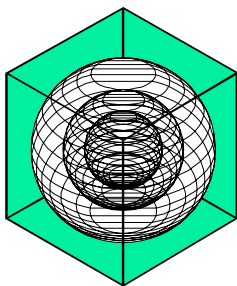


**NO_x, SO_x AND CO₂ EMISSIONS REDUCTION FROM
CONTINUOUS COMMISSIONING[®] (CC[®]) MEASURES AT THE
RENT-A-CAR FACILITY IN THE DALLAS-FORT WORTH
INTERNATIONAL AIRPORT**



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December 2005



ENERGY SYSTEMS LABORATORY
Texas Engineering Experiment Station
Texas A&M University System

Disclaimer

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Table of Contents

<i>Section</i>	<i>Page</i>
1. Background.....	1
2. Approach.....	1
3. Summary of Emissions Reduction.....	1
4. Methodology.....	1
4.1 Degradation Factor for Loss of Retrofit Project Efficiency over Time.....	1
5. Annual and OSD Energy Savings.....	2
6. Power Control Area.....	2
7. Explanation of Tables and Figures.....	2

List of Figures

Figure 1.	Electricity consumption patterns before and after the implementation of the Continuous Commissioning [®] measures on the Rent-a-Car facility of the Dallas-Fort Worth International Airport for the FY 2005.	3
Figure 2.	Annual NO _x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning [®] measures (1999 eGRID).	4
Figure 3.	OSD period NO _x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 1999 (1999 eGRID).	4
Figure 4.	Annual NO _x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).	5
Figure 5.	OSD period NO _x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).	5
Figure 6.	Annual SO ₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).	6
Figure 7.	OSD period SO ₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the period of July 15 thru September 15, 2005 (2007 eGRID).	6
Figure 8.	Annual CO ₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).	7
Figure 9.	OSD period CO ₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the period of July 15 thru September 15, 2005 (2007 eGRID).	7

List of Tables

Table 1. Monthly Savings for the fiscal year 2005 and potential monthly savings in the year 1999 obtained from the Continuous Commissioning [®] measures.....	3
Table 2. Annual NO _x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning [®] measures (1999 eGRID).	8
Table 3. OSD period NO _x emissions reduction by Power Control Areas on Rent-a-Car facility of the Dallas-Fort Worth International Airport based on the 1999 weather data from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 1999 (1999 eGRID).....	9
Table 4. Annual NO _x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).....	10
Table 5. OSD period NO _x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).	11
Table 6. Annual CO ₂ emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).....	12
Table 7. OSD period CO ₂ emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).	13
Table 8. Annual SO ₂ emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).....	14
Table 9. OSD period SO ₂ emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).....	15
Table 10. 1999 Annual and Peak-Day NO _x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning [®] measures (1999 eGRID).....	16
Table 11. FY 2005 Annual and Peak-Day NO _x emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).	16
Table 12. FY 2005 Annual and Peak-Day SO ₂ emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning [®] measures (2007 eGRID).	17

Table 13. Annual and Peak-day CO₂ emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).17

1. Background

The Energy Systems Laboratory (ESL) at the Texas Engineering Experiment Station, Texas A&M University System was contracted to fulfill a *Continuous Commissioning*[®] (CC[®])¹ project on the Rent-a-Car facility (RAC) of the Dallas-Fort Worth International Airport (DFWIA) in which energy savings are directly related to an emission reduction that can be credited. The purpose of this study is to estimate the creditable emissions reductions from energy efficiency CC[®] measures in the RAC of DFWIA.

2. Approach

The energy savings were evaluated thru weather normalized inverse modeling. Baseline data, pre-CC[®], and the post-CC[®] data were modeled as a function of the weather. The electricity savings were calculated by the difference of the baseline model and the measured post-CC[®] data of the facility (see Figure 1). Similarly, these models were applied to weather of 1999 and the potential savings at that year were documented.

The documented savings at RAC were then converted to NO_x, CO₂, and SO₂ emissions reduction on a tons/year and tons/peak-day basis using TCEQ/ESL's emissions reduction methodology and EPA's eGRID emissions data base.

3. Summary of Emissions Reduction

The total potential emissions (NO_x, SO₂, and CO₂) reduction for year 1999 and the projected ones for 2007 and corresponding OSD periods are presented next.

Emissions	Potential Emissions Reductions for 1999		Potential Emissions Reductions for 2007	
	Annual (Tons/yr)	OSD (Tons/day)	Annual (Tons/yr)	OSD (Tons/day)
NO _x	3.710320	0.012782	1.64387	0.00554
SO ₂	N/A	N/A	1.11594	0.00362
CO ₂	N/A	N/A	1316.468	4.62669

The potential emissions reduction of SO₂ and CO₂ for the year 1999 was not evaluated because eGRID tables for that year were not available.

4. Methodology

The methodology used to determine the energy savings and the estimate of savings in 2007, from electricity reductions, is critical if reported savings are to be given credit by TCEQ. Project savings are first *discounted* if the projects were not fully commissioned and monitored on a monthly basis. Secondly, reported savings are further reduced using a *degradation* factor to account for the overall retrofit loss of efficiency over time. These factors are fully described below.

4.1 Degradation Factor for Loss of Retrofit Project Efficiency over Time

The operational efficiency of energy retrofits such as lighting, motors, HVAC equipment, controls, pumps, etc., may decrease over time due to normal wear and uneven operations and maintenance (O&M). Savings degradation of 0% to 5% per year was reported by Greg Katz in 1996.² This range is dependent upon whether or not the project was tracked with monthly utility

¹ Continuous Commissioning[®] and CC[®] are trademarks registered by the Texas engineering Experimentation Station of Texas A&M University. For more information please contact the Energy Systems Laboratory at esl.tamu.edu.

² Kats, G.H. et al. (1996) "Energy Efficiency as a Commodity," *ACEEE Summer Study on Energy Efficiency in Buildings*.

bills (i.e., 5%), or savings were measured with hourly data loggers and systems were continuously maintained through good O&M practices (i.e., 0%). Based on the Katz study and the ESL's experience, we recommend that project savings estimates, absent utility bill information, or monitoring data reflect an across-the-board loss of project efficiency of 4% per year. Accordingly, a 0% degradation factor was utilized for this report.

5. Annual and OSD Energy Savings

The annual electricity savings after the Continuous Commissioning[®] measures were implemented are 1,890,218 kWh with an OSD average savings of 6,548 kWh/day (see Table 1). These energy savings are affected by an additional 10% from Transmissions and Distribution (T&D) losses. The translation of the energy patterns to the year 1999 would produce annual energy savings for 1,848,229 and 6,367 kWh/day daily average savings in the corresponding OSD.

6. Power Control Area

The Power Control Area (PCA) for the RAC of the DFW International Airport from the period October 2004 through April 25, 2005, was TXU, but after that period to the present the utilities have been provided by Reliant (see Table 1). The annual total electricity savings and OSD electricity savings were entered into the eGRID spreadsheet according to the providers' PCA.

7. Explanation of Tables and Figures

Table 2 and 3 summarize the eGRID for the main contributor counties in Texas and list the corresponding inputs based on the annual potential electricity savings and the OSD potential electricity savings for the year 1999 on the RAC, respectively. The corresponding emissions reduction obtained in these tables are presented, respectively, in Figures 2 and 3.

