

City of Austin



**A Report to the
Austin City Council**

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Mayor Pro Tem
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Council Members
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Laura Morrison
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FOLLOW-UP AUDIT REPORT

Alternative Fuel Vehicle Follow-Up Audit

January 2013



REPORT SUMMARY

We found that the City Manager has empowered the Chief Sustainability Officer to set policies for alternative fuel vehicle use. However, the Sustainability Office and Fleet Services have only partially implemented the original recommendation, because enforcement of the policy is incomplete. We also confirmed that the Sustainability Office and Fleet Services developed a 2020 Carbon Neutral Fleet Plan that includes all elements of the original recommendation. However, elements of the Plan remain to be implemented.

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GOVERNMENT AUDITING STANDARDS COMPLIANCE

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

AUDIT TEAM

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January 2013



Audit Report Highlights

Why We Did This Audit

This audit was conducted as part of the Office of the City Auditor's (OCA) Fiscal Year (FY) 2013 Strategic Audit Plan.

The initial audit included two recommendations to centralize alternative fuel policy and enforcement, and produce a comprehensive plan to bring the City's fleet to carbon neutrality by 2020.

What We Recommend

We did not issue any new recommendations.



For more information on this or any of our reports, email oca_auditor@austintexas.gov

ALTERNATIVE FUEL VEHICLE FOLLOW-UP AUDIT

Mayor and Council,

I am pleased to present this follow-up audit on Alternative Fuel Vehicles.

BACKGROUND

In February 2007, the City Council passed Resolution No. 20070215-023, which included a directive to the City Manager to make the City's fleet of vehicles carbon neutral by 2020. In May 2010, the OCA issued an Alternative Fuel Vehicle Audit. The report included two recommendations to centralize alternative fuel policy and enforcement, and produce a comprehensive plan to bring the City's fleet to carbon neutrality by 2020.

OBJECTIVE AND SCOPE

The objective of the audit was to confirm whether, and to what degree, management has implemented the two recommendations made in the original audit.

The audit scope included actions taken by the Sustainability Office and Fleet Services from June 2010 through November 2012 to address the recommendations made in the original audit.

WHAT WE FOUND

We found that the first recommendation has been partially implemented. The City Manager has empowered the Chief Sustainability Officer to set policies for alternative fuel use. However, the Sustainability Office and Fleet Services have only partially implemented the original recommendation because enforcement of the policy is incomplete. We confirmed that the second recommendation was implemented. The Sustainability Office and Fleet Services developed the 2020 Carbon Neutral Fleet Plan that includes all elements of the original recommendation. However, elements of the plan remain to be implemented.

Recommendation	Last Status Reported by Management	Status Verified by Auditors
The Chief Sustainability Officer should be empowered to set and enforce policies related to alternative fuel vehicle use.	Implemented	Partially Implemented
The Chief Sustainability Officer should develop a comprehensive plan to bring the City fleet to carbon neutrality by 2020.	Implemented	Implemented

We appreciate the cooperation and assistance we received from the Sustainability Office and Fleet Services staff during this audit.

Kenneth J. Mory, City Auditor

BACKGROUND

In February 2007, the City Council passed Resolution No. 20070215-023, which included a directive to the City Manager to make the City's fleet of vehicles carbon neutral by 2020. In May 2010, the Office of the City Auditor (OCA) issued an Alternative Fuel Vehicle Audit. The report included two recommendations to centralize alternative fuel policy and enforcement, and produce a comprehensive plan to bring the City's fleet to carbon neutrality by 2020.

OBJECTIVE, SCOPE, AND METHODOLOGY

The Alternative Fuel Vehicle Follow-Up Audit was conducted as part of the Office of the City Auditor Fiscal Year (FY) 2013 Strategic Audit Plan, as presented to the City Council Audit and Finance Committee.

Objective

The objective of the audit was to confirm whether, and to what degree, management has implemented the two recommendations made in the original audit.

Scope

The audit scope included actions taken by the Sustainability Office and Fleet Services from June 2010 through November 2012 to address the recommendations made in the original audit.

Methodology

To accomplish our audit objectives, we performed the following steps:

- Interviewed key Sustainability Office and Fleet Services staff.
- Reviewed the 2020 Carbon Neutral Fleet Plan.
- Analyzed information provided by the Sustainability Office and Fleet Services related to the implementation of the 2020 Carbon Neutral Fleet Plan.
- Considered the risk of fraud, waste, and abuse determined to be significant to the audit objective.
- Considered the reliability of information systems determined to be significant to the audit objective.

