion charges to high urban density areas	*					
93	Public involvement online	*					
94	Redefinition of Level of Service	*					
95	Making self-contained communities; better planning for where people live	*					
96	Presence of better technology for remote access (Skype); tele-presence for meetings; Google for meetings	*					
97	Education of higher income communities for denser development; education in communities who are fairly high income and to understand development and make smart decisions	*					
98	Physical presence in conferences, computer may make cable TV go away; technology in future to have mega conference remotely	*					
99	Include level of service for bikes	*					
100	Consolidation of stores as they are dwindling	*					
101	Better understanding of value of time						*
102	USPS - no delivery on Saturday; accounting for these reduced trips	*					
103	Offshoring jobs come back to the USA; intermodal logistics see the trade-off of labor cost and trip cost			*			
104	Remote meter-reading	*					
105	Increase inter-city bus travel	*					
107	De-nitrification SCR systems for cement kilns (DeNOx)				*		
108	Shift in thought to choosing SCR over SNCR for cement kilns or Hybrid SNCR-SCR Systems				*		
109	Develop high-powered wireless charging solutions for electric vehicles including transit and shuttle buses, fleet vehicles, streetcars, and off-road industrial vehicles	*					
110	Remove passenger minimum requirements for HOV lanes for alternative fuel vehicles	*					
111	Level of Service for Transit			*			
112	Commute Counselor - person to work with individuals to help them find alternative commute options and educates them on alternatives to single occupancy vehicle driving	*					
113	Car Free Day	*					
114	School Pools/School Walks - group of kids carpool or walk to school together	*					
115	Heavy Duty Wrecker Contracts - contracts with the tow truck companies with a required response time for major incidents and HAZMAT incidents	*					
116	Metro Lawn Propane Conversions			*			
117	100% Mitigation of trees taken during development of land					*	
118	Use buffalo grass and other native plants					*	
119	Shaded parking					*	
120	Alternative paving surfaces for parking lots					*	
121	Close down coal-fired power plants in East Texas				*		

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		On-Road	Off-Road	Non-Road	Point	Area	To be Determined
122	Limit emissions from fracking in DFW and the Permian Basin				*		
123	Include emissions from coal-fired power plants and oil and gas industry in SIP				*		
124	Ban idling of all vehicles at schools and daycares	*					
125	Electronic Speed Limit Signs	*					
126	Street Lamps in Downtown Fort Worth stay on an extra 45 minutes, adjust accordingly					*	
127	Require periodic emissions testing for wells in Barnett Shale				*		
128	Install vapor recovery equipment, such as that offered by Hy-Bon Engineering for gas wells				*		
129	Control dust arising from road construction sites					*	
130	Do not allow anything but closed loop systems for natural gas drilling and prohibit anything but electric pump station facilities				*		
131	Make a large effort to educate mayors of all cities about the short and long term impacts of continuing "business as usual"	*					
132	Create enforceable policies for restriction of polluting lawn equipment			*			
133	Create enforceable policies for restriction of motorcycles and older boat motors 2 stroke	*					
134	Mandate the adoption of Southern California 1190 fleet rules	*					
135	Build an overhead light rail system ("L") similar to northeastern US	*					
136	Temporal and Spatial Analysis of gas well emissions				*		
137	Increase incentives and outreach by DART, The T and TRE to increase ridership (i.e. discount days, education about safety of public transit, etc.)	*					
138	Make weekly passes available for those with the Senior Pass (not just monthly)	*					
139	Make the TRE available on Sundays	*					
140	Implement the nonstop run between Dallas and Ft. Worth as early as possible in 2014		*				
141	Require shale gas grilling companies to recycle fracking water from at least one or two additional wells to decrease on the number of tanker trips				*		
142	Provide financial incentives to those who choose solar, wind, and geothermal power for their homes					*	
143	Build more roads. Fund each mode in accordance with its trip share. If transit carries 2% of the trips, then that's all the funding it gets. 2%, not 30% or more.	*					
144	Enforce emission testing requirements, increase penalty for driving without proper documentation	*					
145	Implement new or strengthen current laws, regulations, and incentives to require public transit, school buses, and delivery vehicles be powered by alternative fuels.	*					
146	Allow EVs and other alt fuel vehicles to use HOV lanes, regardless of number of occupants	*					
147	Quit suing the EPA						*
148	Implement a regional bikeshare system	*					
149	Increase enforcement of single riders using HOV	*					
150	Use both available HOV lanes on IH-30 near Fairpark	*					
151	Allow SOV to use HOV lanes on Ozone days	*					
152	Build a PNR at location of old Big Town Mall, access express bus to downtown service from this point		*				
153	Expand the work day to add flexibility and decrease congestion on roadway	*					
154	Promote 4-day work week	*					
155	Add more monitors for black carbon and GHGs along major highways	*					
156	Increase funding for signalization and add on-site visits to ensure improvements are operating the way intended	*					
157	Mandate electric lawn equipment, specifically leaf blower and mowers			*			
158	Support DOEs Workplace EV Charging Initiative	*					
159	Encourage multi-tenant dwellings to add EV infrastructure to properties	*					
160	Anti-idling PSA, video that could be use by other organizations	*					
161	Propane lawnmowers for golf courses			*			

