MEMORANDUM

TO:	City of Austin Electric Utility Commission
CC:	Marc A. Ott, City Manager
FROM:	Larry Weis, General Manager
DATE:	September 17, 2012
SUBJECT:	Generation plan update - FPP options in response to Council Resolution 20111006-059

This report and recommendation is in response to Council Resolution 20111006-059 (copy attached) which directed the City Manager and General Manager of Austin Energy (AE) to prepare a report analyzing various strategies for near-term resource, generation, and climate protection goals relating to the Fayette Power Project (FPP) and other resources. The Resolution requested delivery of the report to the Electric Utility Commission at its September 2012 meeting and to the City Council at the following regularly scheduled Austin Energy quarterly update.

Recommendation

Austin Energy (AE) and its customer owners have enjoyed the benefit of a diverse generation portfolio for some time. This diversity has increased in recent years with the growth of AE's renewable resources. With additions completed in 2011 and 2012 we expect to supply approximately 27% of AE customer demand from renewable energy sources by 2013. This places AE well on its way to meeting its 2020 renewable goals and allows AE the opportunity to consider eliminating coal from our portfolio while still maintaining diversity through a mix of nuclear, renewable and clean burning natural gas.

In response to the resolution AE has reviewed several scenarios related to the City's share of FPP including selling it to LCRA or a third party. That option has been determined to be technically feasible, from an operational system perspective, and appears to be economically viable under current energy, fuel and regulatory forecasts. However, a firm value for FPP is ultimately needed to fully evaluate the viability of this recommendation and that can only be determined through a formal sale process. We also expect the value to decline over the long term given the age of the facility and current forecasts, which suggests that pursuing a sale transaction sooner rather than later would achieve maximum value for AE's owners.

Based on the assessment Austin Energy recommends that we issue a Request for Proposals seeking offers for the sale of Austin Energy's interest in FPP to determine if favorable sales terms that can support this recommendation can be achieved. We further recommend that we concurrently evaluate opportunities to replace the FPP capacity with natural gas based generation. This may include one or more of the following steps:

- Purchase of one or more existing power plants
- Construction of one or more power plants, including expansion at Sand Hill Energy Center
- Short and long term power purchase agreements
- Possible actions to secure long-term gas prices

Any action to sell, buy or build long-term generation resources will be presented to Council with an assessment of its impact on affordability and other goals. In addition, any sale of FPP will require presentment to LCRA for their review under the terms of the Right of First Refusal.

Background

The Austin Energy Resource, Generation, and Climate Protection Plan to 2020 (the Generation Plan) that was unanimously adopted by Council in April 2010 includes a goal of reducing generation portfolio CO_2 emissions to 20% below 2005 levels by 2020. FPP contributes approximately 75% of annual generation portfolio CO_2 emissions. As a result, meeting this goal will require the sale, retirement or significant reduction of FPP output.

The Resolution specified discussion of several topics related to FPP that fall within two broad areas; each discussed below.

1. Environmental considerations
2. Feasibility of selling or mothballing AE's share of FPP.

Environmental Considerations

Austin Energy reviewed several environmental considerations including, its CO_2 Goal, the Cross-State Air Pollution Rule, the Mercury and Air Toxics Standard, ozone standards and water supply.

The Cross-State Air Pollution Rule (CSAPR) was vacated and remanded back to the United States Environmental Protection Agency (EPA) by a federal court in August 2012 and therefore is not expected to impact FPP at this time. If EPA replaces CSAPR, Austin Energy will evaluate the impacts of that replacement rule. Austin Energy and the Lower Colorado River Authority (LCRA) completed a five year project in 2011 to install flue gas desulphurization equipment commonly known as scrubbers at a cost to AE of approximately \$200 million. The scrubbers remove more than 95% of SO_2 emissions and reduce particulate matter and mercury emissions from the two units. The installation and operation of the scrubbers makes FPP well-positioned to comply with the recently finalized Mercury and Air Toxics Standards (MATS) compared to coal plants without similar equipment. Relatively minimal additional capital improvements of approximately \$9 million for AE and operational costs will be required to comply with MATS; these expenses are included in the current business plan and are not expected to have a significant impact to FPP's cost of operation. The scrubbers also make FPP well-positioned to comply with any future rule limiting SO_2 emissions such as CSAPR or its replacement. MATS and CSAPR, or a replacement similar to CSAPR, are the two EPA rules that are expected to have the greatest impact in the near term on the U.S. power sector, especially coal plants.

In addition to MATS and CSPAR the EPA has also proposed a number of other rules in recent years that cumulatively could have a significant impact on the electric sector as a whole. Many of these rules, however, have not been finalized and are therefore difficult to quantify in terms of cost and operational impacts.

A proposed rule affecting the classification and storage of coal ash at coal fired power plants would likely impose new requirements on the storage of coal ash in ponds and other impoundments. The majority of coal ash from FPP is currently recycled for beneficial reuse and FPP does not use a wet ash pond for storage. Cost impacts to FPP will not be known until EPA finalizes the rule and there are currently no deadlines for its completion.

