

GOALS & OBJECTIVES	ACTION ITEMS	PROGRESS
<i>Goal 1: Make all City of Austin facilities, fleets and operations totally carbon neutral by 2020 through measures including:</i>		
<u>OBJECTIVE 1:</u> Power all City facilities with renewable energy by 2012;	100% GreenChoice	In 2011, the City of Austin became the largest local government in the U.S. to subscribe to 100% renewable energy to power all City-owned buildings and facilities. By making this switch, the City avoided over 135,000 metric tons of CO ₂ -equivalent emissions.
	Solar PV on City facilities	In 2011, 122 kW (AC) of peak power in Solar Photovoltaic (PV) Systems was added to four City facilities: the new Austin Animal Shelter, the Carver Library, the Carver Museum and the Northwest Recreation Center. As of July 2012, the City has 45 solar PV installations totaling over 614.64 kW (AC), which will generate over 1,037,700 kWh annually.
<u>OBJECTIVE 2:</u> Make the entire City fleet of vehicles carbon neutral by 2020 through the use of electric power, non-petroleum fuels, new technologies, mitigation, and other measures as necessary, prioritizing the earliest possible conversion to such fuels and technologies and establishing timelines and benchmarks for such conversions;	Determine carbon footprint of the City's vehicle fleet	In 2011, the City's vehicle fleet emitted 45,288 metric tons of CO ₂ -equivalent. Emissions have been reduced by 13% since 2007.
	Overall progress	The City's non-regulated municipal carbon footprint has decreased from a baseline in 2007 of over 286,000 metric tons of CO ₂ to 190,000 in 2011. Emissions from the vehicle fleet have decreased from a baseline in 2007 of over 52,000 metric tons of CO ₂ to 45,000 in 2011. These reductions were achieved through energy efficiency and the use of zero carbon renewable electricity at City facilities, as well as by using less gasoline and diesel and more B20-biodiesel, E85-ethanol, propane, compressed natural gas, and electric powered vehicles.
	Develop purchase/conversion plan for carbon neutrality by 2020	On January 17, 2012, Fleet Services and the Office of Sustainability delivered the 2020 Carbon Neutral Fleet Plan to City Council that defines strategies and tactics for maximizing environmental benefits in a cost-effective manner. Three areas of focus include: 1) new vehicle and equipment purchasing, 2) fueling infrastructure and fuel purchasing, and 3) employee education and training. The plan also includes intermediate goals and deliverables, performance measures, financial measures, lines of authority and accountability, data reliability, internal reporting, and stakeholder reporting.
	Austin Energy and City-owned EV charging stations	In 2011 and 2012, Austin's electric vehicle charging infrastructure, which includes more than 100 charging stations and is known as the Plug-in EVerywhere Network, became the first in the country to be powered with 100% renewable energy. In addition, 50 new charging stations were installed at City of Austin facilities such as parks, libraries, and community centers.

<p><u>OBJECTIVE 3:</u> Develop and implement departmental climate protection plans, including policies, procedures, targets, benchmarks and reporting for maximum achievable reduction of greenhouse gas emissions and energy consumption in all City departments;</p>	<p>Develop carbon footprint analysis/audit</p>	<p>In 2011, the CY2010 municipal greenhouse gas inventory was third-party verified and reported to The Climate Registry, which resulted in Climate Registered Status for the City. In 2012, the Office of Sustainability completed the CY2011 municipal operations greenhouse gas inventory. Currently, the Office of Sustainability and Building Services are working collaboratively to automate carbon footprint calculations as part of the City’s new on-line building management tool, which will reduce reporting time and increase staff efficiency.</p>
	<p>Develop Departmental Climate Protection Plans</p>	<p>23 City departments and 5 major buildings are currently in the implementation phase of their Climate Protection Plans. As of early 2012, 28% of the actions have been completed and 39% are in progress.</p>
<p><u>OBJECTIVE 4:</u> Develop an employee climate protection education program, programs and incentives to help employees reduce their personal impact on climate change, and training to help employees engage in community outreach for climate protection.</p>	<p>Help staff understand personal carbon footprints</p>	<p>To date, approximately 70% of City staff has received some form of climate training. In 2011, 1,119 staff received in-person training/presentations on climate change. An on-line training module has been developed that will be available in September 2012 to provide easier access to climate training.</p>

