



## Recommendation for Council Action

Austin City Council - Commissioners Court Meeting		Item ID	34962	Agenda Number	<ITEM_OUTLINE>
Meeting Date:	8/28/2014			Department:	Austin Energy
Subject					
Approve issuance of a rebate to Apple Inc. for the installation of energy efficiency improvements at the Riata-Vista Phase I Campus and New Central Plant located at 5401 and 5501 West Parmer Lane, Austin, Texas 78727, in an amount not to exceed \$180,359.					
Amount and Source of Funding					
Funding is available in the Fiscal Year 2013-2014 Operating Budget of Austin Energy.					
Fiscal Note					
There is no unanticipated fiscal impact. A fiscal note is not required.					
Purchasing Language:					
Prior Council Action:					
For More Information:	Jeff Vice, Director, Local Government Issues (512) 322-6450; Denise Kuehn, Director, Energy Efficiency Services (512) 322-6138.				
Boards and Commission Action:	August 18, 2014 - To be reviewed by the Electric Utility Commission; August 19, 2014 - To be reviewed by the Resource Management Commission.				
MBE / WBE:					
Related Items:					

## Additional Backup Information

Austin Energy requests authorization to issue a rebate to Apple Inc., in an amount not to exceed \$180,359, for energy efficient air-cooled and water-cooled chillers, cooling tower, interior and exterior lighting, transformers, multiple variable frequency drives, and a flywheel uninterruptible power supply (UPS) system in accordance with the City of Austin's Commercial Rebate Program guidelines. This program is one element of Austin Energy's comprehensive Resource, Generation and Climate Protection Plan to 2020, approved in April 2010 by City Council, and designed to reduce local air pollution through energy conservation, reduce peak demand, and assist customers in reducing electric consumption.

The Apple, Inc. Riata-Vista facilities are located at 5401 & 5501 West Parmer Lane, Austin, Texas 78727. Phase I is a two building, 280,000 square foot, expansion of Apple's Austin Headquarters campus. With another approximately 800,000 square feet of facilities planned in Phase II, Apple has also completed a Central Plant to serve those facilities. The total cost of this phase of the project is about \$56,500,000 and the rebate will cover 0.3% of the cost. The demand (kW) savings associated with this energy efficiency project are estimated at 539 kW, at a program cost of \$335 per kilowatt saved. The avoided kWh, estimated at 2,262,456 kWh per year, represents a major benefit to the local

environment. This project will prevent the following air pollutants from being emitted: 1358 metric tons of Carbon Dioxide (CO<sub>2</sub>), 0.856 metric tons of Sulfur Dioxide (SO<sub>2</sub>), and 0.947 metric tons of Nitrogen Oxides (NOX).

In addition to the reduced air and toxic pollution, the project savings are also equivalent to an estimated 3,050,204 vehicle miles traveled, the removal of 260 cars from our roadways, or the planting of 34,901 trees or 1,745 acres of forest in Austin's parks. The project will also generate approximately 1,018,105 gallons of reduced evaporation at the power plant.

## RCA PROJECT FACT SHEET

Customer Name: Apple, Inc.  
File Number: 13265-01

Facility Address: 5401 & 5501 West Parmer Lane, Austin, Texas 78727  
Customer Contact: Pat Moore

Estimated Rebate: Not to exceed \$180,359

Measures Included: High Efficient Air-Cooled and Water-Cooled Chillers, Cooling Tower, Interior and Exterior Lighting, Transformers, multiple Variable Frequency Drives (VFDs) and two Flywheel UPS systems.

Demand Savings: 539 kW  
KWh Savings: 2,262,456 kWh  
Cost per kW: \$335

Estimated Project Cost: \$56,500,000  
*The rebate amount for these energy efficiency improvements is 0.3% of the total cost of this project.*

Estimated Completion Date: July 2014 for the Central Plant; Sept 2014 for the Data Center

Site Information: Apple Computer Phase I Riata-Vista facilities are located at 5401 & 5501 West Parmer Lane, Austin, Texas 78727

Comments: The Austin campus will be the operational center of the company for the Americas region outside of Apple's global offices in Cupertino, Calif. Apple estimates that once the entire expansion is completed, there will be an additional 3,600 full-time employees, with about 93 percent of the hires local. Phase I consists of two 140,000 square foot office buildings with efficient fluorescent and LED lighting. Most air conditioning is provided by air-cooled rotary screw chillers with very good full load and part-load efficiencies for this type of machine. Air handlers are equipped with multiple fan arrays, with each fan controlled by a VFD. Each building also has very efficient Fly Wheel (no batteries) uninterruptable power supplies (UPS) devices. Additionally, Apple has built a Central Plant with 3 water-cooled chillers, a very efficient four-cell cooling tower, and a primary chilled water system. The chillers, pumps, and the cooling tower fans all have VFDs as well as sophisticated optimization software to maximize savings by controlling the speed of the various VFDs and sequencing the equipment.