Similarly, results for the emissions reduction in 2007 are found in Figures 4 and 5, for which the related eGRID Tables are 4 and 5. For this same year, the distribution of SO₂ and CO₂ contaminants can be traced in the State of Texas. Results of the emissions reduction on these pollutants are depicted in Figures 6, 7, 8 and 9, whose values are presented in Tables 6, 7, 8, and 9, respectively.

Tables 10 through 13 present a summary of the emissions for each of the pollutants. In these tables, the upper part corresponds to the non-attainment or affected counties; the counties in yellow high-lighted cells indicate affected (near non-attainment) counties and the counties in white cells indicate non-attainment counties. The lower part of the table includes the counties in attainment areas with power plants.

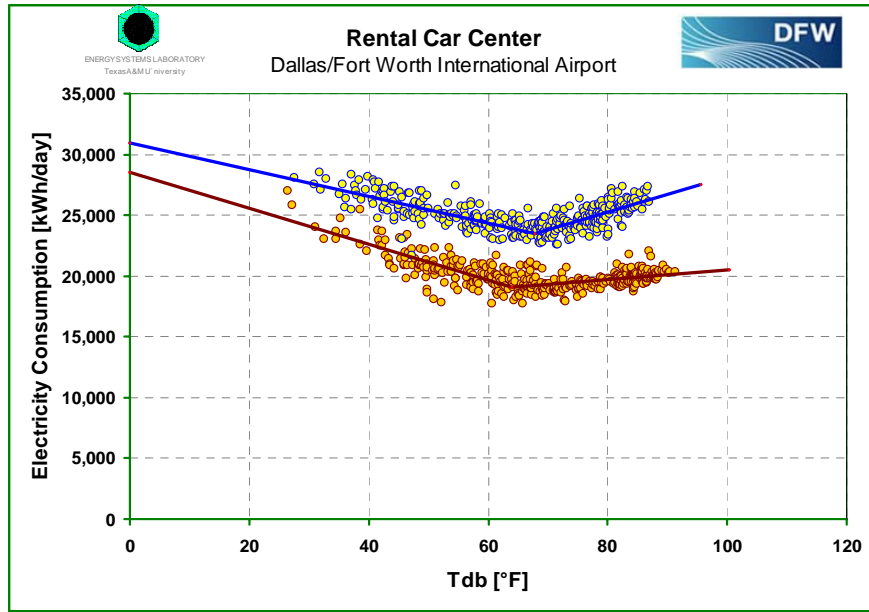


Figure 1. Electricity consumption patterns before and after the implementation of the Continuous Commissioning[®] measures on the Rent-a-Car facility of the Dallas-Fort Worth International Airport for the FY 2005.

Table 1. Monthly Savings for the fiscal year 2005 and potential monthly savings in the year 1999 obtained from the Continuous Commissioning[®] measures.

Rental Car Center - DFW International Airport

MONTHLY SAVINGS (1999)		(PRICE 0.0674 \$/kWh)	
	kWh	US\$	
Jan-99	131,642	\$	8,873
Feb-99	126,130	\$	8,501
Mar-99	141,799	\$	9,557
Apr-99	141,071	\$	9,508
May-99	153,959	\$	10,377
Jun-99	171,178	\$	11,537
Jul-99	191,335	\$	12,896
Aug-99	205,214	\$	13,831
Sep-99	164,822	\$	11,109
Oct-99	150,067	\$	10,114
Nov-99	135,885	\$	9,159
Dec-99	135,127	\$	9,108
1,848,229		\$	124,571
OSD => 7/15/1999 - 9/15/1999			
OSD Savings		401,115	
OSD Daily Average Savings		6,367	

MONTHLY SAVINGS		(PRICE 0.0674 \$/kWh)	
	kWh	US\$	
Sep-04	14,397	\$	970
Oct-04	118,728	\$	8,002
Nov-04	157,451	\$	10,612
Dec-04	142,024	\$	9,572
Jan-05	134,653	\$	9,076
Feb-05	121,325	\$	8,177
Mar-05	112,271	\$	7,567
Apr-05	143,573	\$	9,677
May-05	174,623	\$	11,770
Jun-05	184,514	\$	12,436
Jul-05	206,214	\$	13,899
Aug-05	201,473	\$	13,579
Sep-05	193,369	\$	13,033
Oct-05	153,450	\$	10,343
FY05		1,890,218	\$ 127,401
Total		2,058,065	\$ 138,714
OSD => 7/15/2005 - 9/15/2005			
OSD Savings		412,509	
OSD Daily Average Savings		6,548	

	PCA	Measured	Baseline	Savings		
		Total Use kWh	Total Use kWh	kWh	%	US\$
FY2005 (10/01/2004 - 04/25/2005)	TXU	4,225,222	5,129,880	904,658	17.64%	\$60,974
FY2005 (04/26/2005 - 09/30/2005)	Reliant	3,116,232	4,101,791	985,559	24.03%	\$66,427
		7,341,454	9,231,671	1,890,218	20.48%	\$127,401

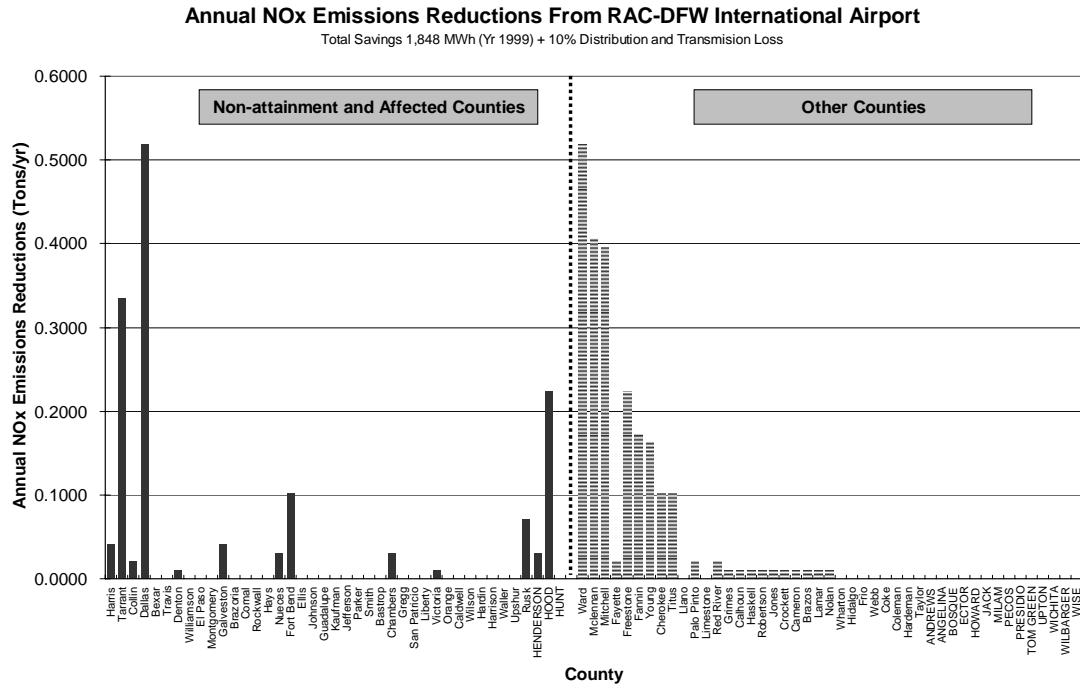


Figure 2. Annual NO_x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning[®] measures (1999 eGRID).

