

RESOLUTION NO. _____

76
6-8-06

WHEREAS, the City of Austin's community owned electric utility, Austin Energy, is a national leader in promoting and using environmentally friendly renewable energy; and

WHEREAS, the 2006 Energy Freedom Challenge will recognize local governments for their leadership in seeking out and purchasing their electricity from sustainable, renewable supply sources; **NOW, THEREFORE**,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

That the City Council authorizes the City Manager to submit on behalf of the City of Austin an application to enter the Energy Freedom Challenge.

ADOPTED: _____, 2006

ATTEST: _____
Shirley A. Gentry
City Clerk

America's race to independence through clean energy.



Energy Freedom Challenge 2006 Program Requirements

INTRODUCTION

This document summarizes the Energy Freedom Challenge ("EFC") vision and program, explains what is required to participate in the EFC program in 2006, and provides definitions and other details of the program. The purpose of this document is to provide the information needed to join the 2006 Energy Freedom Challenge, including a brief description of the Challenge and an explanation of the data participants need to collect and submit to complete an entry to the Challenge.

ENERGY FREEDOM CHALLENGE VISION

The Energy Freedom Challenge is a national race among U.S. cities¹ to achieve energy independence by purchasing more than half of their electricity needs from clean, renewable resources such as wind, solar and bioenergy. The race is expected to take many years for cities to complete. To encourage competition among cities and increase collaboration among participants, each year the Challenge program will recognize progress made toward the 50% goal and highlight local strategies being used.

By deriving our energy from clean, renewable resources, we reduce our dependence on fossil fuels, increase domestic jobs and economic development, improve national security, and reduce global warming. Renewable energy is economically stable and environmentally sustainable, providing consumers with cleaner air, improved health, and reduced energy costs.

In the absence of strong federal policies to promote renewable energy, community-based groups in leading U.S. cities such as Austin, Los Angeles, San Francisco, Chicago, Seattle, and Portland have taken ownership of this vision. Through annual incremental improvements at the city level, these and other cities are leading the way to reducing dependence on polluting energy sources.

ENERGY FREEDOM CHALLENGE 2006

The 2006 EFC program invites U.S. cities to join the Challenge to track and recognize progress local government is making toward meeting its energy needs from sustainable energy supply sources. While we expect the Challenge will eventually extend to energy use community wide, we will focus initially on how city government meets its own energy needs. In the first year our race will count city electricity use, looking at where cities obtain their electricity supplies. We are starting here for several reasons: 1) because electricity makes up the majority of city government energy use, 2) because the switch to renewable electricity sources is a practical, affordable option for most cities, and 3) because this is something that can be tracked fairly easily, allowing the measurement of progress toward EFC goals.

In subsequent years, the EFC plans to look beyond local government electricity use to how all consumers in America's cities, towns and villages are meeting their electricity needs. In the long run the successful move to a sustainable energy future nationwide will depend on our ability to address the Challenge broadly, addressing all energy uses and the diverse public and private energy users within America's cities. Counting how city governments meet their electricity needs is an excellent place to start.

¹ For the purpose of the EFC program, a "city" is defined to include a city, town, village, or county located in the United States.

Electricity generation is a major contributor to air pollution and climate change emissions. The generation of electric power using fossil fuels produces more pollution than any other single industry in the United States. Recent (2002) data shows the U.S. electricity industry was responsible for:²

- 39% of carbon emissions, which contribute to global climate change
- 63% of sulfur dioxide emissions, which contribute to acid rain
- 22% of NOx emissions, which contribute to urban smog
- 33% of mercury emissions, which pose significant health risks

Among the other major environmental issues linked to electricity are water impacts, generation of wastes, and the disruption of land uses.³

The 2006 Energy Freedom Challenge will address how each participating local government is progressing toward meeting its electricity needs by using environmentally sustainable electricity supply sources, that is, electricity supply sources that meet the Green-e environmental definitions.⁴

Local government uses electricity for many different purposes. The EFC will recognize local governments for their leadership in seeking out and purchasing their electricity from sustainable, renewable supply sources. Local governments may procure renewable energy in several different ways. They can:

- a. Install renewable energy powered generator on site, such as photovoltaic systems on municipal buildings or property,
- b. Purchase renewable energy generated electricity from a local utility through a "green pricing" program of the utility,
- c. In electricity market areas where consumers choose among competing service providers, purchase electricity services featuring renewable electricity supplies,
- d. Purchase renewable energy certificates in competitive local, regional or national markets for such certificates,
- e. Obtain renewable energy generated electricity from their own municipal utility.

