



Austin Energy Resource, Generation and Climate Protection Plan Implementation

Mission: Deliver clean, affordable, reliable energy and excellent customer service.

Larry Weis, General Manager
December 9, 2010



Background and History

- Generation plan developed in 2008 and 2009 as Austin Energy's response to City's 2007 climate protection plan
- Financial stress on AE revenues raised concerns regarding the generation plan implementation
 - Economy, energy markets and other factors
- Financial assessment of Austin Energy
- April 22, 2010 City Council approved generation plan with a goal of 35% of annual power supply from renewable sources by 2020
 - Plan is flexible and dynamic, and emphasizes affordability as a fundamental element
 - Dependent on City Council's approval of method to measure the plan's affordability to customers by December 31, 2010



AE = Austin Energy



2010 Generation Plan Implementation Tasks

- Benchmarking
 - Determining current rate competitiveness within Texas for residential, commercial and industrial customers
 - Determining impacts and affordability of generation
 - Program cost comparison with other utilities
- Affordability Forecast
 - Develop a template/tool to measure and forecast affordability
- Annual updates with 5 Year Financial Forecast



2011 Generation Plan Implementation Tasks

- Retail rate design
 - Development of master schedule for rate implementation
 - Cost of service studies
 - Public involvement committee process
 - General Fund Transfer policy
- Rate pricing and implementation



Benchmarking Rates with Comparable Utilities

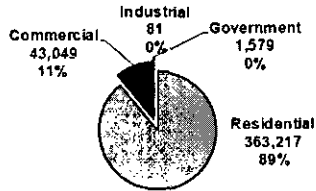
Benchmarking Rates with Comparable Utilities

- Benchmarking tool proposed for annual use
- Comparisons of Austin Energy customer costs for electricity to other Texas utilities and retail electric providers (REP)
 - By customer class (residential, commercial, industrial)
- Benchmarking to be updated annually with 5 Year Financial Forecast
- Data prepared independent of Austin Energy by R.W. Beck, An SAIC Company and R. J. Covington Consulting, LLC
- Electricity burden for low income residents prepared by Austin Energy
- Web link to reports
 - <http://www.austinenenergy.com/About%20Us/Newsroom/Reports/index.htm>

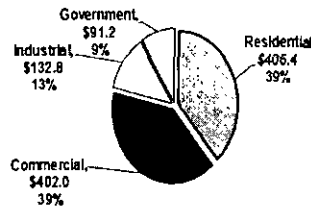


Benchmarking – 2009 Revenue/Customer Profile

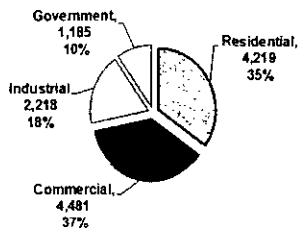
2009 Average Number of Bills
by Customer Class
407,928



2009 Revenue by Customer Class
(in millions)
\$1,032.4 M



2009 gWh Sales by Customer Class
12,103 gWh



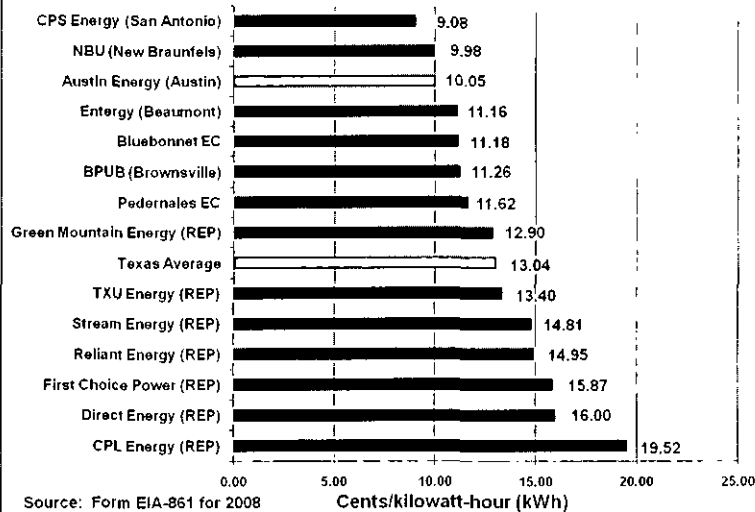
- Customer profile stable from year to year.
- Residential - 89% of customers provide 39% of revenue.
- Commercial & Industrial - 11% of customers provide 52% of revenue.
- 2010 data not yet available.