The EPA has also deferred a revision to the federal standard for ozone until 2013. Once EPA proposes a new ozone standard, the State and EPA will determine which counties in Texas should be designated non-attainment, and large point sources in those counties could then face requirements to reduce emissions. Fayette County, where FPP is located, tends to have lower ozone levels compared to urban areas and is therefore less likely to be designated non-attainment than the larger urban counties. While FPP is one of many sources that contribute to ozone levels in the central Texas region there is no evidence to indicate its absence would prevent Travis County from becoming non-attainment. Ultimately, the cost to comply with new standards cannot be assessed until non-attainment designations are made and emissions reduction requirements, if any, are determined.

With respect to water supply, AE believes FPP is well positioned for the future. FPP operation was not impacted during the record drought of 2011/2012. However, in response to that event, AE increased its firm water supply as a precaution against a continuation of extreme drought conditions. AE does not anticipate that FPP would face significant operational constraints in the most likely curtailment scenario defined by the LCRA.

<u>Feasibility of Selling or Mothballing</u>

Selling the AE's share of FPP to LCRA or a third party has been determined to be technically feasible from an operational position, and appears to be economically viable under current energy, fuel and regulatory forecasts. A firm value for FPP can only be determined through a formal sale process. Since we expect its value to decline over the long term, given the age of the facility and current forecasts, we believe that pursuing a sale transaction sooner rather than later would achieve maximum value for AE's owners.

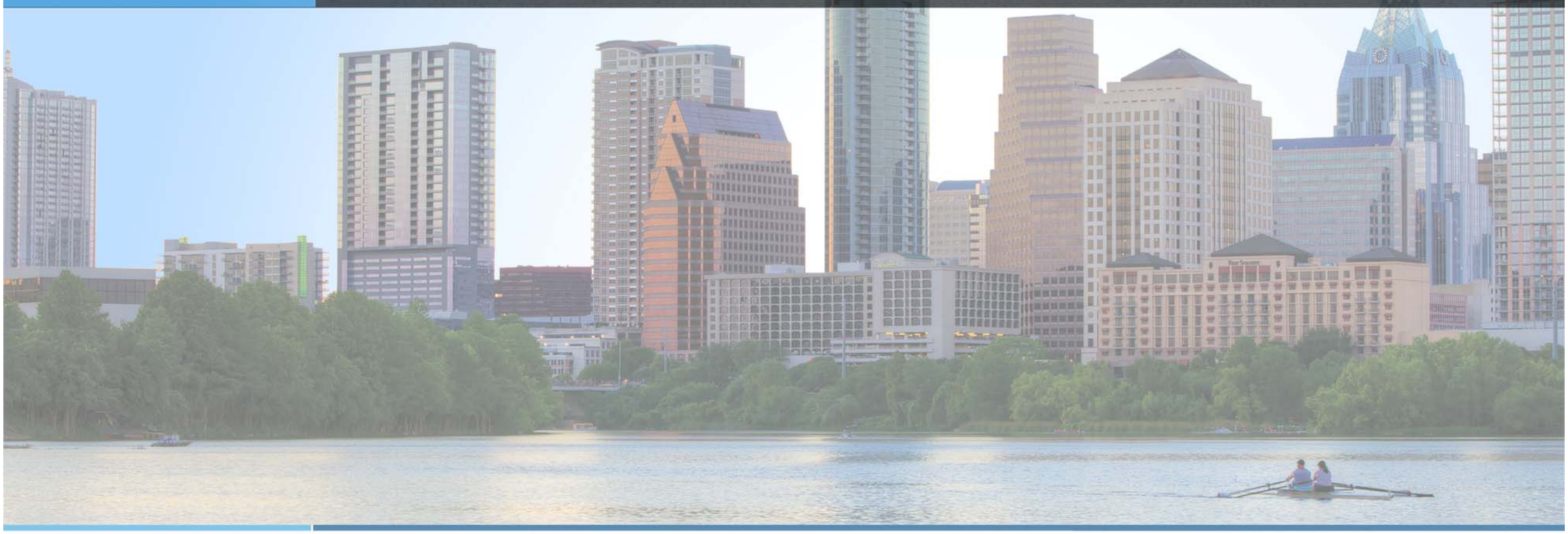
Mothballing or retiring AE's share of FPP is not currently an option. The joint ownership of the units and the Fayette Participation Agreement that governs its operation do not allow AE to unilaterally retire or mothball its share of the facility. As a result, any effort to retire or mothball AE's share would require a negotiated arrangement with LCRA. In addition, and irrespective of any agreement between AE and LCRA regarding mothballing or retirement, ERCOT, the grid operator, must approve proposed retirements or mothballing. The outcome of a mothball or retirement request is determined by its potential impact on ERCOT system reliability.

