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Austin Climate Protection Plan

The five components

ACPP's Five-Point Plan

- 1) Municipal operations
 - 2) Austin Energy
 - 3) Homes and buildings efficiency
 - 4) Community buy-in
 - 5) Going carbon neutral as a city
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1) The Municipal Plan: Leading by Example

This initiative strives to make the city of Austin – all of its internal municipal functions – 100% carbon-neutral by 2020. That includes all facilities, all vehicles, all operations. "This alone is such a massive undertaking!" emphasized Futrell. "We're just beginning to sketch out how we would even approach it."

Mayor Wynn sees this effort as a strong incentive for communitywide and local corporate change. "We're going to lead by example," said Wynn. "This will show that a complex organization can turn a ship around. We're going to demonstrate that the math and economics work – that we can dramatically save money through energy efficiency and reduced energy consumption."

The four elements outlined for the Municipal Plan are:

- **2012 City Facilities Goal:** All city-owned and -operated buildings and other facilities will be exclusively powered by 100% renewable energy by 2012. Only wind, solar, and biomass power will be used.
- **2020 City Fleet Goal:** All city of Austin vehicles will be carbon-neutral by 2020. The intent is to have the entire fleet powered by electricity or nonpetroleum fuels, if technically possible – even heavy equipment. (For example, Austin currently has six new garbage trucks that run on compressed natural gas.) As alternative fuels do produce some carbon emissions, those will be offset through mitigation efforts to achieve greenhouse-gas neutrality. While vehicles operated by outside contractors and Capital Metro cannot be directly controlled, the city will strive to get them on the carbon-neutral bus.
- **City Department Reductions:** Within every individual department, the city will achieve maximum possible reductions of 1) greenhouse-gas emissions and 2) energy consumption. Most critical is the water department, which Mayor Wynn said is responsible for about 50% of the electricity consumed by the municipal government. (Water efficiency and forestalling the need for a new water-treatment plant are thus

key tools for energy efficiency.) Specific milestone numbers and dates for these reductions will be established once the internal planning and research process are completed. Each city department will develop its own climate-protection plan, to include targets/goals, policies, procedures, and reporting/monitoring systems.

- **City Employees:** The city will educate, motivate, and support its more than 10,000 employees to help them reduce their personal carbon footprints. The campaign will include global warming education, special programs, and incentives. Employees will be trained and deputized to engage in community outreach, spreading the message throughout Austin. City leaders point out that strong employee buy-in to the Municipal Plan will be essential for its successful execution, at all levels of all city departments.

2) The Utility Plan: Lab and Incubator

Austin Energy has set a goal of becoming the top utility in the nation for greenhouse-gas reductions. Our city-owned electric utility is already a national leader in environmental initiatives; innovations in recent years include its Green Building Program, GreenChoice Renewable Energy Program, and Plug-In Partners, a national initiative promoting advanced hybrid vehicles to automakers and fleet purchasers. Utilities from around the country and the world come to Austin to learn about cutting-edge methods. From this already strong base, the new ACP Utility Plan mandates AE to achieve the very most aggressive reductions of greenhouse-gas emissions possible.

While the city water utility falls under the departmental portion of the Municipal Plan, reducing its emissions is also essential to the Utility Plan, as it's the city's single largest electricity user. More energy-efficient water pumps are a high priority, said AE deputy general manager Roger Duncan.

Futrell points out that the standard set by AE will extend far beyond city limits or even national borders: "We're uniquely positioned, because it's very unusual for a city to own its own electric utility. We're already a real-world lab for green power, green building, and so many things; our utility can serve as a lab and an incubator." Components of the Utility Plan include:

- **2020 Reduction Goal:** Through *new* improvements in efficiency and conservation, AE will reduce energy use from current levels by a total of 700 megawatts by 2020. This cumulative savings should equal what would have been generated by a whole power plant – thus saving the cost of building and operating a new plant. Per kilowatt-hour, energy-efficiency programs cost the utility roughly 1 to 3 cents (about the same as dirty coal); natural gas is now around 5 to 9 cents, while solar is the most expensive at 23 cents.