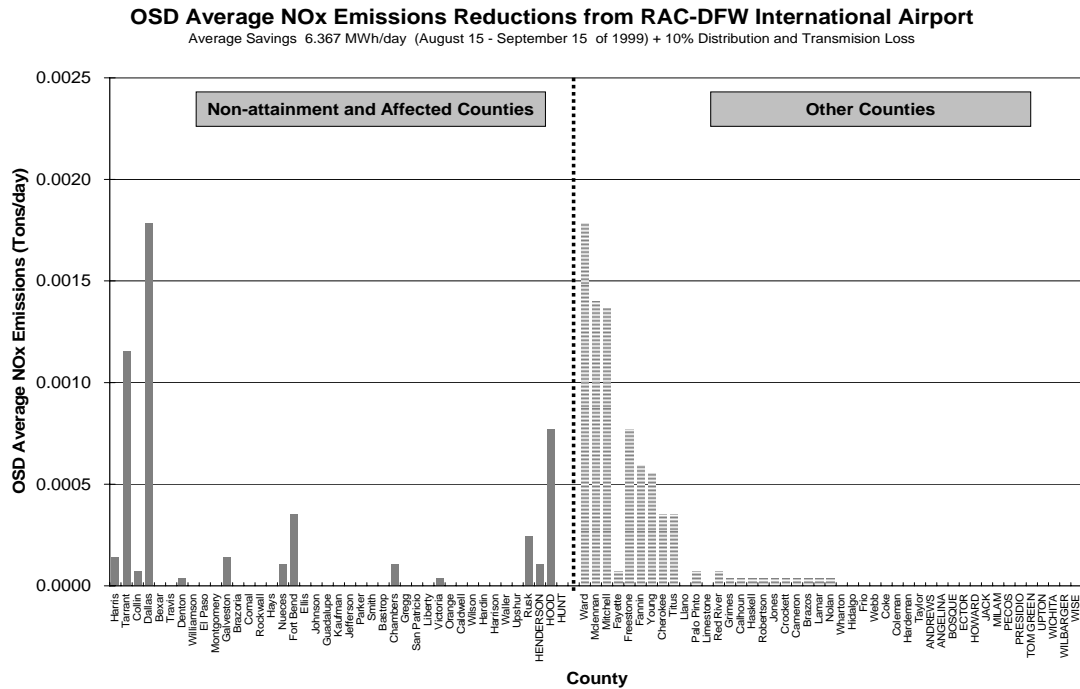


Figure 3. OSD period NO_x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning[®] measures during the OSD period of July 15 thru September 15, 1999 (1999 eGRID).

Annual NO_x Emissions Reductions From RAC-DFW International Airport
 Total Savings 1,890 MWh (October 2004 - September 2005) + 10% Distribution and Transmission Loss

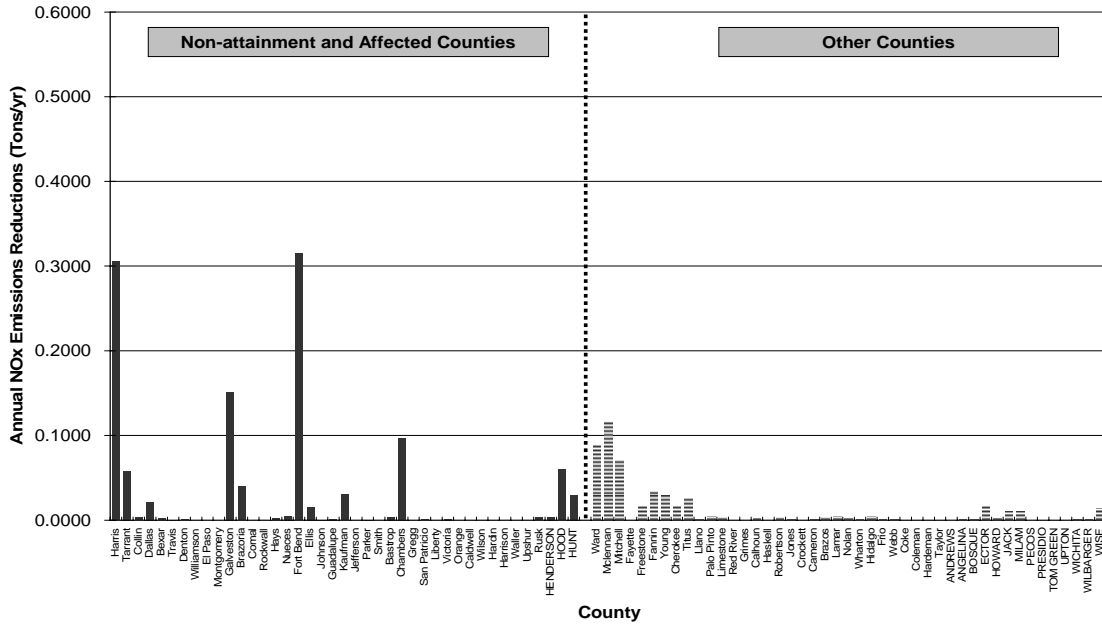


Figure 4. Annual NO_x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).

OSD Average NO_x Emissions Reductions from RAC-DFW International Airport
 OSD Average Savings 6.55 MWh (August 15 - September 15 of 2005) + 10% Distribution and Transmission Loss

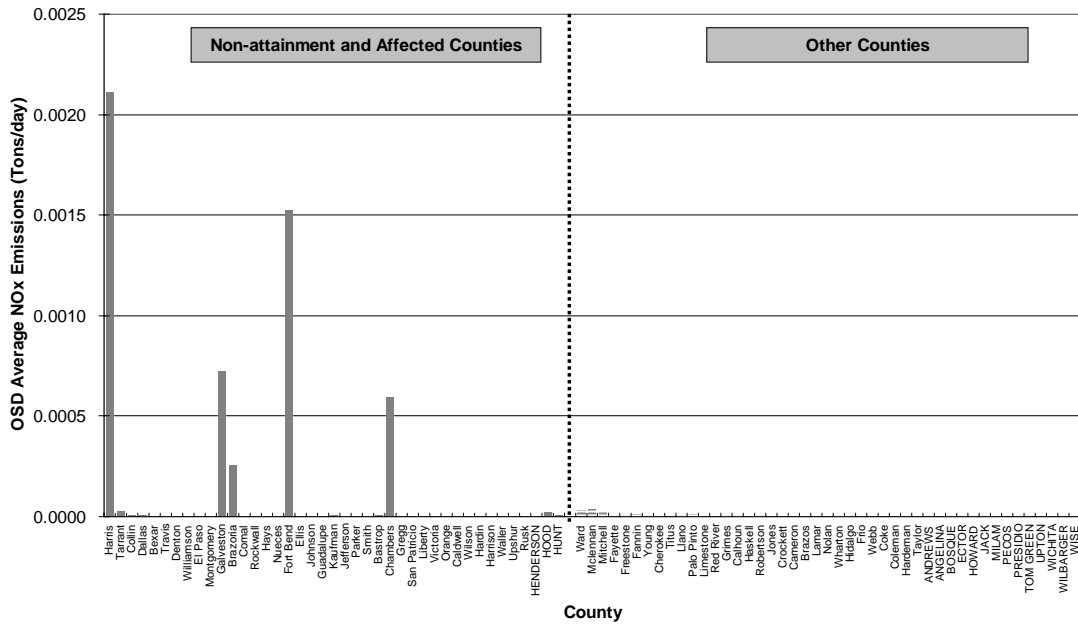


Figure 5. OSD period NO_x emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).