AUDIT RESULTS

The May 2010 Alternative Fuel Vehicle Audit included two recommendations to centralize alternative fuel policy and enforcement and produce a comprehensive plan to bring the City's fleet to carbon neutrality by 2020. Management concurred with both recommendations and subsequently reported the recommendations as implemented in February 2012.

We found that the Sustainability Office and Fleet Services have partially implemented the first recommendation. They have established an alternative fuel policy, though portions of the policy have not been enforced.

The Sustainability Office and Fleet Services implemented the second recommendation by developing a 2020 Carbon Neutral Fleet Plan that includes all recommended plan elements. However, elements of the Plan remain to be implemented. See Exhibit 1, which shows the original recommendation, last reported status, and verified status.

EXHIBIT 1
Verified Status of Recommendations

Recommendation	Last Status Reported by Management	Status Verified by Auditors
1. The Chief Sustainability Officer should be empowered to set and enforce policies related to alternative fuel vehicle use.	Implemented	Partially Implemented
2. The Chief Sustainability Officer should develop a comprehensive plan to bring the City fleet to carbon neutrality by 2020 that includes: <ul style="list-style-type: none"> a. Objectives b. Performance Measures c. Financial Measures d. Intermediate Targets and Milestones e. Authority f. Accountability g. Data Reliability h. Internal Reporting i. Stakeholder Reporting 	Implemented	Implemented

SOURCE: OCA analysis of original audit recommendations, January 2013.

Finding 1: The City Manager has empowered the Chief Sustainability Officer to set policies for alternative fuel use. However, the Sustainability Office and Fleet Services have only partially implemented the original recommendation because enforcement of the policy is incomplete.

The Chief Sustainability Officer oversees the development, coordination, and administration of sustainability policies and practices for the City of Austin. The Officer’s duties include developing and implementing short and long-range strategies, objectives, policies, and priorities related to sustainability. The Chief Sustainability Officer’s position was newly created at the time of the original May 2010 audit and the City Manager had indicated that much of the substance of how the Officer would eventually perform was still being determined. By empowering the Officer’s position with responsibility for setting sustainability policies, the City Manager has addressed a portion of the original audit recommendation.

The original audit also recommended that the Officer enforce the policies. Currently, Fleet Services is responsible for policy enforcement. Enforcement of the City’s alternative fuel vehicle use generally falls into two areas:

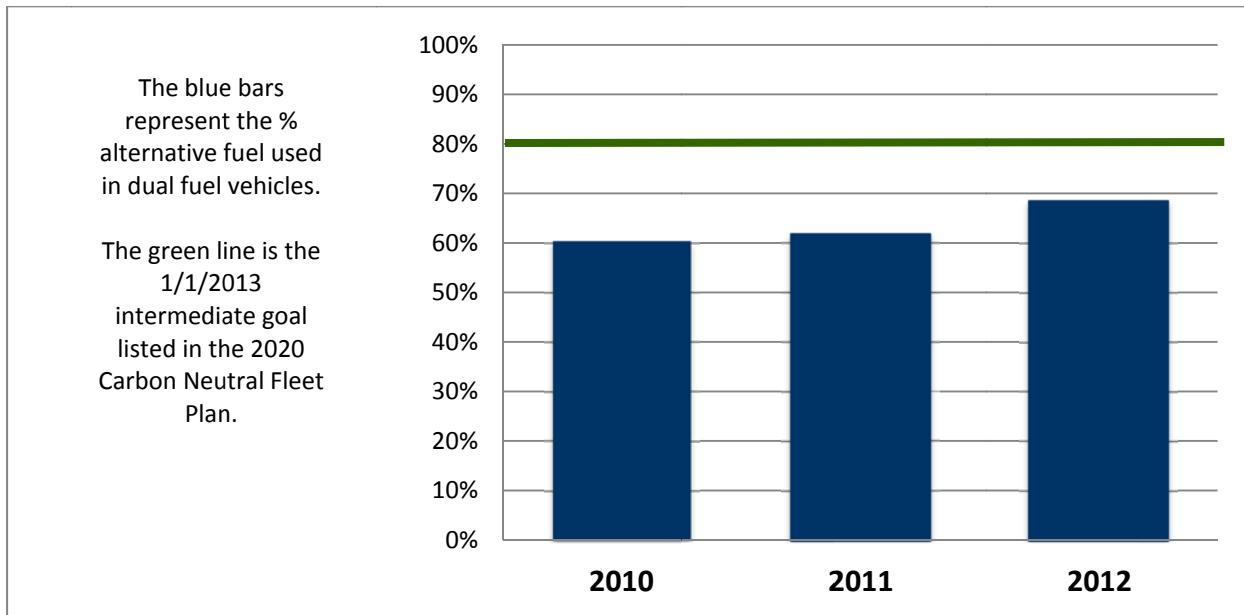
- vehicle purchases by City departments and
- fuel purchases for use in City vehicles.