Because Austin Energy has already enacted many efficiency and conservation measures, achieving the aggressive goal of cutting an additional 700 MW will be challenging. Past reductions have focused on peak energy demand; the new goal will require digging deeper, into base load reductions. The good news is that these reductions have a greater net effect on greenhouse-gas emissions.

- **2020 Renewable Energy 30% Goal:** AE has committed to meet 30% of all energy needs through renewable energy by 2020. That's a highly ambitious, even courageous goal. Previously, the AE goal was 20% – considered laudable by most environmental organizations, according to mayoral aide Matt Watson. The renewable energy will include 100 megawatts of solar power, already an AE goal.

- **CO2 Cap & Reduction Plan:** The levels and milestone dates still need to be determined, but AE has committed to setting maximum caps on emissions from its electrical generation, then reducing those caps over time to specified levels.

Said Duncan, "It's going to take a while to figure out what we can commit to, in terms of reductions." To arrive at realistic targets, he said, the utility must accurately project "what kind of electrical generation we're going to build and use, how to replace some of our existing plants with efficiency and renewables." For example, while AE might love to use 100% wind power, it can only incorporate the amount it realistically

can acquire or build by the time Austin needs it. "It won't be too long before we have some real numbers," Duncan said.

- **New Plants Carbon Neutral:** AE is committed to achieving carbon neutrality on all of its future, new electricity generation. While adding capacity appears inevitable, given the city's rapid growth, the utility plans to generate more power without increasing net greenhouse-gas emissions. For generation units that still use carbon-based fuels – like "clean" coal plants – this will require use of lowest-emission technologies and carbon capture and sequestration (if the technology proves solid). Any remaining emissions will be netted back to zero through carbon offset credits or other mitigation.

3) Homes and Buildings Plan: Enforcing Efficiency

About 70% of Austin's electricity is used by homes and commercial buildings. In fact, the average home is responsible for twice the greenhouse-gas emissions of the average car. So the ACPP will include strong energy-efficiency measures amended into (and enforced through) the city's building code. For new construction, Austin plans to develop the most energy-efficient building codes in the entire nation – an announcement that, predictably, has drawn objections from the development, home-building, and real estate industry.

The Homes and Buildings Plan expands on the energy-efficiency components of the city's successful Green Building Program but takes them much further. Builders and buyers both must do their parts to help reduce greenhouse-gas emissions; to ensure both buy-in and realism, the city is already involving the Home Builders Association and other stakeholders in crafting a phased series of amendments to the building code. The first set of amendments will be rolled out this spring or summer.

Four specific initiatives have been defined:

- **2015 New Homes 65% Goal:** The stated goal is to make all new single-family homes zero net-energy capable by 2015. That means requiring that home builders incrementally increase energy efficiency by 65%, according to mayoral aide Matt Watson. Homeowners then can voluntarily add self-generation units for power (e.g., rooftop solar panels) to achieve a net-energy use of zero. This ambitious goal would be roughly equivalent to achieving the highest possible energy score for a top five-star rating within the existing Green Building Program.

- **2015 New Construction 75% Goal:** For all other new construction, the ambitious goal is to increase energy efficiency by 75% by 2015.

- **Existing Homes and Buildings:** When a house or other building is resold, it will be required to have an energy-efficiency inspection and meet minimal standards. The buyer will be responsible for adding basic improvements, if necessary. Mayor Wynn explained, "We're not talking about requiring a comprehensive retrofit. What we're looking at are the top four or five things with the lowest cost and highest return. Things like ceiling insulation, weather stripping, duct sealing, and solar screens." On an older home, the energy-efficiency upgrades can pay for themselves, either immediately or within a short time frame. If financed (through Austin Energy's zero-interest-loan program or rolled into a 30-year mortgage), the investment is likely to put money in people's pockets, by producing monthly utility savings greater than the monthly loan payment.