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Benchmarking - Residential Rates

Average Residential Rates in 2008



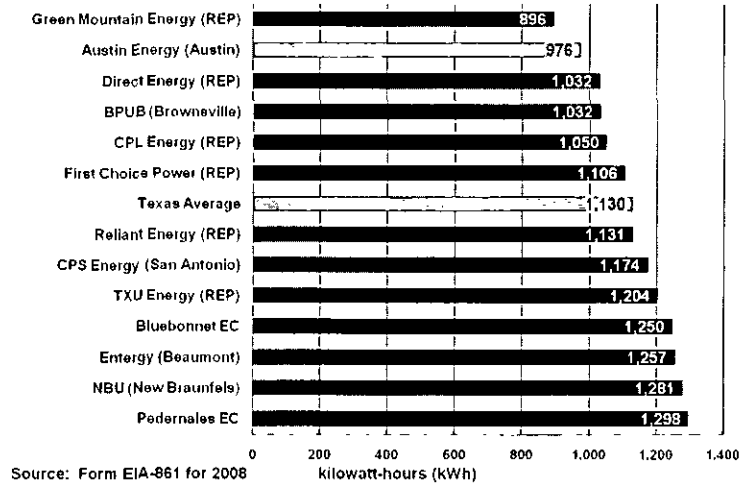
U.S. Energy Information Administration (EIA) Form EIA-861 Annual Electric Power Industry Report



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Benchmarking - Residential Usage

Average Monthly Residential Electricity Usage, 2008

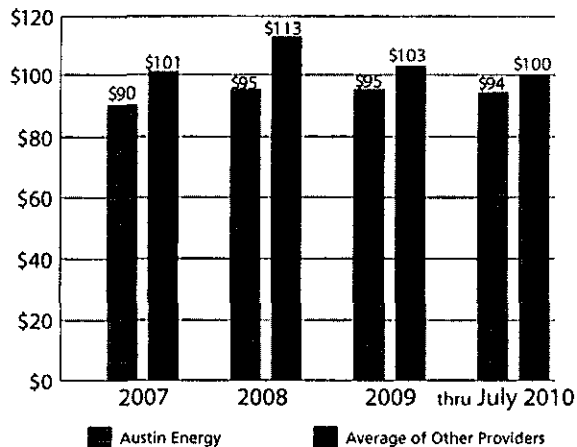


U.S. Energy Information Administration (EIA) Form EIA-861 Annual Electric Power Industry Report



Benchmarking - Residential Bill (1,000 kWh)

Average Monthly Electric Bill at 1,000 kWh from 2007 thru July 2010:
Austin Energy Compared to Other Texas Electric Services

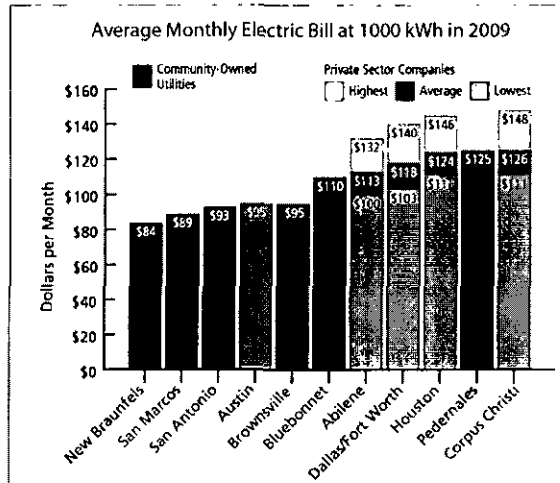


Source: First Choice Residential Benchmark Study, 2010

NOTE: Electric rates will vary for different consumption levels. The average monthly usage for Austin Energy customers is 976 kWh.