Goal 2: Make Austin Energy the leading utility in the nation for greenhouse gas reductions through measures including:		
<p><u>OBJECTIVE 1:</u> Achieve 800 MW of new savings through energy efficiency and conservation efforts by 2020;</p>	<p>Demand side management (DSM) programs</p>	<p>In FY 2011, 46.3 megawatts (MW) of peak demand were avoided through energy efficiency programs; cumulatively Austin Energy had achieved 34% of the 800MW target as of the end of FY2011 (see http://www.austinenergy.com/About%20Us/Newsroom/Reports/annualReport2011.pdf). An update on progress toward this target will be provided with Austin Energy’s resource plan update to City Council in September 2012.</p>
<p><u>OBJECTIVE 2:</u> Meet 35% of energy needs through the use of renewable resources by 2020, including at least 200 MW of solar power;</p>	<p>Generation mix</p>	<p>Austin Energy received 10% of its energy from renewable resources during FY2011 and added 30 MW of solar by the end of the calendar year (see http://www.austinenergy.com/About%20Us/Newsroom/Reports/annualReport2011.pdf). Austin Energy will add a significant amount of renewable capacity in 2012, including 100 MW of biomass and 291 MW of new wind. Compliance with the 35% renewable goal is anticipated to occur sooner than 2020 with existing and already contracted renewable resources. An update on progress toward this target will be provided with Austin Energy’s resource plan update to City Council in September 2012.</p>
<p><u>OBJECTIVE 3:</u> Establish a CO2 cap and develop and implement a CO2 reduction plan for existing utility emissions;</p>	<p>Austin Energy long-term generation planning</p>	<p>Austin Energy established a goal in 2010 to reduce CO2 emissions from power plants to 20% below 2005 levels by 2020. Total CO2 emissions in CY2011 were 5,815,871 metric tons, which is 5% greater than 2005 levels. An update on progress toward this target will be provided with Austin Energy’s resource plan update to City Council in September 2012.</p>
<p><u>OBJECTIVE 4:</u> Achieve carbon neutrality on any new generation units using carbon-based fuels through the utilization of lowest-emission technologies, carbon capture and sequestration if it is proven to be reliable, mitigation, and other prudent measures.</p>	<p>New generation options for carbon neutrality</p>	<p>Austin Energy added two new 50 MW gas turbine peaking units at the Sand Hill Energy Center in 2011. In 2007 Austin Energy removed all four gas-fired units at the Holly St Power Plant from service; the removal of those emissions help offset expansion at Sand Hill, as well as energy savings through demand side management programs. Meeting the goal of reducing CO2 emissions to below 2005 levels by 2020 means that over the period 2005-2020 Austin Energy will go beyond carbon neutrality.</p>

Goal 3: Implement the most energy efficient building codes in the nation and aggressively pursue energy efficiency retrofits and upgrades to existing building stock through measures that include:		
<p><u>OBJECTIVE 1:</u> Implement building codes requiring all new single-family homes to be zero net energy capable by 2015;</p>	<p>Zero energy capable homes</p>	<p>The first phase of the Zero Energy Capable Homes initiative involved adoption of the 2006 International Energy Conservation Code (IECC) with local amendments as City of Austin Energy Code in October of 2007 (it became effective on January 1, 2008). The second phase included adoption of the 2009 IECC with local amendments on April 8, 2010 (becoming effective October 1, 2010). These improvements have reduced the energy used by new single-family homes permitted in Austin by 31%, which is in line with goals set in the Zero Energy Capable Homes Plan adopted by City Council in October 2007. The next phase will entail adoption of the 2012 IECC with local amendments. This code is in development and anticipated to go before City Council for approval later this year, with implementation planned for early 2013.</p>
<p><u>OBJECTIVE 2:</u> Implement building codes to increase energy efficiency in all other new private and public sector buildings by at least 75% by 2015;</p>	<p>City of Austin Energy Code changes</p>	<p>As with Objective 1 above, meeting this goal is based on development, adoption and implementation of the IECC. The first and second phases of this objective involved adoption of the IECC with local amendments. The third phase, development/adoption of the 2012 IECC with local amendments, is underway.</p>
<p><u>OBJECTIVE 3:</u> Implement policies, identify opportunities for energy efficiency retrofits and upgrades, and require cost-effective retrofits and upgrades for all properties at the point of sale;</p>	<p>Energy Conservation Audit and Disclosure Ordinance</p>	<p>City Council approved the Energy Conservation Audit and Disclosure Ordinance in 2008 (as well as a revised version in April 2011) to improve the energy efficiency of homes and buildings in the City of Austin that receive electricity from Austin Energy. Single-family homeowners must have energy audits performed on their properties prior to a sale; audit results must be provided to prospective buyers at least three days before the end of the option period. Multi-family properties more than 10 years old are required to perform an audit and report results to the City as well as all residents living in those communities. Commercial building owners must meet new phased-in reporting requirements that began June 1, 2012 for buildings 75,000 square feet and larger. In FY 2011, 6,634 single family homes were sold: 1,887 were exempt from the ordinance, 3,259 conducted energy audits, and 373 of those homes performed energy efficiency upgrades within 1 year prior to or after the sale. There are 1,347 multi-family properties in Austin: 270 are exempt and 561 had energy audits completed in FY2011.</p>