The EFC will count renewable energy obtained by any of these means as long as the renewable electricity supply meets the Green-e based definition of a qualifying renewable energy source as set forth below. While purchases of Green-e certified supplies may simplify reporting and are encouraged by the EFC, they are not required.

QUALIFYING RENEWABLE ENERGY GENERATED ELECTRICITY

The EFC is using green power definitions developed by the Green-e Renewable Energy Certification Program.

In general, Green-e eligible renewable resources include the following:⁵

- Wind
- Solar Electric – including photovoltaic and thermal electric technologies

² Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States –2002. CERES, NRDC, & PSEG. April 2004. (See http://www.nrdc.org/air/pollution/benchmarking/2002/benchmark2002_pt1.pdf)

³ See the Power Scorecard Internet consumer education tool at http://www.powerscorecard.org/elec_envy.cfm

⁴ The Green-e certification program has been endorsed by a diverse community of renewable energy market stakeholders, including the EFC sponsors, and is widely accepted in the electricity marketplace. The Green-e certification program is administered by the non-profit Center for Resource Solutions. For information see www.green-e.org.

⁵ The complete Green-e list of eligible renewables is provided in Appendix A.

- Geothermal
- Biomass – organic material, including wood and wood waste, agricultural residues (plant and animal waste), methane from landfills and digester gas, but excluding burning of municipal solid waste
- Hydro – certified by the Low Impact Hydropower Institute
- Fuel Cells – using eligible fuels

Generating facilities must be located in the United States. See Appendix A for additional details about eligible renewable resources.

The primary focus of the EFC is on new renewable energy supplies, those that began generating electricity after January 1, 1997 (or the definition of new renewable energy supplies embodied in statute, regulation or policy of the state in which the municipality is located). The January 1, 1997 date is used by Green-e. This date is also used by the U.S. EPA's Green Power Partnership and others.

The EFC recognizes green power purchases also required by law or policy. For example, if a state renewable portfolio standard requires a minimum percentage of new renewable energy content in all electricity sold in the state, that mandated percentage will be recognized in counting the total percentage of new renewables purchased by the municipality. For example, if an RPS mandate requires 10 percent of supply be provided by EFC eligible renewable supplies and the city purchases another 20 percent of its supply from other EFC eligible renewable electricity supplies, the city may report that 30 percent of its supply as renewable for the purposes of the EFC. In such cases, the RPS supplies must qualify as EFC eligible.

The EFC requires that the environmental attributes of the purchased renewable energy counted in the EFC must be retired and not traded to another party for emissions trading programs.

VINTAGE OF QUALIFYING ELECTRICITY SUPPLY SOURCES

EFC Awards will be granted for actual purchases of qualifying new renewable energy generated electricity because it is the purchases that grow the supplies of sustainable electricity generation.

The EFC adopts the recently released Green-e National Standard (see http://www.green-e.org/pdf/Green-e_National_Standard.v1.pdf), which the Green-e program will put into effect on January 1, 2007. This standard is presented in Attachment A. This standard identifies what types of electricity generation sources meet the Green-e environmental standard and sets January 1, 1997 as the benchmark for identifying what qualifies as a new source.

EFC LOCAL GOVERNMENTS

Any local government may enter the EFC. Entrants will be assigned to size categories on the basis of their population size as follows.

Current resident population is:

- Less than 50,000
- 50,000 to 200,000
- 200,000 to 500,000
- Greater than 500,000

2006 EFC AWARDS

In 2006 the EFC will recognize the progress participating local governments are making on the path to energy independence with two awards, the EFC Leadership Award and the EFC Milestone Award.

➤ EFC Milestone Award

for Local Government Electricity Purchases

- The Milestone Award will recognize local government for its purchases of qualifying new renewable electricity (see definition below) during the previous year. The EFC will offer Milestone Award recognition to the local government among the EFC participants that achieves the greatest percentage of new renewable purchases of total electricity purchases for the most recent completed calendar or fiscal year.
 - For example, of the total electricity purchases made by local government, 10 percent were from qualifying new renewable electricity supply sources.