Annual SO₂ Emissions Reductions From RAC-DFW International Airport

Total Savings 1,890 MWh (October 2004 - September 2005) + 10% Distribution and Transmission Loss

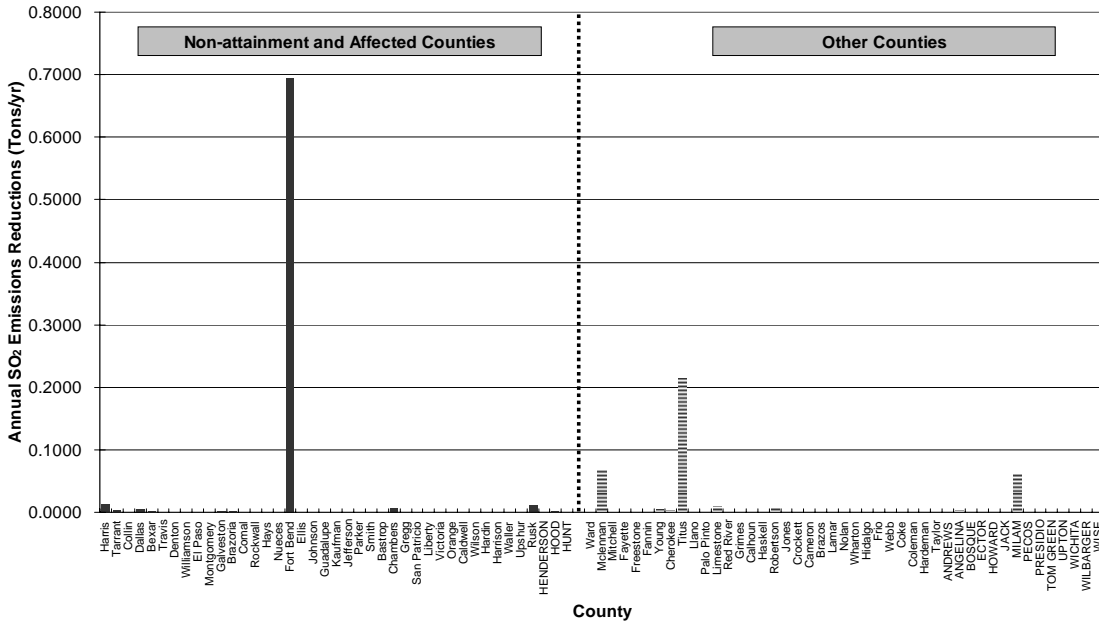


Figure 6. Annual SO₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).

OSD Average SO₂ Emissions Reductions from RAC-DFW International Airport

OSD Average Savings 6.55 MWh (August 15 - September 15 of 2005) + 10% Distribution and Transmission Loss

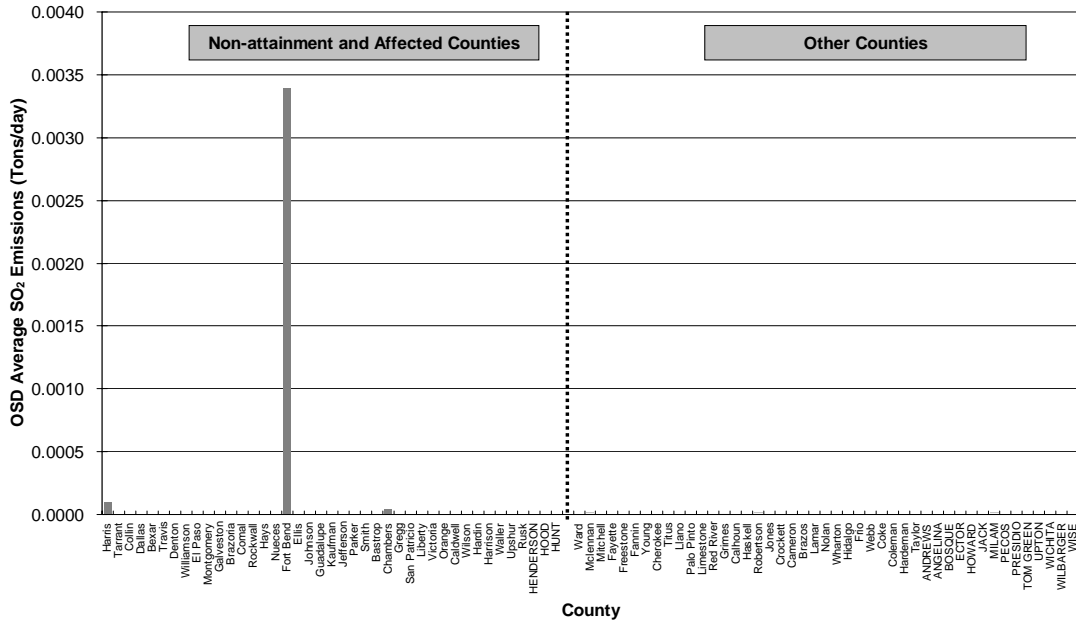


Figure 7. OSD period SO₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures during the period of July 15 thru September 15, 2005 (2007 eGRID).