- **Green Building Program:** The bar is about to be raised. AE will strengthen the energy-efficiency requirements required to achieve each GBP rating of one to five stars; incentives and recognition will go up correspondingly, as well. AE also will develop ways to certify and recognize buildings that achieve carbon neutrality. Other green building criteria may be raised a notch as well, now that a two-star rating has become the norm. This will increase the energy efficiency of commercial projects built under the city's new commercial-design and mixed-use standards, which includes a green building component.

4) Community Plan: You and Me

At this early stage, the city has at least formulated a vision and a few specific emission-reduction targets for the elements under its direct control: municipal functions, the city's utility, and its building code. Far murkier is the "everything else" community plan to reduce greenhouse-gas emissions citywide, by all citizens, in every activity. But that's understandable, given the scope of the assignment.

The first step is simply to inventory Austin's comprehensive greenhouse-gas emissions. This inventory will be performed by staff from various city departments, working collaboratively as the City Climate Action Team. They'll be assisted by technical advisers and community stakeholders. Once the city has documented current emission levels and their sources, it can then set realistic targets for reductions. Within one year, City Council should have the data necessary to approve a comprehensive plan for meeting aggressive but achievable targets for emission reduction citywide.

City leaders say that widespread community input and involvement will be actively solicited, once the initial in-house assessments have been performed. "It's too big to not organize it, to not know how we'll reach out, and then how we'll pull all the input back together," said Futrell. "But we know we've got to bring people on board, include people, open up the tent." Essential will be:

- **Community Education** – A broad public-information campaign will be needed to get a strong communitywide buy-in. The city has been talking to consultants with expertise in social marketing for climate-change issues, according to the mayor's aide; one option being explored would use innovative methods for inspiring behavioral change.
- **Transportation:** Since vehicle emissions are such a primary source of greenhouse-gas emissions, this should be the city's No. 1 concern. Investing in mass transit and getting people to use it is essential, of course, but Texans love their cars. "To make a significant reduction, you must reduce vehicle emissions," said Austin Energy's Roger Duncan. His two-pronged approach is to get people out of their cars while also putting drivers into lower-emission vehicles – the goal of AE's Plug-In Partners program. But Duncan estimates that, at best, it could take 10 years to put a million superefficient hybrids on the road nationally, enough to make a real impact.
- **Land-Use Planning:** This includes the push for urban infill to promote density rather than suburban sprawl; that in turn supports greater use of public transit and reduced car-trip miles. Transit Oriented Development districts and nodal development are also part of the mix.

Other key areas for study and policy development include support for emerging technologies (like the Clean Energy Incubator), waste-management practices and landfills (which emit especially destructive methane gas), and natural areas and landscapes as "carbon sinks" (City Council Member Lee Leffingwell is working on a new program on that front).

5) The "Go Neutral" Plan: Offsetting GHG

The city will develop and implement a program to motivate and help everyone in Austin – individuals, businesses large and small, organizations, even visitors – voluntarily take their net greenhouse-gas emissions down to zero. How? Those who aspire to a carbon-neutral lifestyle generally improve everything they can (as in, buy that new energy-efficient dishwasher and hybrid car) then purchase compensating "offset credits" to zero-out their remaining greenhouse-gas emissions. The city's program will include recognition, such as a window sticker and other incentives, for everyone who participates and achieves carbon neutrality. Elements include:

- **Local Carbon Footprint Calculation** – An online tool will help households and small businesses calculate their total greenhouse-gas emissions, based on Austin data. Larger entities can get the city to provide individualized assessments of emissions from their more complex operations.

• **Local Carbon Offset Credits** – The city will sell these credits to folks who need them to achieve carbon neutrality (see "[Carbon Neutrality](#)"). The credits will fund a range of local greenhouse-gas-reduction strategies that also may lead to cleaner air in Central Texas over time, such as extensive tree-planting. The credits also will fund programs like energy-efficiency improvements for homes owned by low-income residents. An innovative aspect is a plan to market Austin's homegrown offset credits to visitors. For example, a kiosk at the airport could sell credits to offset the emissions entailed in a flight to Austin. (Hey, buy 1,000, and we'll throw in a CD of local music!) ■

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