Fleet Services' enforcement of policy for alternative vehicle purchases appears effective. Fleet Services reports it has the authority to enforce alternative fuel vehicle purchases on all City departments, except for the Austin Police Department, Austin Fire Department, and Austin – Travis County Emergency Medical Services, as Administrative Bulletin 09-01 issued in March 2009 exempts emergency first response vehicles from the alternative vehicle use policy. According to Fleet Services' data, 95% of all City vehicles purchased in FY 2012 were alternative fuel capable. When emergency first response vehicles are excluded, 100% of vehicles purchased were alternative fuel capable.

In contrast, Fleet Services reports it has not exercised its ability to enforce alternative fuel purchases for alternative fuel capable vehicles at City fueling stations. Administrative Bulletin 01-01 revised in November 2007 addressed the operation and fueling of alternative fuel vehicles. To comply with the Bulletin, City employees using alternative fuel vehicles should use gasoline (or diesel) only as a backup if the alternative fuel is not available. According to the 2020 Carbon Neutral Fleet Plan, dual fuel vehicles should use alternative fuel at least 80% of the time by January 1, 2013. However, as shown in Exhibit 2, the City's dual fuel capable vehicles burned alternative fuel only 68% of the time during FY 2012.

The Sustainability Office and Fleet Services have also not conducted employee training related to alternative fuel vehicles. However, management reports that a citywide training program is in development.

EXHIBIT 2
Percent Alternative Fuel Used in Dual Fuel Vehicles



SOURCE: OCA analysis of data provided by the Fleet Services (unaudited) in January 2013.

Finding 2: The Sustainability Office and Fleet Services developed the 2020 Carbon Neutral Fleet Plan that includes all elements of the original recommendation. However, elements of the plan remain to be implemented.

In January 2012, the Sustainability Office and Fleet Services completed a comprehensive plan to reduce carbon emissions and bring the City’s fleet to carbon neutrality by 2020. The goal of the 2020 Carbon Neutral Fleet Plan was to define the strategies, tactics, and performance measures more clearly, with an emphasis on maximizing our environmental benefits in a cost effective manner. The Plan includes each of the nine elements included in OCA’s original audit recommendation. However, the Sustainability Office and Fleet Services have fully implemented only one of the elements, as shown in Exhibit 3.

**EXHIBIT 3
2020 Carbon Neutral Fleet Plan Implementation Status**

Recommendation Element	Included in Plan?	Implementation Status	OCA Observations
Objectives	Yes	Partially Implemented	Two of three strategy objectives are not implemented.
Performance Measures	Yes	Partially Implemented	Fleet Services tracks four of five performance measures. There is no process to track training.
Financial Measures	Yes	Partially Implemented	Fleet Services tracks one of two financial measures. Vehicle operational fuel cost is partially tracked.
Intermediate Targets and Milestones	Yes	Partially Implemented	The Plan includes seven deliverables. Targets for four of the deliverables have not been met, as shown in Exhibit 4.
Authority	Yes	Implemented	Authority for implementing alternative fuel policy is outlined in the plan.
Accountability	Yes	Partially Implemented	The Sustainability Office and Fleet Services have assigned responsibility for deliverables, as shown in Exhibit 4. However, four of the seven deliverables have not been met.
Data Reliability	Yes	Not Implemented	The reliability of data collected is not reviewed per the plan.
Internal Reporting	Yes	Partially Implemented	Internal reporting has not been implemented as outlined in the Plan, although Sustainability has provided the City Manager with periodic updates.
Stakeholder Reporting	Yes	Partially Implemented	Neither Fleet Services nor the Sustainability Office send reports to alternative vehicle and fuel suppliers as outlined in the plan.