## Recommendation for Council Action

Austin City Council - Commissioners Court Meeting		Item ID	35139	Agenda Number	<ITEM_OUTLINE>
Meeting Date:	8/28/2014		Department:	Austin Energy	
Subject					
Approve issuance of a rebate to Flextronics America, LLC, for the installation of energy efficiency improvements at its facilities located at 12455 Research Blvd., Austin, Texas 78759, in an amount not to exceed \$158,125.					
Amount and Source of Funding					
Funding is available in the Fiscal Year 2013-2014 Operating Budget of Austin Energy.					
Fiscal Note					
There is no unanticipated fiscal impact. A fiscal note is not required.					
Purchasing Language:					
Prior Council Action:					
For More Information:	Jeff Vice, Director, Local Government Issues (512) 322-6450; Denise Kuehn, Director, Energy Efficiency Services (512) 322-6138.				
Boards and Commission Action:	August 18, 2014 – To be reviewed by the Electric Utility Commission; August 19, 2014 – To be reviewed by the Resource Management Commission.				
MBE / WBE:					
Related Items:					

## Additional Backup Information

Austin Energy requests authorization to issue a rebate to Flextronics America LLC, in an amount not to exceed \$158,125, for energy efficient lighting, lighting controls, multiple variable frequency drives, and HVAC and electrical equipment in accordance with the City of Austin's Commercial Rebate Program guidelines. This program is one element of Austin Energy's comprehensive Resource, Generation and Climate Protection Plan to 2020, approved in April 2010 by City Council and designed to reduce local air pollution through energy conservation, reduce peak demand, and assist customers in reducing electric consumption.

The Flextronics Austin-Research facilities are located at 12455 Research Blvd., Austin, Texas 78759. The energy efficient improvements were part of a 260,000 square foot renovation/conversion to new technology to enhance production of the new Apple Mac Pro. The total cost of this project is about \$15,000,000 and the rebate will cover 1% of the cost. The demand (kW) savings associated with this energy efficiency project are estimated at 491 kW, at a program cost of \$293 per kilowatt saved. The avoided kWh, estimated at 2,272,643 kWh per year, represents a major benefit to the local environment. This project will prevent the following air pollutants from being emitted: 1,365 metric tons of Carbon Dioxide (CO<sub>2</sub>), 0.860 metric tons of Sulfur Dioxide (SO<sub>2</sub>), and 0.951 metric tons of Nitrogen

Oxides (NOX).

In addition to the reduced air and toxic pollution, the project savings are also equivalent to an estimated 3,063,938 vehicle miles traveled, the removal of 261.4 cars from our roadways, or the planting of 35,058 trees or 1,753 acres of forest in Austin's parks. The project will also generate approximately 1,022,689 gallons of reduced evaporation at the power plant.

## RCA PROJECT FACT SHEET

Customer Name: Flextronics American LLC

File Number: 9066-006

Facility Address: 12455 Research Blvd., Austin, Texas 78759

Customer Contact: Martin Warnasch

Estimated Rebate: Not to exceed \$158,125.00

Measures Included: High Efficiency LED lighting, Combination Daylighting and Occupancy Sensor Controls on Majority of Fixtures, Multiple Variable Frequency Drives on Pump and Fan Motors, High Efficiency Transformers

Demand Savings: 491 kW

KWh Savings: 2,272,643 kWh

Cost per kW: \$293

Estimated Project Cost: \$15,000,000

- *The rebate amount for these energy efficiency improvements is 1% of the total cost of this project.*

Estimated Completion Date: First Quarter 2014

Site Information: Flextronics American LLC Austin-Research sight is loacated 12455 Research Blvd., Austin, Texas 78759

### Comments:

The Flextronics America LLC, Austin-Research location is a design, manufacturing, and distribution facility for high tech electronic projects. This project involved the renovation and conversion of 260,000 square feet of existing space to new technology to help the company produce the new Apple Mac Pro computer. In doing so, they installed state-of-the-art LED lighting with integral daylighting and occupancy sensor controls on appropriate fixtures. Additionally, they installed VFDs (variable frequency drives) on most fan and pump motors, including many large motors used in the manufacturing process. These technologies significantly reduced both kW and kWh at the facility. The customer also invested in high efficient ECM (electronically commutated motors) where possible, as well as high efficiency transformers.



