



## Austin Energy Open Meetings/Open Records Resolution Annual Report 2009

In September 2001, the Austin City Council approved a resolution allowing Austin Energy to utilize a provision of Senate Bill 7 wherein the legislature recognized the need for municipally-owned utilities to keep confidential, information that if disclosed would give advantage to competitors or prospective competitors. In approving the resolution the City Council also provided that Austin Energy would publish an annual summary on the performance and costs of its generation portfolio and planning targets for renewables and energy efficiency. The Council stipulated that this annual report should be presented at a public hearing where questions and input from the Electric Utility Commission and citizens could be provided, regarding the report.

The Council identified eight performance parameters on which reporting should be provided:

1. system annual average heat rate
2. system annual average production costs
3. system annual average fuel cost
4. total fuel costs by fuel source
5. revenues and consumption by customer class.
6. summary of planning targets for renewable energy and energy efficiency
7. annual average availability of Austin Energy's base load generating units
8. unplanned outage information for outages lasting over 12 hours

In addition to the areas listed above, data has been included related to renewables goals set by City Council. New measures included: total renewable energy delivered by Austin Energy to its customers and the percentage of annual energy production by each generation type.

### **Heat Rate**

The heat rate is the number of British Thermal Units (BTU) needed to produce a kilowatt-hour (kWh) of electricity. In other words, the heat rate is a measurement of how efficiently a generating unit converts fuel into electricity. The lower the heat rate, the higher the efficiency.

The slight increase in overall system heat rate for FY 2009 from the year before is due to two factors. The extremely hot summer of 2009 increased the average temperature of reservoir water used to cool the South Texas Project (STP). This required the plant to work harder and resulted in a slight increase in the heat rate for STP production. Our increased wind energy capacity in 2009 means we have higher amounts of wind energy flowing overnight. This requires, as planned, a ramping down of the Fayette Power Project (FPP). Power plants operate less efficiently at lower levels of production, thereby increasing the average heat rate.

	<b>FY 08</b> BTU/(net kWh)	<b>FY 09</b> BTU/(net kWh)
<b>Average</b>	9,803	9,810

## **Production Cost**

The system annual average production cost in cents per kilowatt-hour of electricity produced includes fuel costs plus operating and maintenance costs. Lower natural gas costs were the key factor in lower production costs for FY 2009.

<b>FY 08</b>	<b>FY 09</b>
4.207 cents/kWh	4.045 cents/kWh

## **Fuel Cost Average**

The system annual average fuel cost, in cents per kilowatt-hour of electricity produced, were lower during FY 2009 due primarily to lower natural gas prices.

<b>FY 08</b>	<b>FY 09</b>
3.655 cents/kWh	3.371 cents/kWh

## **Fuel Costs**

Total costs by fuel source (excludes hedging and ERCOT fees) were lower in FY 2009 primarily due to lower natural gas costs. **Note:** 92% of costs for FY 2008 renewables were paid by GreenChoice® subscribers as were about 65% of costs shown for FY 2009. Austin Energy roughly doubled the amount of renewable energy received during FY 2009 from FY 2008 levels.

<b>Fuel Source</b>	<b>FY 08</b>	<b>Percent</b>	<b>FY 09</b>	<b>Percent</b>
Gas	\$293,337,648.39	69.4%	\$157,522,365.54	51.0%
Coal	\$87,063,859.86	20.6%	\$84,635,000.11	27.4%
Nuclear	\$15,823,058.81	3.7%	\$16,866,182.92	5.5%
Fuel Oil	\$420,141.71	0.1%	\$566,981.19	0.2%
Renewables	\$26,183,662.02	6.2%	\$49,567,759.02	16.0%
<b>Total</b>	<b>\$422,828,370.79</b>	<b>100%</b>	<b>\$309,158,288.78</b>	<b>100%</b>

## **Energy By Fuel Type**

Energy by fuel type reflects the percentage of power from Austin Energy generation resources in meeting all demands on Austin Energy from customers and for power sales to other utilities or to ERCOT for grid reliability needs.