➤ EFC Leadership Award

for Local Government Electricity Purchases

- The Leadership Award will measure and compare the increase in the proportion of total electricity use represented by purchases of qualifying new renewable electricity (see definition below) during the previous year (i.e., the increase in new renewable electricity purchases for government use measured by the change in purchases from 2004 to 2005).
 - For example, a local government increases the new renewable portion of total electricity purchases from 10 percent of total purchases to 25 percent, an increase of 15 percent of total electricity use.

REPORTING RENEWABLE ENERGY PURCHASES

Municipalities entering the EFC will report an estimate of total renewable electricity supply purchases on the 2006 Energy Freedom Challenge Entry Form. Each applicant will later submit a 2006 Energy Freedom Challenge Tracking Form, which will describe the component sources of renewable electricity supply.

The EFC Tracking Form solicits information from the entrant for each reporting period on:

- total electricity purchases (kWhs), and
- renewable electricity supplies (kWhs purchased), by source.

The Tracking Form asks the entrant to certify the accuracy of the information provided and to be prepared to validate the claims of qualifying renewable electricity supply purchases upon request.

ENERGY FREEDOM CHALLENGE CONTACT INFORMATION

To discuss EFC details, contact Joni Gilton, Program Coordinator, (512) 306-0898, joni@energyfreedomchallenge.org. Or visit the web site at www.energyfreedomchallenge.org.

Acknowledgment:

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APPENDIX A: DEFINITION OF ELIGIBLE RENEWABLE RESOURCES

The Energy Freedom Challenge ("EFC") relies on definitions of qualifying renewable energy supply sources developed by Green-e. The EFC uses Green-e definitions because they are widely recognized and used in the marketplace and are endorsed by the EFC sponsors.

The EFC is adopting the definitions of qualifying renewable energy recently published by the Green-e program as a part of a new National Standard. The Green-e program announced that this new National Standard will replace Green-e regional standards which, while similar, included regional variations. The new National Standard has been published but will not be applied by the Green-e program until January 1, 2007. The Green-e Program is administered by the non-profit organization, Center for Resource Solutions (CRS).

The following is an excerpt from the Green-e National Standard.⁶

QUALIFYING SOURCES OF RENEWABLE ELECTRICITY GENERATION

A. Definition of Eligible Renewables

The following types of renewable energy are eligible to supply Green-e certified products:

- 1) Solar Electric;
- 2) Wind;
- 3) Geothermal;
- 4) Hydropower from new generation capacity on a non-impoundment or new generation capacity on an existing impoundment that meets one or more of the following conditions:
 - a) Hydropower facilities certified by the Low Impact Hydropower Institute;
 - b) Run-of-the-river hydropower facilities equal to or less than 5 MW nameplate capacity;
 - c) Hydropower facilities that consist of a turbine in a pipeline or a turbine in an irrigation canal; and/or
 - d) *The Board will consider on a case-by-case basis new incremental capacity on an existing dam, where the "new" output is equal to or less than 5 megawatts.*

Green-e will not certify renewables from new impoundments of water. Green-e will consider adopting ocean-based resources and will review these technologies as they mature and as practical application reaches near term.

- 5) Solid, liquid, and gaseous forms of Biomass from the following fuels:
 - a) All woody waste⁷
 - b) All agricultural crops or waste
 - c) All animal and other organic waste
 - d) All energy crops

⁶ This is taken from the Green-e National Standard found at http://www.green-e.org/pdf/Green-e_National_Standard_v1.pdf

⁷ Includes "black liquor" from pulp and paper processing, mill residues, industrial waste wood, and waste wood from woodworking or wood processing, so long as the wood is not chemically treated or coated.

- e) Landfill gas and wastewater methane
- f) Municipal Solid Waste is eligible if it is first converted to a clean burning fuel that is then used to generate electricity. The solid waste conversion facility for converting the municipal solid waste to a clean burning fuel must meet the following criteria⁸:
 - i. The facility uses a non-combustion thermal process to convert the municipal solid waste to a clean burning fuel.
 - ii. The technology is designed to produce no discharges of air contaminants or emissions, including greenhouse gases.
 - iii. The technology produces no discharges to surface or groundwaters.
 - iv. The technology produces no hazardous wastes.
 - v. To the maximum extent feasible, the technology removes all recyclable materials and marketable green waste compostable materials from the solid waste stream prior to the conversion process and the owner or operator of the facility certifies that those materials will be recycled or composted.
 - vi. To the maximum extent, the facility will remove plastics and all other recyclables
 - vii. The facility at which the technology is used complies with all applicable laws, regulations, and ordinances.