Benchmarking - Residential Bill (1,000 kWh)



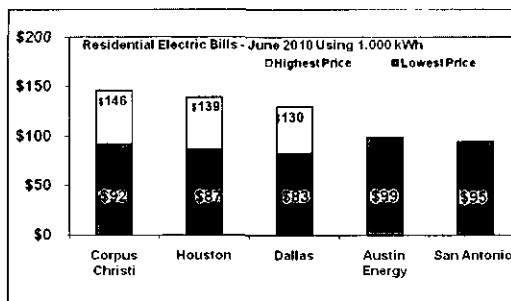
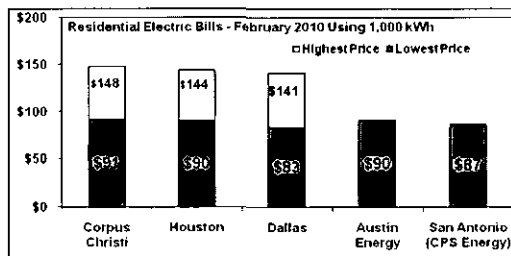
Source: RW Beck Residential Benchmark Study, 2010

NOTE: Electric rates will vary for different consumption levels.
The average monthly usage for Austin Energy customers is 976 kWh.



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Benchmarking - Residential Bill (1,000 kWh)



2010 Electric Bills Major Texas Cities

Summer 2010 and Winter
2010 bill comparison.

AE retail rates are
competitive with those in
major Texas cities.

Charts provided for informational purposes only.
Average usage will vary by city.
Prices may vary by season and usage.

Source: Public Utility Commission of Texas
Additional information on Texas providers can be
found at www.puc.state.tx.us.

Average residential customer usage in Austin
June 2010 at 1,098 kWh.
February 2010 at 808 kWh.

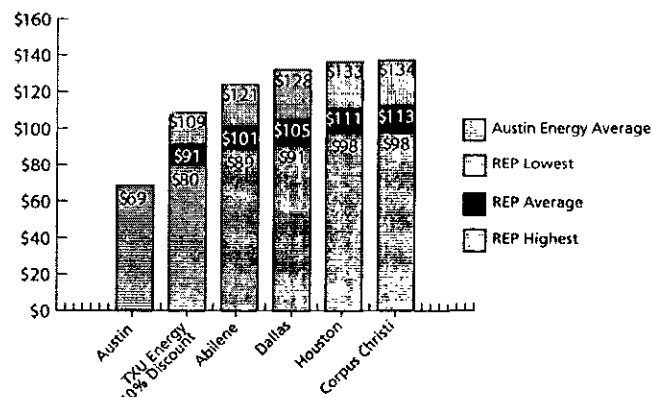


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Benchmarking - Low Income Residential Bill (1,000 kWh)

Austin Energy offers low income residential discounts and first 500 kWh per month at 3.5 cents per kWh.

Average Monthly Electric Bill at 1,000 kWh in 2009 for Low Income Residents



Source: RW Beck Residential Benchmark Study, 2010

NOTE: Electric rates will vary for different consumption levels. The average monthly usage for Austin Energy customers is 900 kWh.

REP = Retail Electric Provider
kWh = kilowatt-hours

Benchmarking - Household Income & Electricity Burden

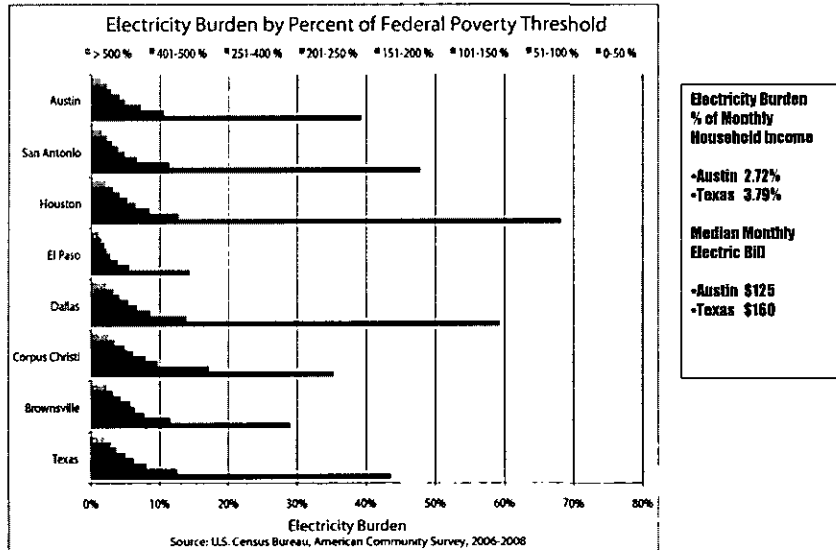
Household Income and Electricity Burden Measures: Austin Compared to the State of Texas