<b>Fuel Type</b>	<b>FY 08</b>		<b>FY 09</b>	
	<b>MWH</b>	<b>Percent</b>	<b>MWH</b>	<b>Percent</b>
Coal	4,408,449	34.5%	3,756,354	29.7%
Nuclear	3,601,899	28.2%	3,512,240	27.8%
Natural Gas	3,414,477	26.7%	3,507,087	27.8%
Renewables	813,431	6.3%	1,259,308	10.0%
Power Purchased	1,055,667	8.3%	1,231,064	9.7%
Power Sales	(522,798)	(4.1%)	(638,329)	(5.1%)
<b>Total</b>	<b>12,771,125</b>	<b>100%</b>	<b>12,627,724</b>	<b>100%</b>

## **Revenues and Consumption**

Aggregate revenues, consumption and average kWh cost in cents by class of customer:

<b>Customer Class</b>	<b>FY 08</b>			<b>FY 09</b>		
	<b>Revenue</b>	<b>Consumption (kWh)</b>	<b>Cents/kWh</b>	<b>Revenue</b>	<b>Consumption (kWh)</b>	<b>Cents/kWh</b>
Residential	\$416,808,367	4,220,597,712	9.88	\$406,393,178	4,218,600,234	9.63
Commercial	\$408,807,777	4,534,984,580	9.01	\$402,031,731	4,480,981,315	8.97
Industrial	\$138,901,263	2,233,484,418	6.22	\$132,791,946	2,218,235,693	5.99
Street/Hwy.	\$8,403,170	47,689,860	17.62	\$8,429,966	47,830,865	17.62
Other Gov	\$86,069,135	1,147,483,264	7.50	\$82,750,991	1,137,492,175	7.27
<b>Total</b>	<b>\$1,058,989,711</b>	<b>12,184,239,834</b>	<b>8.69</b>	<b>\$1,032,397,811</b>	<b>12,103,140,282</b>	<b>8.53</b>

## **Renewable Energy and Energy Efficiency Planning Targets**

**Renewables:** Austin Energy expanded its wind portfolio by 165 MW in December 2008. During Fiscal Year 2008-2009, about 10% of the power delivered from Austin Energy to its customers came from renewable resources, or 1,279,082,866 kWh. Of that total for FY 2009, about 65% was paid for by GreenChoice® participants. The cost of the remaining 35% was recovered through the fuel charge. The current long-term goal is that 30% of energy delivered by Austin Energy will be provided through renewable energy resources by 2020.

<b>Renewable Energy</b>	<b>FY 08 kWh</b>	<b>FY 09 kWh</b>
Green Power Purchases	797,480,831	1,279,082,866
GreenChoice® Sales	730,868,214	828,592,825
Green Power to Fuel Factor	66,612,617	450,490,041

**Energy Efficiency:** Austin Energy reduced electric system peak demand during FY 2009 by 52.4 MW, a performance in a downed economy that was lower than FY 2008's near record of 64.2 MW. Austin Energy has a goal to offset 700 MW of peak demand between 2007 and 2020.

<b>Program</b>	<b>FY 08</b>		<b>FY09</b>	
	<b>MW</b>	<b>Million kWh</b>	<b>MW</b>	<b>Million kWh</b>
Residential	25.3	42.8	19.4	38.6
Commercial	19.7	47.3	19.6	32.9
Green Building	19.2	42.0	13.4	30.7
<b>Total DSM</b>	<b>64.2</b>	<b>132.1</b>	<b>52.4</b>	<b>102.2</b>

## **Availability**

The annual average equivalent availability of Austin Energy's base load generating units, Fayette Power Project (FPP) and South Texas Project (STP), is the ratio of the energy produced by a generating unit over what could have been produced if the unit had been operating at 100% capability around the clock, 365 days a year.