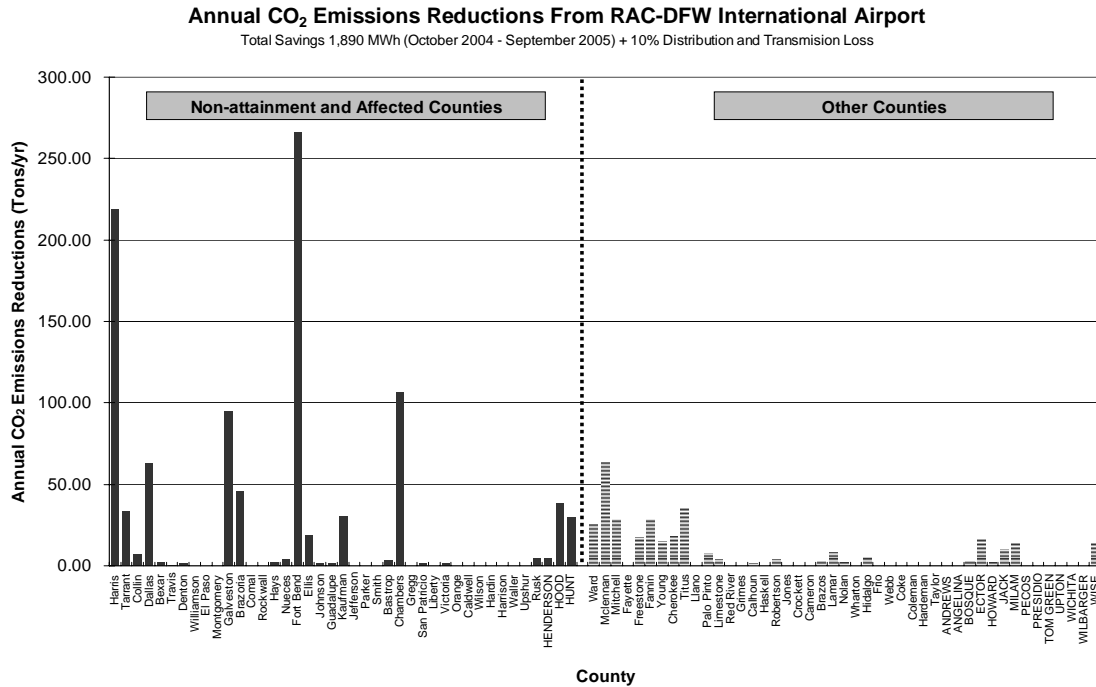


Figure 8. Annual CO₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).

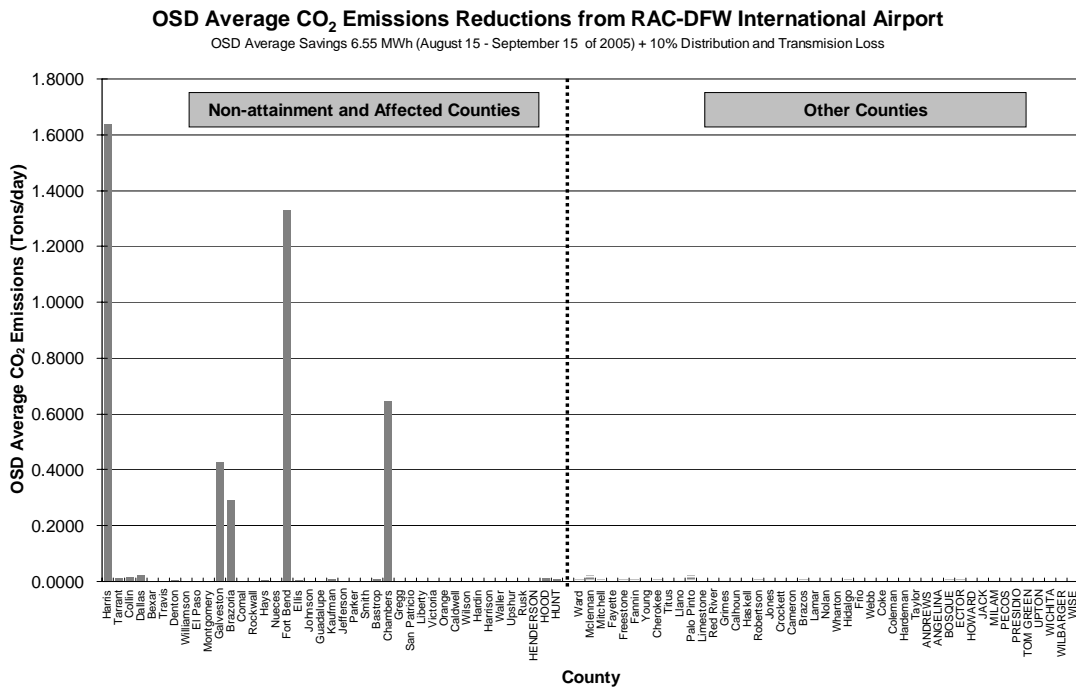


Figure 9. OSD period CO₂ emissions reduction on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures during the period of July 15 thru September 15, 2005 (2007 eGRID).

Table 2. Annual NO_x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning[®] measures (1999 eGRID).