Measure	Austin		Texas	
Total Households	381,300		8,258,100	
Households by Percent of Poverty	Num (000s)	Pct of Total	Num (000s)	Pct of Total
0-50 %	21.1	5.5%	444.5	5.4%
51-100 %	25.3	6.6%	739.2	9.0%
101-150 %	27.7	7.3%	838.1	10.1%
151-200%	28.8	7.6%	771.1	9.3%
201-250%	29.6	7.8%	725.3	8.8%
251-400%	80.2	21.0%	1,730.4	21.0%
401-500%	40.0	10.5%	833.8	10.1%
> 500 %	128.7	33.8%	2,175.8	26.3%
Median Monthly Household Income	\$4,583		\$4,223	
Median Monthly Electric Bill	\$125		\$160	
Electricity Burden (%)	2.72		3.79	

Source: RW Beck Residential Benchmark Study, 2010

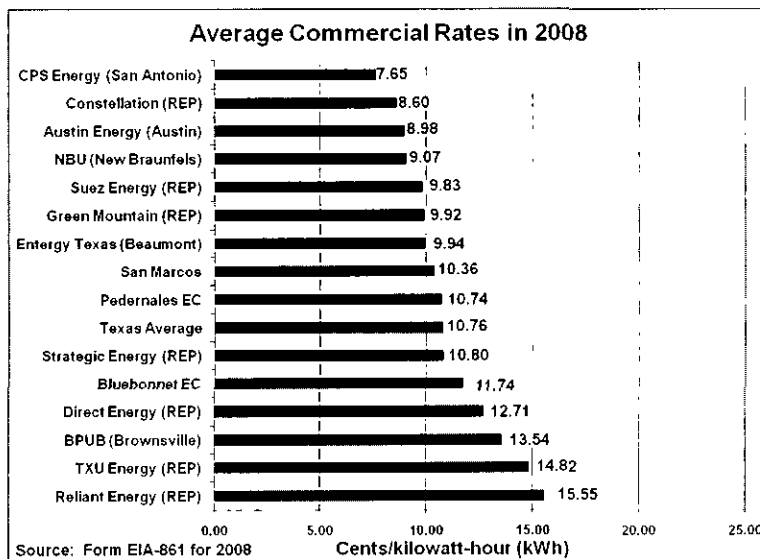
NOTE: Electric rates will vary for different consumption levels.

Benchmarking - Electricity Burden by U.S. Poverty Level



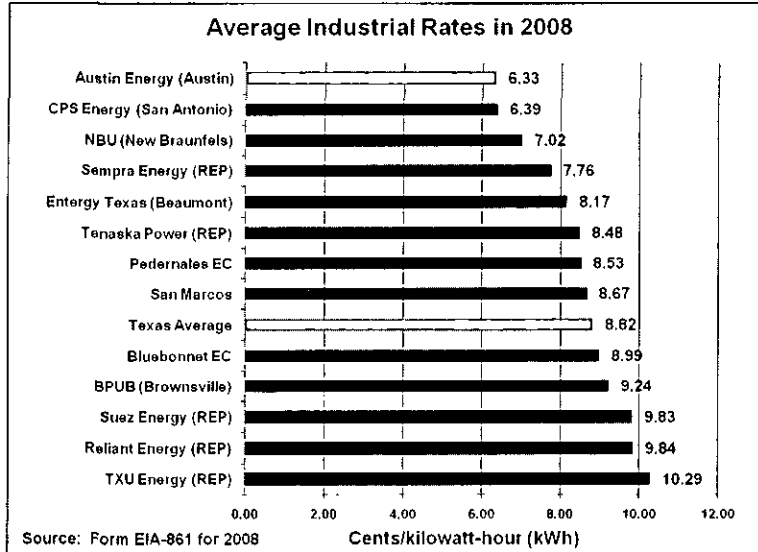
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Benchmarking - Commercial Rates