During 2009, for the sixth year in a row, the STP produced more electricity than the other 32 two-unit nuclear power plant in the U.S. Both STP units also established a U.S. nuclear industry record by completing a fifth consecutive breaker-to-breaker production run each. This means both units operated continuously 24/7 for more than 500 days between refuelings. The lower availability for FPP1 and STP1 during 2009 was expected due to planned outages.

<b>Fiscal Year</b>	<b>FPP 1</b>	<b>FPP2</b>	<b>STP1</b>	<b>STP2</b>
2008	97.30%	85.10%	92.30%	91.60%
2009	84.67%	94.99%	86.42%	96.87%

## Unplanned Outages

The table below shows outages lasting more than 12 hours for Austin Energy managed generating units in FY 2008 due to equipment malfunctions or other problems. Units with no reportable outages include Sand Hill Gas Turbines (GT) 1, 2, 3, and 4; Decker GT 2 and Decker Gas Turbines GT 1,2,3 and 4; and STP 1.

Unit	Outage Start Date/Time	Outage End Date/ Time	Duration (hours)	Description
Sand Hill 5	3/27/09 3:50 PM	3/29/09 9:18 AM	41:28	Oil leak at Unit 5A turning gear.
	5/18/09 9:53 PM	5/19/09 4:12 PM	18:19	Condensate pump bearing failure.
	5/23/09 2:49 PM	5/24/09 10:21 AM	19:32	Hot reheat attemperator block valve failed closed.
	9/14/09 6:46 AM	9/16/09 6:02 AM	47:16	Main steam temperature control problem.
Decker 1	5/13/09 7:30 AM	5/17/09 6:00 PM	106:30	Hot spot on boiler.
	7/25/09 7:30 AM	7/26/09 12:20 AM	16:50	Superheater repairs.
	8/01/09 11:00 AM	8/02/09 7:00 AM	20:00	Super spray valve repairs.
Mueller EC	2/16/08 1:11 PM	2/17/08 10:47 PM	33:36:00	Fault on plant feeder.
	3/7/08 5:55 PM	3/8/08 1:45 PM	19:50:00	Broken wire on "Stop" button.
	3/29/08 1:36 AM	4/2/08 4:36 PM	111:00:00	Air diverter valve actuator failed.
	6/14/08 6:50 PM	6/15/09 10:10 AM	15:20:00	Inlet guide vane controller software error.
	8/13/8 11:32 PM	9/30/09 12:00 AM	1152:00:00*	2 <sup>nd</sup> stage turbine rotor failed causing catastrophic failure.
FPP1	3/18/2009 7:14 AM	3/18/2009 8:30 PM	13.27	Generator 7110 breaker disconnect fault.
	4/4/2009 12:49 AM	4/5/2009 1:00 PM	24.18	External tube leak on 8th floor "C" corner.
	5/11/2009 6:28 PM	5/13/2009 6:01 AM	35.55	Generator 350 G protective relay misoperation.
	6/24/2009 2:10 PM	6/25/09 10:08 AM	43.97	1B vacuum pump tripped.
	7/30/09 3:26 PM	7/30/2009 5:48 PM	2.37	CPU Fault - communication failure.
	12/24/09 5:02 PM	12/24/09 6:12 PM	1.17	1-2 Silo diverter wear plate issue.
	1/11/10 5:54 AM	1/11/2010 4:28 PM	10.57	Startup failure.
FPP 2	3/18/09 7:14 AM	3/19/09 8:48 PM	25.57	Generator 7110 breaker disconnects fault.
	5/7/09 11:58 AM	5/20/09 9:07 PM	309.15	Furnace roof and reheat tubes failure.
	11/24/09 12:40 AM	11/26/09 8:12 AM	55.53	Tube leak.
STP 2	9/17/09 4:44 AM	9/28/09 2:23 PM	261.65	Ruptured steam bellow.