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		On-Road	Off-Road	Non-Road	Point	Area	To be Determined
162	Texas SmartScape program- ensure promotion of plant species that are both drought-tolerant AND low-VOC					*	
163	Work with urban foresters to develop a recommended list of AQ-friendly (low VOC) species					*	
164	Require Tier 3 or higher construction equipment on all RTC-funded transportation projects (better yet, all public sector construction)			*			
165	Encourage additional EV sales thru various means (dealership partnership/education, get more people to experience them thru rental cars/taxis/limos/hotel shuttles, use EV owner groups to help at outreach events)	*					
166	Establish possible regional equipment "pool" to share smaller fleet of low-emitting equipment – enables retirement of superfluous high-emitting equipment	*					
167	Lawn & garden equipment exchange programs			*			
168	Solar carports at park & rides, transit stations, parking garages, malls, etc. (assumption: shading helps reduce evaporative emissions (VOCs), plus reduced grid load that can be quantified with new AVERT tool)					*	
169	Electrification of all gas compressors in DFW nonattainment area and all of East Texas upwind sources				*		
170	Local off-set policies for oil and gas facilities currently exempt from Clear Air Act off-set regulations				*		
171	Mandatory inspection of all heavy-duty on- and off-road diesel vehicles		*				
172	Limit VOCs in paint and other consumer products					*	
173	Provide tax incentives for replacing generators or adding controls				*		
174	Require fork lifts to go to electric			*			
175	Require shutting off vehicles in drive-thru establishments	*					
176	Put in truck-only roads	*					
177	Install more truck electrification plug-in stations to reduce idling	*					
178	Electrified concrete for roadways to charge electric vehicles	*					
179	Adopt 2012 IECC as the Residential Energy Code					*	
180	Adopt the 2012 IECC Commercial Code or ASHRAE Standard 90.1 - 2010 as the Commercial Energy Code					*	
181	Require SEER 16 as the minimum air conditioner efficiency for residential and small commercial					*	
182	Do not allow electric resistance heating or electric resistance DHW in residential and commercial buildings where natural gas is available at the site					*	
183	Encourage the installation of ground source heat pumps in residential and small commercial buildings					*	
184	Encourage the installation of electronic ignition in all new and replacement gas-fired appliances					*	
185	Encourage the installation of water conserving appliance and landscape water systems in all residential and commercial buildings						*
186	Encourage the installation an use of rainwater collection and distribution systems in residential						*
187	Consider adopting NCTCOG -wide smart meter demand reduction capabilities (Demand Response)					*	
188	Encourage accelerated maintenance of municipal water and waste-water systems to reduce water leakage and waste-water-in-flow						*
189	Encourage retro-commissioning of HVAC systems for all existing commercial and institutional buildings					*	
190	Require publicly posted building energy labels for all municipal and government buildings					*	
191	Install fine bubble diffusers in all wastewater treatment facilities both public and private				*		
192	Reduce monitoring usage requirements of TERP Grants			*			
193	Regional landscaping plants/trees with highly reactive biogenic VOC emissions					*	
194	Increase use of dual, signal controlled left turn lanes and dedication right turn lanes in heavy traffic areas	*					
195	Increase overpasses over railroads	*					
196	Limit fireplace use and limit installation of fireplaces in new development					*	
197	Research the effects of Daylight Savings Time on emissions and commute patterns	*					
198	Agencies following EPACT - enforcement of EPACT mandates	*					
199	Hotel partnership - sensor light installation					*	

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		On-Road	Off-Road	Non-Road	Point	Area	To be Determined
200	Encourage single engine taxi for airplanes		*				
201	Convert aircraft ground support equipment to electric		*				
202	Expedite use of alternative fuels for airplanes		*				
203	Pre-conditioned air from terminals rather than run airplane engines while on tarmac		*				
204	Full appropriations of TERP - locomotives		*				
205	Minimize use of local incinerators at entertainment venues				*		
206	Partner with EGU owner/operator during high ozone days to use full potential of SCR/SNCR				*		