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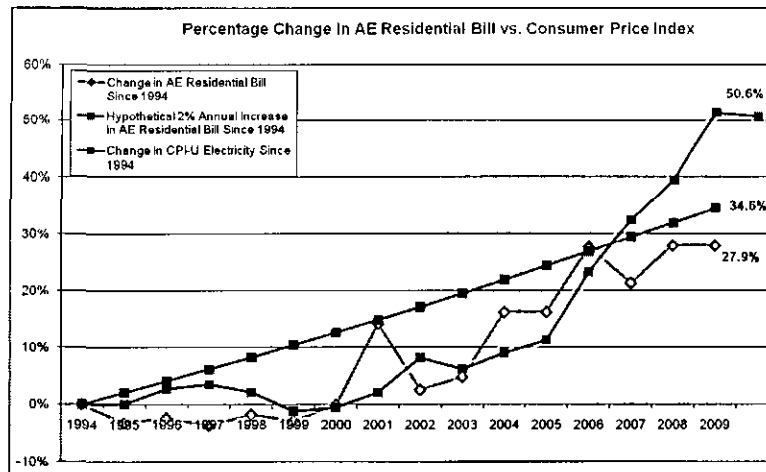
Benchmarking - Industrial Rates



U.S. Energy Information Administration (EIA) Form EIA-861 Annual Electric Power Industry Report



Benchmarking – AE Historic Bills vs. Inflation

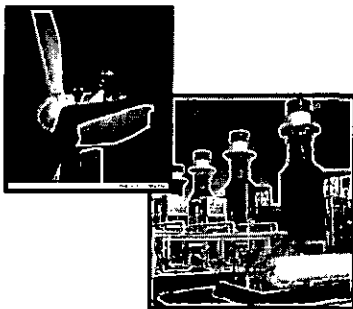


AE bills historically lower than inflation and 2% hypothetical annual increase.



Benchmarking Conclusions

- Benchmarking tool proposed for annual use
- Comparisons of Austin Energy customer costs for electricity to other Texas utilities and retail electric providers (REP)
 - By customer class (residential, commercial, industrial)
- Benchmarking to be updated annually and reported to City Council with 5 Year Financial Forecast each Spring
- Recommend future benchmarking reports be prepared by AE staff using the most current information available



Implementing an Affordable Generation Plan

Implementing an Affordable Generation Plan

Generation plan

- AE's response to City's 2007 climate protection plan
- April 22, 2010 approved by City Council
- Goal - 35% of annual power supply from renewable energy by 2020
- Plan is flexible and dynamic, and emphasizes affordability as a fundamental element
- Dependent on City Council's approval of method to measure the plan's affordability to customers by December 31, 2010

Affordability Forecast

- A tool to measure Generation Plan's affordability
- Present for Council adoption in December 2010
- Update annually and reported to City Council with 5 Year Financial Forecast each Spring



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Austin Energy Power Supply Portfolio

Austin Energy Plant-In Service	Unit	Year Installed	Fuel	Nameplate Rating (MW)	2009 Capacity Factor
Lafayette Power Project	Unit No. 1	1979	Coal	285.0	84.2%
	Unit No. 2	1980	Coal	285.0	94.9%
South Texas Project Electric Generating Station	Unit No. 1	1988	Nuclear	200.0	92.1%
	Unit No. 2	1989	Nuclear	200.0	103.3%
Decker Power Station	Unit No. 1	1970	Gas/Oil	321.0	24.3%
	Unit No. 2	1977	Gas/Oil	405.0	27.3%
Sand Hill Energy Center	Combined Cycle	2004	Gas	300.0	81.3%
Sand Hill Energy Center	Gas Turbines	2001	Gas	180.0	10.3%
	Gas Turbines	2010	Gas	90.0	-
Decker Power Station	Gas Turbines	1988	Gas/Oil	200.0	3.5%
Combined Heat & Power	MEC CHP (Dell Children's Hospital)	2005	Gas	4.6	9.0%
Capacity					2,470.6

Power Supply	Power Supply Source	Year Installed	Fuel	Nameplate Rating (MW)	2009 Capacity Factor	Contract Term (Years)	Contract End Date
Purchased Power	LCRA Texas Wind Contract	1995	Wind	10.0	13.5%	25	9/29/2020
Purchased Power	FPL Energy Upcon Wind I, LP	1999-2001	Wind	76.7	23.9%	10	9/4/2011
Purchased Power	RES North America Sweetwater Wind	2005	Wind	128.0	37.0%	12	2017
Purchased Power	Whirlwind Energy LLC	2007	Wind	60.0	38.8%	20	12/31/2027
Purchased Power	Hackberry Wind LLC	2008	Wind	163.6	29.9%	15	12/31/2023
Purchased Power	Gas Recovery System, LLC	1994-2003	Landfill Gas	4.0	78.7%	25	2019
Purchased Power	EcoGas Inc. & Energy Developments, Inc.	2002-2003	Landfill Gas	7.8	54.2%	10	9/30/2012
Renewable Capacity					452.1		
Total Capacity					2,922.7		

Diverse, competitive and sufficient supply to meet service area demand.