Area	County	American Electric Power - West (ERCOT) / PCA	NO _x Reductions (lbs)	Austin Energy/PCA	NO _x Reductions (lbs)	Brownsville Public Utis Board/PCA	NO _x Reductions (lbs/year)	Lower Colorado River Authority /PCA	NO _x Reductions (lbs)	Reliant Energy HL&P/PCA	NO _x Reductions (lbs)	San Antonio Public Service Bd/PCA	NO _x Reductions (lbs)	South Texas Electric Coop INC/PCA	NO _x Reductions (lbs)	Texas Municipal Power Pool/PCA	NO _x Reductions (lbs)	Texas-New Mexico Power Co/PCA	NO _x Reductions (lbs)	TXU Electric/PCA	NO _x Reductions (lbs)	Total Nox Reductions (lbs)	Total Nox Reductions (Tons)	
Austin-San Antonio Area	BASTROP	0.01	-	0.20	-	-	-	0.34	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	
	BEXAR	0.06	-	0.09	-	0.04	-	0.16	-	-	-	2.00	-	0.08	-	0.01	-	-	-	-	-	-	-	
	TRAVIS	-	-	0.46	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	FAYETTE	0.02	-	0.86	-	0.02	-	1.51	-	0.01	-	0.04	-	0.01	-	0.02	-	-	-	0.02	40.66	40.66	0.02	
	LLANO	-	-	0.12	-	-	-	0.21	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	
	CALDWELL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	COMAL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	GUADALUPE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	WILLIAMSON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dallas-Fort Worth Area	WILSON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	COLLIN	0.01	-	0.01	-	-	-	0.02	-	0.01	-	-	-	0.05	-	0.19	-	-	-	0.02	40.66	40.66	0.02	
	DALLAS	0.06	-	0.06	-	0.04	-	0.09	-	0.03	-	0.01	-	0.09	-	0.30	-	0.09	-	0.51	1,036.86	1,036.86	0.52	
	DENTON	-	-	0.01	-	-	-	0.01	-	-	-	-	-	0.04	-	0.15	-	-	-	0.01	20.33	20.33	0.01	
	JOHNSON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	
	PARKER	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	0.03	-	-	-	-	-	-	-	
	CHEROKEE	0.01	-	0.01	-	0.01	-	0.02	-	-	-	-	-	0.02	-	0.06	-	0.02	-	0.10	203.31	203.31	0.10	
	COKE	0.03	-	-	-	0.02	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	
	COLEMAN	0.02	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	FANNIN	0.02	-	0.02	-	0.01	-	-	0.03	-	0.01	-	-	-	0.03	-	0.09	-	0.03	-	0.17	345.62	345.62	0.17
	FRIIO	0.05	-	-	-	0.04	-	0.01	-	-	-	-	-	1.15	-	0.07	-	-	-	-	-	-	-	
	HARDEMAN	0.01	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	HASKELL	0.16	-	-	-	0.12	-	-	0.01	-	-	-	-	0.03	-	0.01	-	-	-	0.01	20.33	20.33	0.01	
	HENDERSON	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	0.02	-	0.01	-	0.03	60.99	60.99	0.03	
	HOOD	0.02	-	0.02	-	0.02	-	0.04	-	0.01	-	-	-	0.03	-	0.12	-	0.04	-	0.22	447.27	447.27	0.22	
	JONES	0.14	-	-	-	0.11	-	-	-	-	-	-	-	0.03	-	-	-	-	-	0.01	20.33	20.33	0.01	
	LAMAR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	20.33	20.33	0.01	
	LIMESTONE	0.01	-	0.01	-	-	-	-	-	0.05	-	0.01	-	-	-	-	-	-	-	0.40	813.22	813.22	0.41	
	MCLENNAN	0.04	-	0.04	-	0.03	-	0.07	-	0.02	-	0.01	-	0.06	-	0.22	-	0.07	-	0.39	792.89	792.89	0.40	
	MITCHELL	0.04	-	0.04	-	0.03	-	0.07	-	0.02	-	0.01	-	0.06	-	0.21	-	0.07	-	0.01	20.33	20.33	0.01	
	NOLAN	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	-	0.36	-	0.02	40.66	40.66	0.02		
	PALO PINTO	0.01	-	0.02	-	0.01	-	-	0.03	-	0.01	-	-	-	-	0.01	-	-	-	0.02	40.66	40.66	0.02	
	RED RIVER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	40.66	40.66	0.02	
	TAYLOR	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	TITUS	0.01	-	0.01	-	0.01	-	-	0.02	-	-	-	-	0.02	-	0.05	-	0.02	-	0.10	203.31	203.31	0.10	
	YOUNG	0.02	-	0.02	-	0.01	-	-	0.02	-	0.01	-	-	0.03	-	0.09	-	0.03	-	0.16	325.29	325.29	0.16	
	TARRANT	0.04	-	0.04	-	0.03	-	0.06	-	0.02	-	0.01	-	0.05	-	0.18	-	0.06	-	0.33	670.91	670.91	0.34	
Houston - Galveston Area	ELLIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	KALIFMAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ROCKWALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	BRAZORIA	0.01	-	0.01	-	-	-	-	-	0.05	-	0.01	-	-	-	-	-	-	-	-	-	-	-	
	BRAZOS	-	-	0.01	-	-	-	-	0.01	-	-	-	-	0.03	-	0.11	-	-	-	0.01	20.33	20.33	0.01	
	GRIMES	0.01	-	0.01	-	-	-	-	0.02	-	0.01	-	-	0.06	-	0.23	-	-	-	0.01	20.33	20.33	0.01	
	WHARTON	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CHAMBERS	0.05	-	0.06	-	0.03	-	0.02	-	0.35	-	0.08	-	0.03	-	0.02	-	0.02	-	0.03	60.99	60.99	0.03	
	FORT BEND	0.13	-	0.17	-	0.10	-	0.06	-	1.01	-	0.23	-	0.09	-	0.06	-	0.07	-	0.10	203.31	203.31	0.10	
	GALVESTON	0.05	-	0.06	-	0.04	-	0.02	-	0.39	-	0.09	-	0.04	-	0.03	-	0.42	-	0.04	81.32	81.32	0.04	
	ROBERTSON	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	0.40	-	0.01	20.33	20.33	0.01	
	HARRIS	0.05	-	0.07	-	0.04	-	0.02	-	0.41	-	0.09	-	0.04	-	0.02	-	0.03	-	0.04	81.32	81.32	0.04	
	HARDIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	JEFFERSON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	LIBERTY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MONTGOMERY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ORANGE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
WALLER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
El Paso Area	EL PASO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	RUSK	0.01	-	0.01	-	0.01	-	0.01	-	-	-	-	-	0.01	-	0.04	-	0.01	-	0.07	142.31	142.31	0.07	
	CROCKETT	0.14	-	-	-	0.11	-	-	-	-	-	-	-	0.03	-	-	-	-	0.01	20.33	20.33	0.01		
ETC	FREESTONE	0.02	-	0.02	-	0.02	-	0.04	-	0.01	-	-	-	0.03	-	0.12	-	0.04	-	0.22	447.27	447.27	0.22	
	CALHOUN	0.19	-	-	-	0.14	-	0.01	-	-	-	-	-	0.04	-	0.01	-	-	-	0.01	20.33	20.33	0.01	
	HIDALGO	0.13	-	-	-	0.10	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	
	CAMERON	0.14	-	-	-	0.20	-	-	-	-	-	-	-	0.03	-	-	-	-	0.01	20.33	20.33	0.01		
	WARD	0.06	-	0.06	-	0.04	-	0.09	-	0.02	-	0.01	-	0.08	-	0.28	-	0.10	-	0.51	1,036.86	1,036.86	0.52	
	WEBB	0.06	-	-	-	0.05	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	
	NUECES	0.74	-	0.01	-	0.55	-	0.02	-	0.01	-	0.01	-	0.15	-	0.02	-	0.01	-	0.03	60.99	60.99	0.03	
	VICTORIA	0.30	-	0.01	-	0.22	-	0.01	-	-	-	-	-	0.68	-	0.05	-	-	-	0.01	20.33	20.33	0.01	
	GREGG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	HARRISON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SMITH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	LIPSCHUR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SAN PATRICIO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			2.89	-	2.54	-	2.22	-	3.12	-	2.48	-	2.63	-	3.27	-	3.19	-	1.54	-	3.65	7,420.64	7,420.64	3.71
Energy Savings by PCA from ESL (MWh)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.033	-	-	-		

Table 5. OSD period NO_x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures during the OSD period of July 15 thru September 15, 2005 (2007 eGRID).

County	American Electric Power - West (ERCOT) /PCA	NO _x Reductions (lbs)	Austin Energy/PCA	NO _x Reductions (lbs)	Brownsville Public Utilities Board/PCA	NO _x Reductions (lbs/year)	Lower Colorado River Authority /PCA	NO _x Reductions (lbs)	Reliant Energy HL&P/PCA	NO _x Reductions (lbs)	San Antonio Public Service /PCA	NO _x Reductions (lbs)	South Texas Electric Coop /PCA	NO _x Reductions (lbs)	Texas Municipal Power Pool/PCA	NO _x Reductions (lbs)	Texas-New Mexico Power Co/PCA	NO _x Reductions (lbs)	TXU Electric/PCA	NO _x Reductions (lbs)	Total NO _x Reductions (lbs)	Total NO _x Reductions (Tons)		
Brazoria	0.00572	0.011807	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	0.004284	0.007069	
Hardin	0.001764	0.003151	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	0.000560	0.001303	
Collin	0.000476	0.000352	0.000252	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	0.000143	
El Paso	0.031128	0.048234	0.022989	0.084462	0.001064	0.007662	1.06347	0.04367	0.004350	0.000484	0.002333	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Bezar	0.002008	0.076851	0.001483	0.134327	0.001242	0.008942	0.003567	0.001066	0.001862	0.000403	0.001842	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Bastrop	0.002469	0.094281	0.001824	0.165221	0.001527	0.010999	0.004388	0.001311	0.002291	0.000496	0.002285	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Gregg																								
Nueces	0.222325	0.004476	0.165083	0.007477	0.001651	0.011891	0.001398	0.045860	0.007118	0.001581	0.008136	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Victoria	0.000026	0.000026	0.000019	0.000043	0.000011	0.000081	0.000004	0.000037	0.000027	0.000043	0.000023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Andrews	0.000359	0.000407	0.000265	0.000358	0.001534	0.011048	0.000356	0.000371	0.000909	0.083323	0.001655	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Total	1.143037	1.154658	1.089429	1.180869	1.539531	11.087219	1.443965	1.481727	1.269705	1.151969	1.517783	11.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
								7.20																

Table 10. 1999 Annual and Peak-Day NO_x emissions reduction by Power Control Areas on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 1999 weather data from Continuous Commissioning® measures (1999 eGRID).