<p><u>OBJECTIVE 4:</u> Develop enhanced technical assistance, marketing incentives, and standards for the Green Building Program, develop policies requiring achievement of upper-tier ratings in cases where green building is mandated as a product of City programs or negotiations, and develop an optional "Carbon Neutral" certification to accompany green building ratings.</p>	<p>Enhance technical assistance, marketing incentives, and standards for the Green Building program</p>	<p>In 2011, Austin Energy Green Building (AEGB) advanced and updated green building rating tools, which were debuted as part of a custom on-line system that will allow project teams and AEGB staff to track rating progress, comments, and construction documents in a single web-based platform.</p>
	<p>Develop policies requiring achievement of upper-tier ratings in cases where green building is mandated as a product of City programs or negotiations</p>	<p>In 2011, Austin Energy Green Building (AEGB) led a cross-departmental working group of stakeholders to create and implement green building mandates. The stakeholder group included staff from Planning and Development Review, Neighborhood Planning and Zoning, and the Office of Sustainability. Process and communications issues were identified, as well as a plan to resolve them. In 2012, AEGB established a permanent working group to address ongoing issues associated with green building mandates. The group is working to implement the recommendations developed in 2011 as well as resolve long-term issues such as enforcement and integration with the AMANDA system.</p>
	<p>Develop carbon-neutral certification to accompany applicable green building ratings</p>	<p>In 2012, Austin Energy Green Building (AEGB) launched the Performance Modeling Incentive to help offset costs of whole-building energy modeling. AEGB reviewed commercial green building ratings in 2009 to identify areas that contribute directly and indirectly to mitigation of greenhouse gas emissions; they found that most green building measures in the commercial sector have some carbon impact. However, AEGB is not pursuing development of carbon-neutral certification at this time. To certify buildings as "carbon-neutral," custom carbon calculators would need to be developed and complex life-cycle analyses would need to be conducted on a building-by-building basis. At this time, AEGB does not have the resources for this, but plans to pursue development of this certification in the future.</p>

<p>Goal 4: Establish an interdepartmental City Climate Action Team responsible for creating an inventory of greenhouse gases generated from all sources community-wide, working with stakeholders and technical advisors, establishing short-term and long-term targets for reducing these emissions, and reporting back to the City Council in no more than one year with a comprehensive plan for meeting those targets.</p>		
<p><u>OBJECTIVE 1:</u> Create a greenhouse gas emissions inventory from all sources community-wide against which progress in meeting reduction targets can be measured;</p>	<p style="text-align: center;">Greenhouse gas emissions inventory</p>	<p>In 2007, the first Travis County “community” greenhouse gas inventory was completed; emissions were estimated at 14,633,035 metric tons of CO2-equivalent, with major sources being energy usage, waste, and transportation. In 2010, community-wide emissions were estimated to be 14,943,190 metric tons of CO2-equivalent. In 2013, the community inventory will be updated for the second time using a new Global Protocol for Community-Scale Greenhouse Gas Emissions.</p>
<p><u>OBJECTIVE 2:</u> Work with stakeholders and technical advisors to establish short-term and long-term targets for reducing these emissions;</p>	<p style="text-align: center;">Establish targets for reducing greenhouse gas emissions</p>	<p>In March 2010, a 2-day community climate workshop was facilitated by City staff and attended by over 100 community members. Participants set a target of net zero greenhouse gas emissions by 2050 and envisioned an “integrated, affordable green lifestyle that supports the local economy and is accessible to all.”</p>
<p><u>OBJECTIVE 3:</u> Report back to City Council in no more than one year with a comprehensive plan for meeting those targets.</p>	<p style="text-align: center;">Community Climate Handbook</p>	<p>Since the community climate workshop in 2010, greenhouse gas impacts have been included in several City plans that will influence three major sources of Austin’s greenhouse gas emissions: transportation, energy, and waste. These plans include the Imagine Austin Comprehensive Plan, Austin Resource Recovery Master Plan, Austin Energy Long-Term Generation Plan, and Strategic Mobility Plan. The Office of Sustainability participated in the creation of the Imagine Austin Comprehensive Plan and subsequently conducted an analysis of how recommendations that came out of the community workshop referenced above were integrated into Imagine Austin goals. It was concluded that the vast majority of actions had been incorporated; those that were not are related to climate adaptation. The Office of Sustainability is currently exploring options for integration of climate adaptation into the City’s approach to disaster preparedness, public health, and utility planning.</p>