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Generation Resource Plan (In Megawatts – MW)

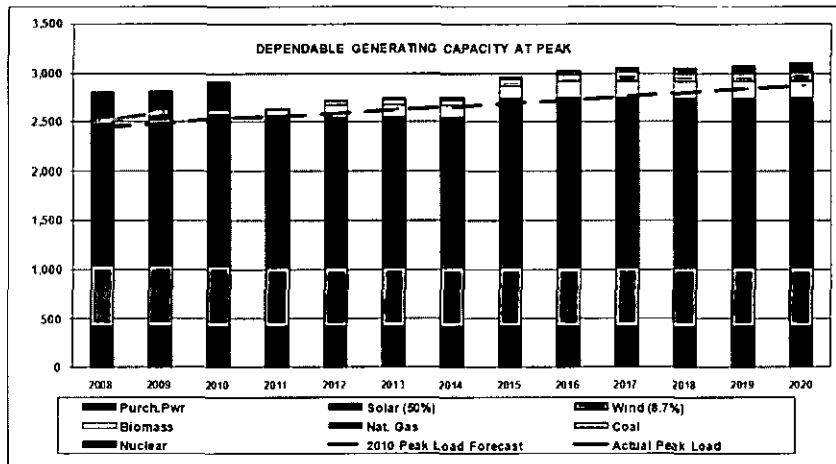
Year	Coal & Nuclear	Gas	Biomass	Wind	Solar	Total	Renewable Portfolio
2009	1,029	1,444	12	439	1	2,925	10%
2010		100			30	130	10%
2011				(77)* / 200		123	15%
2012			100			100	17%
2013				150		150	25%
2014					30	30	25%
2015		200		100		300	28%
2016			50		20	70	30%
2017				(126)* / 200	30	104	33%
2018					20	20	32%
2019					30	30	32%
2020				115	40	155	35%
TOTAL	1,029	1,744	162	1,001	201	4,137	

* Wind contracts expire.



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Generation Resources & 2010 Load Forecast (net of Energy Efficiency Goals)

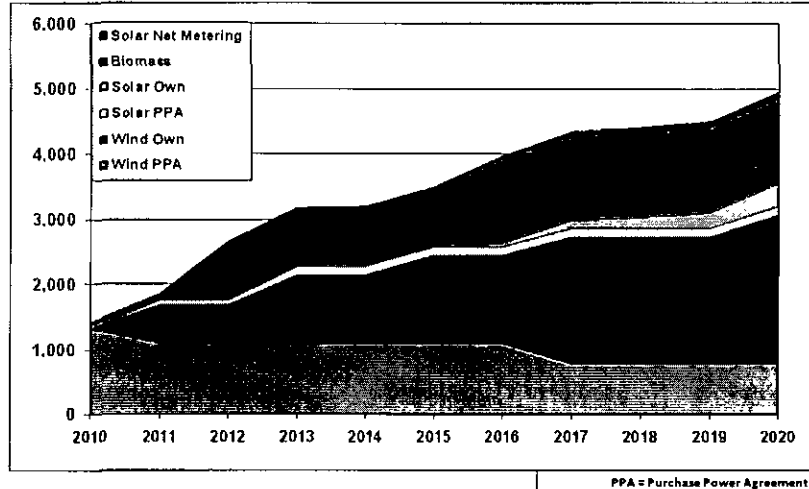


Diverse, competitive and sufficient supply to meet service area demand.



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Renewable Additions 2020 (GWhs) 35% Total Energy



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Austin Energy Renewable Portfolio Cost

Renewable		Actual				
		2005	2006	2007	2008	2009
Wind	Mwh	515,247	639,215	584,347	835,175	1,253,161
	Energy Cost	\$ 12,853,154	\$ 17,536,695	\$ 16,116,203	\$ 27,234,811	\$ 50,412,115
	Congestion cost	\$ (2,549,355)	\$ (1,817,626)	\$ (1,121,113)	\$ 16,215,560	\$ 3,754,624
	Avg. cents/kWh	0.025	0.027	0.028	0.033	0.040
Solar	Mwh					
	Energy Cost	\$ -	\$ -	\$ -	\$ -	\$ -
	Avg. cents/kWh	-	-	-	-	-
Biomass	Mwh	91,586	66,136	66,309	65,752	53,691
	Energy Cost	\$ 2,283,068	\$ 1,781,334	\$ 1,628,588	\$ 1,601,343	\$ 1,090,444
	Avg. cents/kWh	0.025	0.027	0.025	0.024	0.020
Total	Mwh	606,833	705,351	650,656	900,927	1,306,852
	Energy Cost	\$ 15,136,222	\$ 19,318,029	\$ 17,744,791	\$ 28,836,154	\$ 51,502,559
	Avg. cents/kWh	0.025	0.027	0.027	0.032	0.039