County	Annual Nox Reductions (Tons)	Peak-day Nox Reductions (Tons)
Harris	0.040661	0.000140
Tarrant	0.335454	0.001156
Collin	0.020331	0.000070
Dallas	0.518428	0.001786
Bexar	0.000000	0.000000
Travis	0.000000	0.000000
Denton	0.010165	0.000035
Williamson	0.000000	0.000000
El Paso	0.000000	0.000000
Montgomery	0.000000	0.000000
Galveston	0.040661	0.001140
Brazoria	0.000000	0.000000
Comal	0.000000	0.000000
Rockwall	0.000000	0.000000
Hays	0.000000	0.000000
Nueces	0.030496	0.000105
Fort Bend	0.101653	0.000350
Ellis	0.000000	0.000000
Johnson	0.000000	0.000000
Guadalupe	0.000000	0.000000
Kaufman	0.000000	0.000000
Jefferson	0.000000	0.000000
Parker	0.000000	0.000000
Smith	0.000000	0.000000
Castro	0.000000	0.000000
Chambers	0.030496	0.000105
Gregg	0.000000	0.000000
San Patricio	0.000000	0.000000
Liberty	0.000000	0.000000
Victoria	0.010165	0.000035
Orange	0.000000	0.000000
Caldwell	0.000000	0.000000
Wilson	0.000000	0.000000
Hardin	0.000000	0.000000
Harrison	0.000000	0.000000
Waller	0.000000	0.000000
Upshur	0.000000	0.000000
Rusk	0.071157	0.000245
HENDERSON	0.030496	0.000105
HOOD	0.223636	0.000770
HUNT	#N/A	#N/A
Ward	0.518428	0.001786
McLennan	0.406610	0.001401
Mitchell	0.396445	0.001366
Fayette	0.020331	0.000070
Freestone	0.223636	0.000770
Fannin	0.172809	0.000595
Young	0.162644	0.000560
Cherokee	0.101653	0.000350
Titus	0.101653	0.000350
Llano	0.000000	0.000000
Palo Pinto	0.020331	0.000070
Limestone	0.000000	0.000000
Red River	0.020331	0.000070
Grimes	0.010165	0.000035
Calhoun	0.010165	0.000035
Haskell	0.010165	0.000035
Robertson	0.010165	0.000035
Jones	0.010165	0.000035
Crockett	0.010165	0.000035
Cameron	0.010165	0.000035
Brazos	0.010165	0.000035
Lamar	0.010165	0.000035
Nolan	0.010165	0.000035
Wharton	0.000000	0.000000
Hidalgo	0.000000	0.000000
Frio	0.000000	0.000000
Webb	0.000000	0.000000
Coke	0.000000	0.000000
Coleman	0.000000	0.000000
Hardeman	0.000000	0.000000
Taylor	0.000000	0.000000
ANDREWS	#N/A	#N/A
ANGELINA	#N/A	#N/A
BOSQUE	#N/A	#N/A
ECTOR	#N/A	#N/A
HOWARD	#N/A	#N/A
JACK	#N/A	#N/A
MILAM	#N/A	#N/A
PECOS	#N/A	#N/A
PRESIDIO	#N/A	#N/A
TOM GREEN	#N/A	#N/A
UPTON	#N/A	#N/A
WICHITA	#N/A	#N/A
WILBARGER	#N/A	#N/A
WISE	#N/A	#N/A
TOTAL	3.710320	0.012782

Table 11. FY 2005 Annual and Peak-Day NO_x emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning® measures (2007 eGRID).

County	Annual Nox Reductions (Tons)	Peak-day Nox Reductions (Tons)
Harris	0.305157	0.002112
Tarrant	0.057936	0.000025
Collin	0.003335	0.000008
Dallas	0.021217	0.000009
Bexar	0.001865	0.000004
Travis	0.000414	0.000001
Denton	0.000740	0.000003
Williamson	0.000000	0.000000
El Paso	0.000000	0.000000
Montgomery	0.000000	0.000000
Galveston	0.151629	0.000725
Brazoria	0.039537	0.000256
Comal	0.000000	0.000000
Rockwall	0.000000	0.000000
Hays	0.001946	0.000005
Nueces	0.005033	0.000006
Fort Bend	0.314830	0.001520
Ellis	0.015623	0.000006
Johnson	0.000447	0.000002
Guadalupe	0.001584	0.000004
Kaufman	0.030131	0.000010
Jefferson	0.000000	0.000000
Parker	0.000340	0.000002
Smith	0.000000	0.000000
Castro	0.003564	0.000010
Chambers	0.097278	0.000597
Gregg	0.000000	0.000000
San Patricio	0.001113	0.000001
Liberty	0.000000	0.000000
Victoria	0.001772	0.000004
Orange	0.000000	0.000000
Caldwell	0.000000	0.000000
Wilson	0.000000	0.000000
Hardin	0.000000	0.000000
Harrison	0.000000	0.000000
Waller	0.000000	0.000000
Upshur	0.000000	0.000000
Rusk	0.032268	0.000000
HENDERSON	0.003906	0.000001
HOOD	0.059673	0.000019
HUNT	0.029474	0.000010
Ward	0.088408	0.000031
McLennan	0.116869	0.000036
Mitchell	0.071181	0.000027
Fayette	0.000000	0.000000
Freestone	0.017516	0.000006
Fannin	0.033613	0.000012
Young	0.029704	0.000009
Cherokee	0.016691	0.000006
Titus	0.027135	0.000000
Llano	0.000980	0.000003
Palo Pinto	0.005008	0.000014
Limestone	0.003217	0.000000
Red River	0.000000	0.000000
Grimes	0.000000	0.000002
Calhoun	0.001829	0.000002
Haskell	0.000000	0.000000
Robertson	0.003398	0.000006
Jones	0.000900	0.000001
Crockett	0.000000	0.000000
Cameron	0.001070	0.000001
Brazos	0.003029	0.000009
Lamar	0.004529	0.000002
Nolan	0.002690	0.000001
Wharton	0.000645	0.000004
Hidalgo	0.004169	0.000006
Frio	0.000697	0.000003
Webb	0.000443	0.000000
Coke	0.000000	0.000000
Coleman	0.000029	0.000000
Hardeman	0.000000	0.000000
Taylor	0.000000	0.000000
ANDREWS	0.000118	0.000000
ANGELINA	0.001481	0.000001
BOSQUE	0.000930	0.000004
ECTOR	0.016842	0.000006
HOWARD	0.002844	0.000001
JACK	0.010105	0.000003
MILAM	0.010696	0.000003
PECOS	0.000195	0.000000
PRESIDIO	0.000000	0.000000
TOM GREEN	0.000033	0.000000
UPTON	0.000148	0.000000
WICHITA	0.000989	0.000000
WILBARGER	0.000633	0.000000
WISE	0.013499	0.000005
TOTAL	1.643873	0.005544

Table 12. FY 2005 Annual and Peak-Day SO₂ emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).