## Recommendation for Council Action

Austin City Council - Commissioners Court Meeting	<b>Item ID</b>	35152	<b>Agenda Number</b>	<ITEM_OUTLINE>
<b>Meeting Date:</b>	8/28/2014		<b>Department:</b>	Austin Energy
Subject				
Approve issuance of a rebate to Intel Corporation for the installation of energy efficiency improvements at the AN4 Central Plant and Data Center located at 1300 S. Mopac Expressway, Austin, Texas 78746, in an amount not to exceed \$178,890.				
Amount and Source of Funding				
Funding is available in the Fiscal Year 2013-2014 Operating Budget of Austin Energy.				
Fiscal Note				
There is no unanticipated fiscal impact. A fiscal note is not required.				
<b>Purchasing Language:</b>				
<b>Prior Council Action:</b>				
<b>For More Information:</b>	Jeff Vice, Director, Local Government Issues (512) 322-6450; Denise Kuehn, Director, Energy Efficiency Services (512) 322-6138.			
<b>Boards and Commission Action:</b>	August 18, 2014 – To be reviewed by the Electric Utility Commission; August 19, 2014 – To be reviewed by the Resource Management Commission.			
<b>MBE / WBE:</b>				
<b>Related Items:</b>				
Additional Backup Information				
<p>Austin Energy requests authorization to issue a rebate to Intel Corporation, in an amount not to exceed \$178,890, for energy efficient chillers, lighting, transformers, multiple variable frequency drives, replacement of Direct Expansion Computer Room Air Conditioning (CRACs) with more efficient Water Cooled CRACs, replacement of Constant Volume CRACs with more efficient variable flow Electronically Commutated Motor plug fans, and replacement of a Flooded Room Air Conditioning arrangement with the more efficient Hot Aisle and Chimney Containment arrangements in accordance with the City of Austin's Commercial Rebate Program guidelines. This program is one element of Austin Energy's comprehensive Resource, Generation and Climate Protection Plan to 2020, approved in April 2010 by City Council and designed to reduce local air pollution through energy conservation, reduce peak demand, and assist customers in reducing electric consumption.</p> <p>The Intel Corporation AN4 facilities are located at 1300 S. Mopac Expressway, Austin, Texas 78746. The energy efficient improvements were part of a high efficiency upgrade and expanded capacity of their central plant and a high efficient replacement and redesign of 9,500 square feet of data center. The total cost of this project is about \$8,500,000 and the rebate will cover 2% of the cost. The demand (kW) savings associated with this energy efficiency</p>				

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project are estimated at 332 kW, at a program cost of \$539 per kilowatt saved. The avoided kWh, estimated at 1,257,410 kWh per year, represents a major benefit to the local environment. This project will prevent the following air pollutants from being emitted: 755 metric tons of Carbon Dioxide (CO<sub>2</sub>), 0.476 metric tons of Sulfur Dioxide (SO<sub>2</sub>), and 0.526 metric tons of Nitrogen Oxides (NO<sub>x</sub>).

In addition to the reduced air and toxic pollution, the project savings are also equivalent to an estimated 1,695,218 vehicle miles traveled, the removal of 145 cars from our roadways, or the planting of 19,397 trees or 970 acres of forest in Austin's parks. The project will also generate approximately 565,834 gallons of reduced evaporation at the power plant.



## RCA PROJECT FACT SHEET

Customer Name: Intel Corporation  
File Number: 5088-012

Facility Address: 1300 S. Mopac Expressway, Austin, Texas 78746

Customer Contact: Donald W. Hensley

Estimated Rebate: Not to exceed \$178,890

Measures Included: High Efficient chillers, lighting, transformers, multiple variable frequency drives, replacement of Direct Expansion Computer Room Air Conditioning (CRACs) with more efficient Water Cooled CRACs, replacement of Constant Volume CRACs with more efficient variable flow Electronically Commutated Motor (ECM) plug fan CRACs, and replacement of a Flooded Room Air Conditioning arrangement with the more efficient Hot Aisle and Chimney Containment arrangements.