SOURCE: OCA analysis of 2020 Carbon Neutral Fleet Plan; interviews with Fleet Services and Sustainability Office staff; and reviews of documentary evidence, January 2013.

Data Reliability

The May 2010 audit found that in some cases reporting data could not be validated. The 2020 Carbon Neutral Plan includes an element that addresses data reliability. However, we found that data completeness and accuracy has not been reviewed, as the plan requires.

Internal Reporting

Internal reporting between Fleet Services and City departments has not been implemented as outlined in the Plan. Fleet Services has reported to departments their alternative fuel usage by vehicle on a monthly basis. However, Fleet Services has not required departments to provide an explanation for vehicles not meeting the performance measure for alternative fuel usage, as the Plan requires.

In addition, the Sustainability Office has provided periodic memorandums updating the City Manager on elements of the Plan. However, Fleet Services and Sustainability Office have not submitted quarterly reports to the City Manager's Office, as the Plan requires.

Intermediate Targets and Accountability

Seven intermediate deliverables are listed in the plan, as shown in Exhibit 4. Deliverables related to training, including developing a training program, administering a training program, and developing vehicle specific safety and operation materials, have not been produced.

Two deliverables related to vehicle purchasing, alternative vehicle options per class, and a cost benefit analysis report, were produced for FY 2012, but no cost benefit analysis has been produced for FY 2013.

The Sustainability Office did create a cost benefit calculator to help Fleet Services and City departments purchase the most cost effective fuel-efficient vehicles. The calculator has a qualitative and quantitative screen that incorporates operational needs as well as estimated lifetime monetary and environmental costs. The cost benefit calculator was used in FY 2012 but has not yet been used in FY 2013.

Two deliverables are related to fueling. A monthly alternative fuel usage report is automatically generated and sent to selected department financial managers on a monthly basis. The annual fuel infrastructure report has been produced.

EXHIBIT 4
Intermediate Deliverables in the 2020 Carbon Neutral Fleet Plan

Deliverable	Responsible Party	Due Date	Status
Vehicle Options per Class	Fleet, Sustainability, City Departments	January 2012	Completed
Cost Benefit Analysis Report for FY 2013	Fleet & Sustainability	May 2012	Sustainability has not completed the cost benefit analysis for FY 2013.

Deliverable	Responsible Party	Due Date	Status
Alternative Fuel Usage Report	Fleet & Sustainability	Monthly	Ongoing. Fleet provides reports to department financial managers each month.
Fuel Infrastructure Report	Fleet	Annually	Completed
Training Program	Fleet & Sustainability	March 2012	The target dates for these deliverables have not been met. Management reports that a citywide training program is in development.
Administer Training Program	Fleet, Sustainability, City Departments	June 2012	
Vehicle-specific Safety and Operation Training Materials	Fleet & Sustainability	June 2012	

SOURCE: OCA analysis of 2020 Carbon Neutral Fleet Plan; interviews with Fleet Services and Sustainability Office staff; and reviews of documentary evidence, January 2013.

Additional observation: The 2020 Carbon Neutral Fleet Plan does not list a fleet emissions goal for 2020 and does not include a plan for carbon-offset purchases that will bring the City’s fleet to carbon neutrality.

The Plan states that the City’s fleet will not achieve zero carbon emissions by 2020. The Plan indicates that the City will be required to purchase carbon offsets in order to make the City’s fleet carbon neutral by 2020. However, the Plan offers no estimate for the City’s fleet carbon emissions in 2020. Further, the plan does not explain when the carbon offsets will be purchased, how they will be purchased, estimate how much will be needed, or where the actual carbon will be offset.

MANAGEMENT RESPONSE



Memorandum

TO: The City Auditor

FROM: Lucia Athens, Chief Sustainability Officer and Gerry Calk, Director of Fleet Services

DATE: January 22, 2013

SUBJECT: Management Response to the Alternative Fuel Vehicle Follow-up Audit

In January 2012 the Sustainability office and Fleet Services completed the 2020 Carbon Neutral Fleet Plan in accordance with the 2010 recommendations made by the City Auditor. The City Auditor subsequently conducted a follow up audit and identified the following findings:

Finding 1: The City Manager has empowered the Chief Sustainability Officer to set policies for alternative fuel use. However, the Sustainability Office and Fleet Services have only partially implemented the original recommendation because enforcement of the policy is incomplete.