Third-party verification that an MSW facility has met these criteria is required in order for the electricity or RECs from a facility to be used in a Green-e certified product. The California Energy Commission can provide this verification in California and TerraChoice may be able to provide this service in other regions. Facilities may also petition Green-e to allow an alternative third-party to perform this verification if that party meets appropriate standards.

Biomass resources excluded from eligibility include:

- a) Wood that has been coated with paints, plastics, or formica
- b) Wood that has been treated for preservation with materials containing halogens, chlorine or halide compounds like CCA-treated materials, or arsenic. (CCA = chromated copper arsenate)

Qualified wood fuels may contain de minimis quantities (less than 1% of total wood fuel) of the above excluded contaminants.

6) Biodiesel

Biodiesel (B100) that is used to generate electricity is eligible for Green-e. Biodiesel blended with petroleum diesel is permitted if the following conditions are met:

- a) The biodiesel is separately measured (and verified) from the petroleum diesel, and
- b) Contracts are in place to allow CRS to verify that the biodiesel was converted to electricity.

Only the amount of electricity generated from the biodiesel may be counted as part of a Green-e certified product.

7) Fuel Cells

Fuel cells are eligible only if powered by hydrogen derived from any of the above eligible renewable resources.

B. Co-firing of Biomass with Non-Renewables

Co-firing of eligible forms of biomass with non-renewables is permitted if at least one of the following conditions is met:

⁸ Criteria adapted from the California's "Renewables Portfolio Standard Eligibility Guidebook, August 2004. This guidebook can be downloaded at: http://www.energy.ca.gov/portfolio/documents/guidebooks/2004-08-20_500-04-002F1.PDF.

1) The facility is located in an electric system control area that makes use of a generation tracking system (e.g., NEGIS, PJM-GATS, WREGIS) that is fully capable of accurately measuring and reporting the differentiated (biomass-fired and non-biomass-fired) electrical output from the facility; or,

2) The biomass is in a gaseous or liquid state, is separately metered and there are contracts in place to verify that the biomass portion was converted to electricity; or,

3) Facilities that do not meet either of the criteria above may be eligible subject to a case-by-case review by the Green-e Governance Board. The methodology presented to Green-e must demonstrate that the Btu value of the electrical output from the facility is attributed to the eligible biomass fuel. Some of the criteria that the Board will consider in making their decision are:

- a) Whether the facility was modified to accept biomass fuel;
- b) Whether there is an independent entity involved in verifying or determining the appropriate measurement;
- c) Whether there is a way to determine and ensure the net electricity increment being sold as "renewable" can be attributed to eligible biomass fuel. The Board would prefer a verification methodology that is brought forth by the PMAC and UGPAC that could be applied universally.

Only the amount of electricity generated from the eligible biomass may count towards the Green-e criteria.

C. Emissions Limits on Biomass

All facilities must be in compliance with all state and/or federal laws/rules regarding emissions. For facilities subject to New Source Review (NSR), the facility must be compliant with all applicable regional and state standards pertaining to NSR.

D. Emissions Criteria for the Non-Renewable Portion of a Green-e Product

[Note: This section does not pertain to EFC definition of eligible new renewable resource.]

E. New Renewables

Only new renewables are eligible to meet Green-e standards. The term "new" is defined to include any eligible renewable facility beginning operation or repowered after January 1, 1997.

An eligible new renewable generation facility must either be:

- 1) Placed in operation (generating electricity) on or after January 1, 1997;
- 2) Repowered on or after January 1, 1997 such that at 80% of the fair market value of the project derives from new generation equipment installed as part of the repowering;
- 3) A separable improvement to or enhancement of an existing operating facility that was first placed in operation prior to January 1, 1997, such that the proposed incremental generation is contractually available for sale and metered separate from the existing generation at the facility; or
- 4) A biomass co-firing facility that meets all requirements for biomass co-firing outlined in section III.B. above and began co-firing non-eligible fuels with eligible biomass as defined in III.A. above on or after January 1, 1997, or
- 5) A separately metered landfill gas resource that was not being used to generate electricity prior to January 1, 1997.