Demand Savings: 332 kW – estimated  
KWh Savings: 1,257,410 kWh - estimated  
Cost per kW: \$539

Estimated Project Cost: \$8,500,000  
*The rebate amount for these energy efficiency improvements is 2% of the total cost of this project.*

Estimated Completion Date: September 2014

Site Information: Intel Corporation AN4 facilities are located at 1300 S. Mopac Expressway, Austin, Texas 78746

Comments: The Intel Corporation AN4 facility is a key engineering development center for the corporation. This project involved upgrading the Central Cooling Plant and refurbishing the 9,500 square foot data center. The Plant upgrade not only included high efficiency magnetic bearing chillers with VFDs (variable frequency drives), and variable pumping of chilled and condenser water flows, but state-of-the-art Plant optimization software and hardware to maximize savings. The refurbished data center converted from constant volume, direct expansion, flooded room computer room air conditioning (CRACs) with poor temperature control, poor efficiencies and thus excessive fan and compressor energy, to variable flow, water cooled, ECM plug fan CRACs with hot aisle and chimney containment for excellent temperature control and reduced demand and energy consumption. Intel also used high efficiency lighting and transformers.



## Recommendation for Council Action

Austin City Council - Commissioners Court Meeting	<b>Item ID</b>	35138	<b>Agenda Number</b>	<ITEM_OUTLINE>
<b>Meeting Date:</b>	8/28/2014		<b>Department:</b>	Austin Energy
Subject				
<p>Authorize negotiation and execution of an agreement with COEUS BE Austin, LP, to provide performance-based incentives for the generation of solar energy at its facilities located at 1600 Royal Crest Drive, Austin, Texas 78741, for an estimated \$8,047 per year, for a total amount not to exceed \$80,470 over a 10-year period.</p>				
Amount and Source of Funding				
<p>Funding in the amount of \$8,047 is available in the Fiscal Year 2013-2014 Operating Budget of Austin Energy.</p>				
Fiscal Note				
<p>There is no unanticipated fiscal impact. A fiscal note is not required.</p>				
<b>Purchasing Language:</b>				
<b>Prior Council Action:</b>				
<b>For More Information:</b>	Jeff Vice, Director, Local Government Issues (512) 322-6087; Danielle Murray, Manager, Solar Program (512) 322-6055.			
<b>Boards and Commission Action:</b>	August 18, 2014 – To be reviewed by the Electric Utility Commission; August 19, 2014 – To be reviewed by the Resource Management Commission.			
<b>MBE / WBE:</b>				
<b>Related Items:</b>				
Additional Backup Information				
<p>Austin Energy requests authorization to enter into an agreement with COEUS BE Austin, LP, to provide performance-based incentives (PBI) for an estimated \$8,047 per year, for a total amount not to exceed \$80,470 over the 10-year period for the generation of solar energy at its apartment facility located at 1600 Royal Crest Drive, Austin, Texas 78741.</p> <p>The total installation cost is \$190,298 and the incentive will cover between 39% and 42% of the cost. The PBI level for this project is \$0.10 per kWh for 10 years. The solar equipment, which meets Austin Energy program requirements, includes a total of 193 solar modules rated at 290 watts and associated inverters rated at 98% efficiency. A total of 43 kW-AC in demand savings is expected.</p> <p>This energy improvement will save an estimated 73,154 kWh per year—enough to provide electricity to 6 average Austin homes for a year—and produce an estimated 73 Renewable Energy Credits (RECs) per year. These savings are equivalent to the planting of 1,128 trees or 56 acres of forest in Austin's parks or the removal of 98,625 vehicle miles or 8 cars from Austin roadways. This project will save 48 tons of Carbon Dioxide (CO<sub>2</sub>); 61 pounds of Sulfur</p>				

Dioxide (SO<sub>2</sub>); 68 pounds of Nitrogen Oxide (NO<sub>x</sub>); and 47 pounds of Carbon Monoxide (CO) from being emitted into the atmosphere, and 32,919 gallons of water at the generation power plant.



## Austin Energy Project Fact Sheet Solar Applications

<b>File Number</b>	PBI182, PBI183, PBI184
<b>Customer Name</b>	COEUS BE Austin, LP
<b>Facility Address</b>	1600 Royal Crest Drive in Austin, Texas 78741
<b>Customer Contact</b>	Amy Ford
<b>Phone Number</b>	512-444-6676
<b>Estimated Total Incentives</b>	\$8,047 per year for 10-years
<b>Application Received Date</b>	6/13/2014
<b>Number of Modules</b>	193
<b>Wattage per Module (STC)</b>	290
<b>Inverter Efficiency</b>	98%
<b>Solar Contractor</b>	Eco One Homes
<b>Contractor Contact</b>	Shane Swan
<b>Contractor Phone</b>	512-744-8824
<b>Installation Cost</b>	\$190,298
<b>Estimated kWh Savings</b>	320,997 kWh per year
<b>Estimated kW Demand Savings</b>	200 kW-AC
<b>Estimated Date of Completion</b>	TBD
<b>Site Information/Additional Comments</b>	Element Apartments location to install three systems tied into three separate common use accounts at one multifamily address. approved for PBI in 2013