Management Response: In drafting the Carbon Neutral Fleet Plan, management elected to establish enforcement of the policy objectives with Fleet Services. As mentioned by the auditors "enforcement generally falls into two areas" vehicle purchases by City departments and fuel purchases for use in City vehicles. These areas account for two of the three core business functions of Fleet Services. Fleet has trained and developed staff to contract, purchase, and manage these functions on a day to day basis. While it is agreed that overall policy development should occur with both Fleet and the Sustainability Office at the top level, day to day enforcement should remain with Fleet and be reinforced by the Sustainability Office should an issue rise to that level.

While Fleet has found success in enforcement of vehicle purchases, meeting the target of 95%, attention continues to be focused on maximizing the use of alternative fuel. As stated by the Auditors, in 2012 usage of alternative fuels in capable vehicles increased from 61-68% with 80% being the goal. Fleet and the Sustainability office have elected to postpone active enforcement of individual fuel purchases until city employees have been properly trained. Recently a propane capable vehicle training pilot was conducted for drivers of the 53 propane vehicles and achieved 70-90% usage of alternative fuels with trainees. The training program outlined in the Carbon Neutral Fleet Plan is designed to educate city drivers on how to fuel and operate efficiently all vehicles including alternative / hybrid / electric units at the designated city fueling facilities. The Sustainability office and Fleet should begin filming the training video the 1st quarter of 2013 with roll out to departments soon after. Upon completion of the training Fleet will begin exercising enforcement of the policy to include limiting access at fuel sites and requiring management responses and feedback on units not meeting requirements.

Finding 2: The Sustainability Office and Fleet Services developed the 2020 Carbon Neutral Fleet Plan that includes all elements of the original recommendation. However, elements of the plan remain to be implemented.

Management Response: In compliance with the original audit recommendation Fleet completed the plan in February of 2012 and began implementation of the plan immediately. It has been less than a year since the plan was developed and as with any new plan there have been some delays. We are taking this opportunity to review goals, measures, and deliverables with an emphasis on aligning the due dates and timelines with the city's budget and planning processes, as well as the automotive industries production schedules. We will also be reviewing reports, frequency of reports and reporting structure to ensure that they are effective for their intended purpose. This audit process is a useful one in that it helps us to refine the Carbon Neutral Fleet Plan based on lessons learned and changes in technology. We intend to update the plan annually and provide Council with an updated version, along with a full progress report.

Additional Observation: The 2020 Carbon Neutral Fleet Plan does not list a fleet emissions goal for 2020 and does not include a plan for carbon-offset purchases that will bring the City's fleet to carbon neutrality.

Management Response: The Council Resolution language includes carbon offsets in the list of strategies, indicating Council was aware when they wrote the Resolution that purchasing offsets is fundamentally a part of being carbon neutral. In an internal memorandum from Climate Program Manager Zach Baumer, fleet emissions were projected from 2012 to 2020 based on the implementation of the Carbon Neutral Fleet Plan as compared to a business as usual scenario. Assuming the fleet does not increase the number of vehicles or miles driven over current levels, in 2020 the city will need to purchase 22,035 metric tons of third-party-verified carbon offsets through a city procurement process to reach neutrality. Due to price volatility in the carbon market, offset prices range from \$5 to \$100 per ton; therefore the estimated cost of carbon neutrality ranges from \$110,000 to \$2.2 million. The emissions trajectory and possible costs for offsets will be re-evaluated over time, with an opportunity to assess possible budgetary impacts well in advance of the 2019/2020 budget proposal process.

Conclusion:

The 2007 Austin Climate Protection Plan set by City Council to achieve a carbon neutral fleet by 2020 is an admirable and extremely ambitious goal. In fact Melbourne Australia and Austin have the most ambitious carbon reductions goals for city operations in the world (Carbon Disclosure Project Cities 2012 Global Report). Achieving carbon neutrality for a fleet is not a standard practice in the public or private sector, which means there are not models to be followed. In addition, the rapidly evolving vehicle technologies and associated costs make meeting the goals a constantly moving target. Fleet Services and the Office of Sustainability are up to the challenge, and are working diligently to be carbon neutral in 2020. As we implement this plan we will look for continuous improvement opportunities. Reaching the goal will be a challenge but the plan is designed to maximize opportunities environmentally while minimizing impact to the city financially. We believe the plan will afford the best opportunity to do this.