County	Annual SO ₂ Reductions (Tons)	Peak-day SO ₂ Reductions (Tons)
Harris	0.012702	0.000097
Tarrant	0.002225	0.000001
Collin	0.000088	0.000000
Dallas	0.005334	0.000002
Bexar	0.002019	0.000003
Travis	0.000009	0.000000
Denton	0.000014	0.000000
Williamson	0.000000	0.000000
El Paso	0.000000	0.000000
Montgomery	0.000000	0.000000
Galveston	0.001080	0.000004
Brazoria	0.001061	0.000007
Comal	0.000000	0.000000
Rockwall	0.000000	0.000000
Hays	0.000014	0.000000
Nueces	0.000550	0.000001
Fort Bend	0.694818	0.003399
Ellis	0.000076	0.000000
Johnson	0.000009	0.000000
Guadalupe	0.000006	0.000000
Kaufman	0.000121	0.000000
Jefferson	0.000000	0.000000
Parker	0.000011	0.000000
Smith	0.000000	0.000000
Bastrop	0.000015	0.000000
Chambers	0.006581	0.000039
Gregg	0.000000	0.000000
San Patricio	0.000030	0.000000
Liberty	0.000000	0.000000
Victoria	0.000010	0.000000
Orange	0.000000	0.000000
Caldwell	0.000000	0.000000
Wilson	0.000000	0.000000
Hardin	0.000000	0.000000
Harrison	0.000000	0.000000
Waller	0.000000	0.000000
Upshur	0.000000	0.000000
Rusk	0.012015	0.000000
HENDERSON	0.000023	0.000000
HOOD	0.000888	0.000000
HUNT	0.000118	0.000000
Ward	0.001676	0.000001
McLennan	0.068466	0.000023
Mitchell	0.000919	0.000000
Fayette	0.000000	0.000000
Freestone	0.000070	0.000000
Fannin	0.000700	0.000000
Young	0.004711	0.000001
Cherokee	0.002580	0.000001
Titus	0.214445	0.000000
Llano	0.000005	0.000000
Palo Pinto	0.000046	0.000000
Limestone	0.009434	0.000000
Red River	0.000000	0.000000
Grimes	0.000000	0.000010
Calhoun	0.000006	0.000000
Haskell	0.000000	0.000000
Robertson	0.006768	0.000011
Jones	0.000288	0.000000
Crockett	0.000000	0.000000
Cameron	0.000235	0.000000
Brazos	0.000062	0.000000
Lamar	0.000130	0.000000
Nolan	0.000075	0.000000
Wharton	0.000003	0.000000
Hidalgo	0.000127	0.000000
Frio	0.000009	0.000000
Webb	0.000009	0.000000
Coke	0.000000	0.000000
Coleman	0.000000	0.000000
Hardeman	0.000000	0.000000
Taylor	0.000000	0.000000
ANDREWS	0.000002	0.000000
ANGELINA	0.002652	0.000001
BOSQUE	0.000008	0.000000
ECTOR	0.000067	0.000000
HOWARD	0.000012	0.000000
JACK	0.000040	0.000000
MILAM	0.061549	0.000015
PECOS	0.000004	0.000000
PRESIDIO	0.000000	0.000000
TOM GREEN	0.000000	0.000000
UPTON	0.000004	0.000000
WICHITA	0.000118	0.000000
WILBARGER	0.000847	0.000000
WISE	0.000054	0.000000
TOTAL	1.115938	0.003619

Table 13. Annual and Peak-day CO₂ emissions reduction by Power Control Areas based on the Rent-a-Car facility of the Dallas-Fort Worth International Airport based on 2005 weather data (10/2004–9/2005) from Continuous Commissioning[®] measures (2007 eGRID).

County	Annual CO ₂ Reductions (Tons)	Peak-day CO ₂ Reductions (Tons)
Harris	219.060551	1.638453
Tarrant	33.289695	0.013364
Collin	7.154484	0.014099
Dallas	63.152438	0.024128
Bexar	1.939767	0.004235
Travis	0.497275	0.001457
Denton	1.621697	0.006199
Williamson	0.000000	0.000000
El Paso	0.000000	0.000000
Montgomery	0.000000	0.000000
Galveston	94.920407	0.424868
Brazoria	46.095338	0.294267
Comal	0.000000	0.000000
Rockwall	0.000000	0.000000
Hays	1.941204	0.005485
Nueces	3.899031	0.004408
Fort Bend	266.110600	1.315200
Ellis	18.677608	0.006328
Johnson	1.696639	0.004601
Guadalupe	1.576204	0.004450
Kaufman	30.131127	0.010221
Jefferson	0.000000	0.000000
Parker	0.217891	0.001359
Smith	0.000000	0.000000
Bastrop	3.416784	0.009547
Chambers	106.555115	0.644863
Gregg	0.000000	0.000000
San Patricio	1.826202	0.002318
Liberty	0.000000	0.000000
Victoria	1.537247	0.003369
Orange	0.000000	0.000000
Caldwell	0.000000	0.000000
Wilson	0.000000	0.000000
Hardin	0.000000	0.000000
Harrison	0.000000	0.000000
Waller	0.000000	0.000000
Upshur	0.000000	0.000000
Rusk	4.144355	0.000000
HENDERSON	4.404531	0.001687
HOOD	38.412273	0.012570
HUNT	29.474272	0.009998
Ward	25.963072	0.009157
McLennan	63.760043	0.020293
Mitchell	28.441152	0.010668
Fayette	0.000000	0.000000
Freestone	17.516139	0.005942
Fannin	28.524554	0.010191
Young	15.536677	0.004526
Cherokee	17.984890	0.005959
Titus	36.315225	0.000000
Llano	1.111367	0.003140
Palo Pinto	7.601608	0.020766
Limestone	3.848395	0.000000
Red River	0.000000	0.000000
Grimes	0.000000	0.002993
Calhoun	1.585570	0.002041
Haskell	0.000000	0.000000
Robertson	3.633678	0.006047
Jones	1.333837	0.001675
Crockett	0.000000	0.000000
Cameron	0.983139	0.001340
Brazos	2.534851	0.006997
Lamar	8.047406	0.002748
Nolan	2.052585	0.000725
Wharton	0.523888	0.003422
Hidalgo	5.253330	0.006614
Frio	0.330791	0.001411
Webb	0.712487	0.000607
Coke	0.000000	0.000000
Coleman	0.001262	0.000002
Hardeman	0.000000	0.000000
Taylor	0.000000	0.000000
ANDREWS	0.068250	0.000023
ANGELINA	0.508740	0.000174
BOSQUE	2.751629	0.007302
ECTOR	16.842441	0.005713
HOWARD	2.155632	0.000751
JACK	10.105465	0.003428
MILAM	13.489653	0.003281
PECOS	0.118962	0.000041
PRESIDIO	0.000000	0.000000
TOM GREEN	0.028347	0.000000
UPTON	0.124040	0.000042
WICHITA	0.764431	0.000267
WILBARGER	0.758471	0.000000
WISE	13.489073	0.004611
TOTAL	1316.47	4.626693