Goal 5: Develop and implement a program to assist all citizens, businesses, organizations and visitors in achieving carbon neutrality through the following measures:		
<u>OBJECTIVE 1:</u> Develop an Austin-specific, on-line "carbon footprint calculator;"	Carbon calculator	An Austin-specific carbon calculator has been made available by the City's Climate Program since January 2010. From March 2010 – March 2012, the Climate Program contracted with a software developer for a custom, web-based, carbon calculator that was used by more than 1,100 people at a cost of \$17,500 annually. Responding to cost concerns, changing technology, and the community's desire for a calculator that can be applied to businesses, churches, etc. as well as individuals, a flexible, spreadsheet-based tool will be downloadable from the City's website in fall 2012.
<u>OBJECTIVE 2:</u> Develop a menu of greenhouse gas reduction strategies for local implementation that citizens and organizations can fund through the purchase of "carbon offset" credits, thereby reducing their own carbon footprint;	Community challenge grants	A community carbon challenge grant program was created in 2010 to fund three carbon reduction projects: solar PV at the Yellow Bike Project, solar PV at the M Station housing development, and urban forestry through TreeFolks. These projects are currently producing carbon reductions that are documented and banked by the City. The Office of Sustainability is assessing options for how this program might evolve in future years.
<u>OBJECTIVE 3:</u> Develop a program for recognition of households, businesses and other organizations achieving carbon neutrality;	Austin Green Business Leaders	The Austin Green Business Leaders program was launched on March 27, 2012. This free program allows businesses to complete a scorecard and document sustainable actions in seven categories (water, energy, transportation, resource management, community outreach, healthy work environment, and community stewardship). Based on the number of points achieved, businesses achieve ratings of silver, gold, or platinum. As of July 2012, 40 businesses have been recognized as Green Business Leaders. Full details are available at www.austintexas.gov/greenbusiness .
	Mayor's Environmental Awards	In 2011, the Mayor's Environmental Awards program included categories for schools, businesses, individuals, and local agencies. In 2012, the program was modified to focus on businesses and schools. In June 2012, Austin Green Business Leader participants were recognized in a ceremony with the Mayor. In the fall of 2012, a Green School Grants program will be launched to award funding to local schools for sustainability-related projects. Chosen projects will promote hands-on environmental educational opportunities for students, as well as measurable impacts to the environment. Selected projects will be funded in late 2012 and implemented in 2013.

<p><u>OBJECTIVE 4:</u> Promote the concept of carbon neutrality to visitors by offering carbon offsets for purchase by travelers, conventions, tradeshow, and festivals;</p>	Airport kiosks	The City of Austin currently offers a link to the City’s carbon calculator at computer kiosks at Austin-Bergstrom International Airport and the Austin Convention Center.
	Positive Impact on Climate	The Office of Sustainability is currently exploring partnerships with local event organizers to offer a sustainability/carbon reduction program for purchase with event tickets. This program is currently under development, and if approved, will launch in 2013.
<p><u>OBJECTIVE 5:</u> Cooperate with other local and regional entities to provide technical and investigational assistance and to coordinate region-wide greenhouse gas reduction strategies;</p>	Regional coordination	The Office of Sustainability currently coordinates climate and sustainability efforts with sustainability directors in El Paso, Dallas, Houston, and San Antonio. Coordination efforts involve participation in conference calls, information sharing, and work together on projects to reduce greenhouse gas emissions.
	Community training	Since 2008, the City has offered a speakers bureau and climate training for interested groups in Austin. In 2011, the total number of community members reached with climate/sustainability messaging and presentations was 5,248; (K-12 students – 2,443 and the general community – 2,805).
<p><u>OBJECTIVE 6:</u> Support all appropriate Federal and State policies and legislation that will lead to the reduction of greenhouse gas emissions.</p>	National collaboration - Urban Sustainability Directors Network	The City of Austin is a core member of the Urban Sustainability Directors Network; Zach Baumer, Climate Program Manager, is the City’s representative. This network of over 100 cities across the U.S. works together to advocate for solutions to sustainability challenges, including reducing greenhouse gas emissions on the national scale. In addition, the City participates in the C40 Cities Climate Leadership Group, a network of large and engaged cities from around the world, working on climate change issues.