Notes:

1) Biomass includes Landfill and Woodwaste resources



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Austin Energy Renewable Resource Cost

Renewable		Projected				
		2011	2012	2013	2014	2015
Wind	Mwh	1,857,436	1,726,602	2,390,749	2,438,724	2,785,404
	Energy Cost	\$ 71,561,808	\$ 68,304,207	\$ 93,063,083	\$ 81,820,756	\$ 94,415,572
	Congestion cost					
	Avg. cents/kWh	0.039	0.040	0.039	0.034	0.034
Solar	Mwh	70,520	70,659	70,520	138,766	138,766
	Energy Cost	\$ 11,600,612	\$ 11,623,432	\$ 11,600,612	\$ 22,213,484	\$ 22,213,484
	Avg. cents/kWh	0.165	0.165	0.165	0.160	0.160
Biomass	Mwh	87,862	550,343	876,262	876,262	876,262
	Energy Cost	\$ 3,422,233	\$ 45,231,841	\$ 76,319,189	\$ 77,933,917	\$ 79,605,325
	Avg. cents/kWh	0.039	0.082	0.087	0.089	0.091
Total	Mwh	2,015,818	2,347,604	3,337,531	3,453,752	3,800,432
	Energy Cost	\$ 86,584,653	\$ 125,159,480	\$ 180,982,884	\$ 181,968,157	\$ 196,234,381
	Avg. cents/kWh	0.043	0.053	0.054	0.053	0.052

Notes:

- 1) Biomass includes Landfill and Woodwaste resources
- 2) Projection includes resources under contract and new resources reflected in April 2010 Resource Plan
- 3) Future Transmission Congestion Costs are not known or projected



All-in Cost Estimates for New Generation

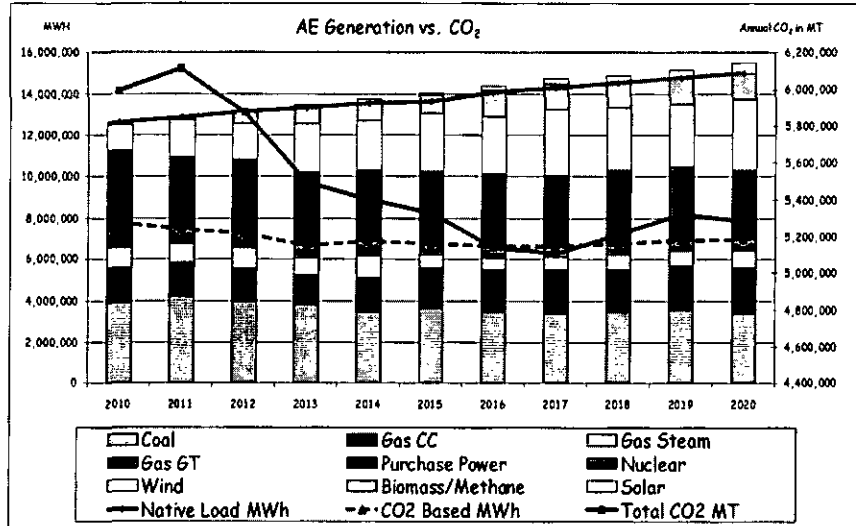
Generation Technology	Levelized Cost Cents per kWh
Nuclear	9 - 10
Coal	6 - 9
Coal with CCS	10 - 14
Natural Gas (GT)	15 - 18
Natural Gas (CC)	6 - 11
Wind	5 - 7
Solar	12 - 17

Notes:

- 1) "All-in" includes costs to construct, finance and operate (including fuel levelized over a long term period)
- 2) Cost estimates are based on public data, consultant data and internal AE forecasts
- 3) Natural Gas GT - Gas Turbine Peaker - Natural Gas Market Prices \$5 to \$11 per MMBtu
- 4) Natural Gas CC - Combined Cycle - Natural Gas Market Prices \$5 to \$11 per MMBtu
- 5) Renewable resources reflect Production / Investment Tax Credits
- 6) Solar costs assume utility scale central solar installations
- 7) CCS is carbon capture and sequestration
- 8) Delivery costs related to transmission congestion are not included



AE Generation vs. CO₂



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National Trends to Watch

- Federal Legislation regulating CO₂ and a Renewable Portfolio Standard are not likely in the next Congress
- Greenhouse gas (GHG) is regulated by U.S. Environmental Protection Agency (EPA) under the Clean Air Act
- Growth in renewable investments has continued during the economic downturn, however, regulatory bodies are beginning to challenge the cost of renewable energy for rate payers
- Natural gas is at record low prices on the spot market due to reduced demand and new discoveries of shale gas



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Forecasting the Generation Plan's Affordability

- Tool to be updated annually and reported to City Council with 5 Year Financial Forecast each Spring along with rate benchmarking
- Early years of forecast are more firm data with latter years more dependent upon assumptions that will likely change
- *Emphasis is on predictability and low volatility*
- Revenue requirements driven by forecast assumptions
 - Inflation in forecast
 - Renewed emphasis on cost reduction strategies for utility operations and capital spending plans.
 - Rate review will reset revenue requirements

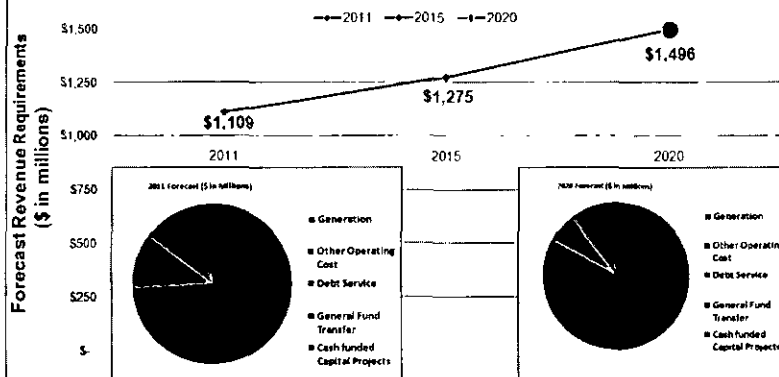


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Generation Plan Implementation Affordability Template

Forecast Revenue Requirements driven by assumptions that include inflation, but have not assumed cost reduction strategies.

Reach 35% Renewable Goal by 2020 = 35% Revenue Increase



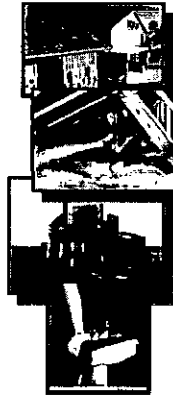
Rate increase coupled with cost reductions will be required to close the gap and improve the plan's affordability. Cost reductions alone will not be sufficient. Have not formalized renewable strategy (mix of owned & purchased power) which changes debt service.



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Benefits of Implementing Generation Plan for Consumers and the Utility

- Generation Plan Goals - lower CO₂ emissions, increase renewable energy & energy efficiency
- Rate design will incentivize energy efficiency
- Consumer benefits
 - Energy efficiency improvements lower usage & bills
 - Cleaner environment
- Utility benefits
 - Lower long-term CO₂ emissions costs
 - Increased energy efficiency reduces utility load and revenue, but delays costly additions of power supply
 - Affordable and competitive rates/bills maintained with careful timing of renewable additions
 - Position utility for the long-term



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Summary

- Benchmarking
 - Austin Energy's rates are competitive in Texas for residential, commercial and industrial customers
- Affordability Forecast
 - Generation plan goal - 35% of annual power supply from renewable energy by 2020
 - Tool to forecast affordability of generation plan
- Annual updates with 5 Year Financial Forecast



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Council Communication Timeline

- **January 2011**
 - Report to Council on rate design progress and Public Involvement Committee
 - Master schedule for rate review
- **April 2011**
 - Update Council in a work session on benchmarking, generation plan financial forecast and AE general financial performance and 5 year financial forecast
- **July 2011**
 - Report to Council on rate design progress
- **October 2011**
 - Council work session on operational performance and other strategic issues



Questions