Any enhancement of fuel source that increases generation at an existing facility, without the construction of a new or repowered, separately metered generating unit, is not eligible to participate, with the exception of new landfill gas resources identified in (5) above. An eligible "new renewable" must qualify as an "eligible renewable resource" as described herein.

F. Energy Storage

Energy storage systems or plants, including pumped hydroelectric storage, battery storage, compressed air energy storage, superconducting magnetic energy storage, flywheels, and super capacitors, are not energy resources. While each of these storage technologies may play an important future role in managing the delivery of non-dispatchable renewable energy, they are not in themselves a renewable energy resource. Therefore, these storage technologies themselves are not qualifying sources of renewable generation.

G. Parasitic Load

Renewable energy consumed as parasitic load of an eligible facility is not eligible for use in a Green-e certified product. Parasitic load is a load that contributes to the process of electricity generation.

APPENDIX B

2006 Energy Freedom Challenge Entry Form



The Energy Freedom Challenge ("EFC") is a voluntary program that promotes and acknowledges the progress of U.S. cities toward energy independence by evaluating cities' purchases of qualifying electricity generated by clean, renewable, sustainable sources.

PARTICIPANTS AGREE TO:

- Complete and submit an EFC Tracking Form annually.
- When opting to use the EFC Participant mark, it must be used in a manner that is consistent with mark use guidelines.

IN RETURN, THE EFC WILL:

- Publicly acknowledge participants on the EFC web site.
- Provide recognition of EFC winners at an annual Awards Ceremony.

GENERAL TERMS

- Either party can terminate this agreement at any time without prior notification or penalties and with no further obligation.
- Participant agrees that any activities it undertakes connected with this voluntary agreement are not intended to provide services in exchange for compensation from the EFC.
- The EFC may use the Participant logo in selected marketing materials. This added

benefit is available only to Participants that have joined the EFC and have submitted an annual tracking form for the most recent year. For more details, refer to the document titled Energy Freedom Challenge Participant Mark Guidelines, which is available for download at www.energyfreedomchallenge.org.

- The EFC may periodically revise program requirements or eligibility definitions of qualifying electricity.

KEY PARTICIPATION REQUIREMENTS

Participants must acquire electricity generated from eligible new renewable resources, which include solar, wind, geothermal, biogas, eligible biomass, and eligible hydropower.

Entrants will be assigned to size categories on the basis of their resident population size:

- Less than 50,000
- 50,000 to 200,000
- 200,000 to 500,000
- Greater than 500,000

Participant's purchases may be met with any combination of eligible supply sources, including for example, green pricing program purchases from a local utility, on-site renewable energy generation, and REC purchases.

Eligible renewable energy supplies mandated by state policy (e.g., for renewable portfolio standard programs) may be counted in the participant's reported commitment.

For more details, refer to the document titled Energy Freedom Challenge Program Requirements, which is available for download at www.energyfreedomchallenge.org.

AUTHORIZING OFFICIAL: On behalf of {city, town, village, or county}, the undersigned understands and agrees to the terms of the Energy Freedom Challenge.



Name of Authorizing Official

Signature of Authorizing Official

Name and Title of representative submitting entry

Street Address

City/State/Zip

Phone

Facsimile

E-mail

Name of Municipality, County or other Local Government Entry

County and State

Level of Government (i.e., city, town, village, county)

Resident population

Date and source of population information

Estimate of percentage of electricity use supplied by renewable energy sources (if available)

PRIMARY CONTACT FOR CHALLENGE FOLLOW-UP:



Name

Title

Street Address

City/State/Zip

Phone

Facsimile

E-mail

SECONDARY CONTACT FOR CHALLENGE FOLLOW-UP:



Name

Title

Street Address

City/State/Zip

Phone

Facsimile

E-mail

Public Relations Contact (optional)

Phone

Facsimile

E-mail

PLEASE MAIL TO:

Energy Freedom Challenge, Solar Austin
611 South Congress Avenue, Suite 200
Austin, TX 78704.
You may also fax to 512-233-0098.

If you have questions about this entry,
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