Our analysis of the economic impacts of these options considered both expected market conditions as well as the importance of FPP in AE's resource portfolio. FPP represents approximately 22% of AE's generating capacity and supplies nearly 32% of annual energy requirements. As a result, AE contemplates a replacement of the capacity and energy provided by FPP in either a sale or maintenance of ownership with a reduction in output scenario. The analysis indicates both scenarios can be achieved affordably with maintaining ownership and reducing output being slightly more favorable than a sale of FPP. Either scenario may impact both base and power supply rates with the net effect expected to be affordable. This analysis is highly sensitive to several key assumptions such as sale and replacement values and the future cost of natural gas. These assumptions can only be validated through sale and purchase replacement processes given the relatively unique nature of the assets and while the outlook for natural gas prices has moderated it remains subject to future volatility.

Summary

AE believes the timing is right to assess the sale of FPP in order to meet its CO_2 goal. Compared to other coal plants FPP is well positioned to meet environmental requirements which enhances its value today. However, that value may decrease over time. At the present, general market conditions may also allow AE to replace FPP's capacity at an affordable cost with gas based generation that emits less than half the carbon. The success of this approach ultimately depends on the availability of favorable terms within a prospective sale and replacement options. If this approach does not bear fruit, AE will continue to evaluate options under the joint participation agreement, and continue to evaluate affordable additions of highly efficient gas assets that will support meeting the 2020 CO_2 goal by reducing output at FPP.

2012 Generation Plan Update – Addressing FPP



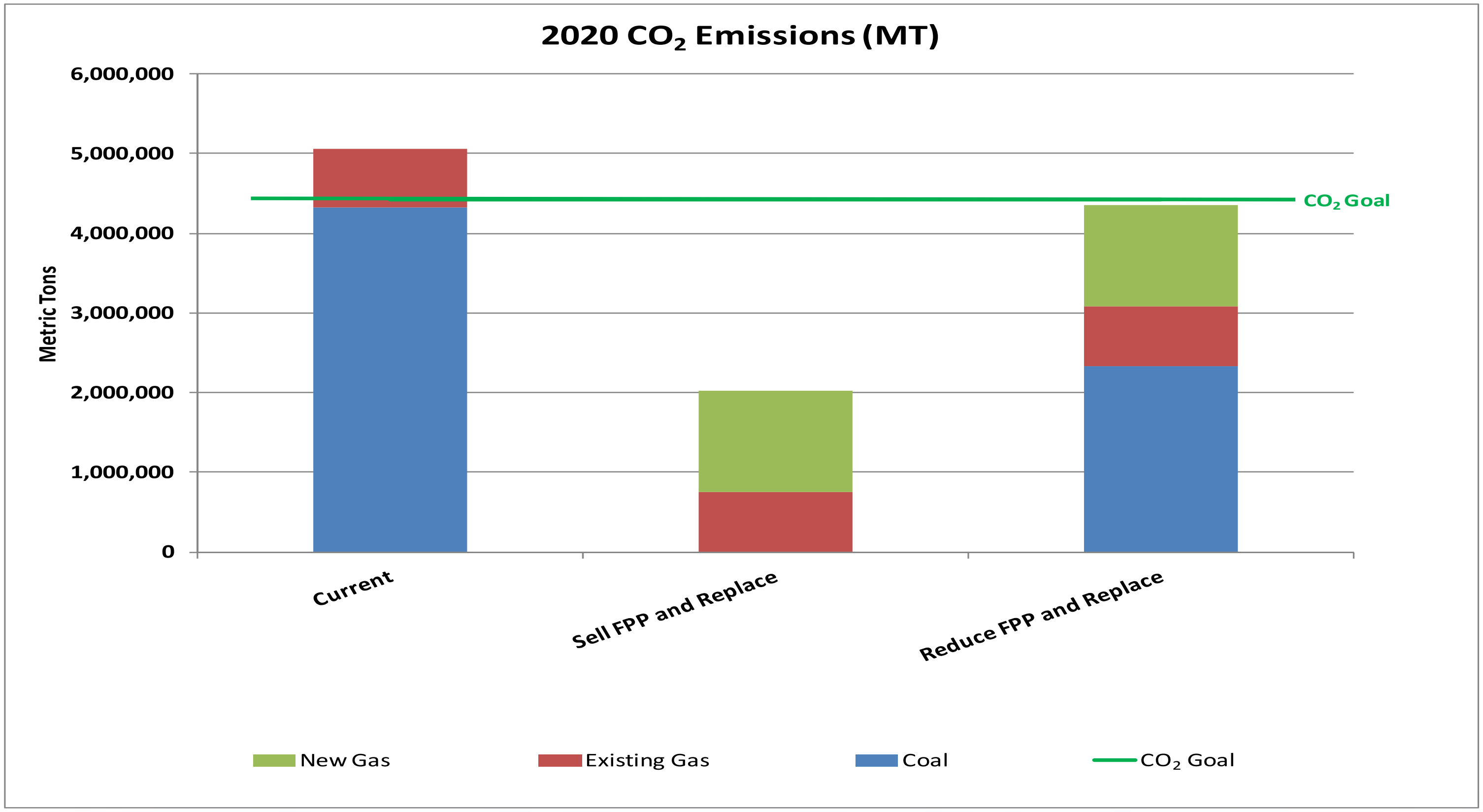
Electric Utility Commission

September 17th, 2012

Cheryl Mele, Austin Energy Chief Operating Officer

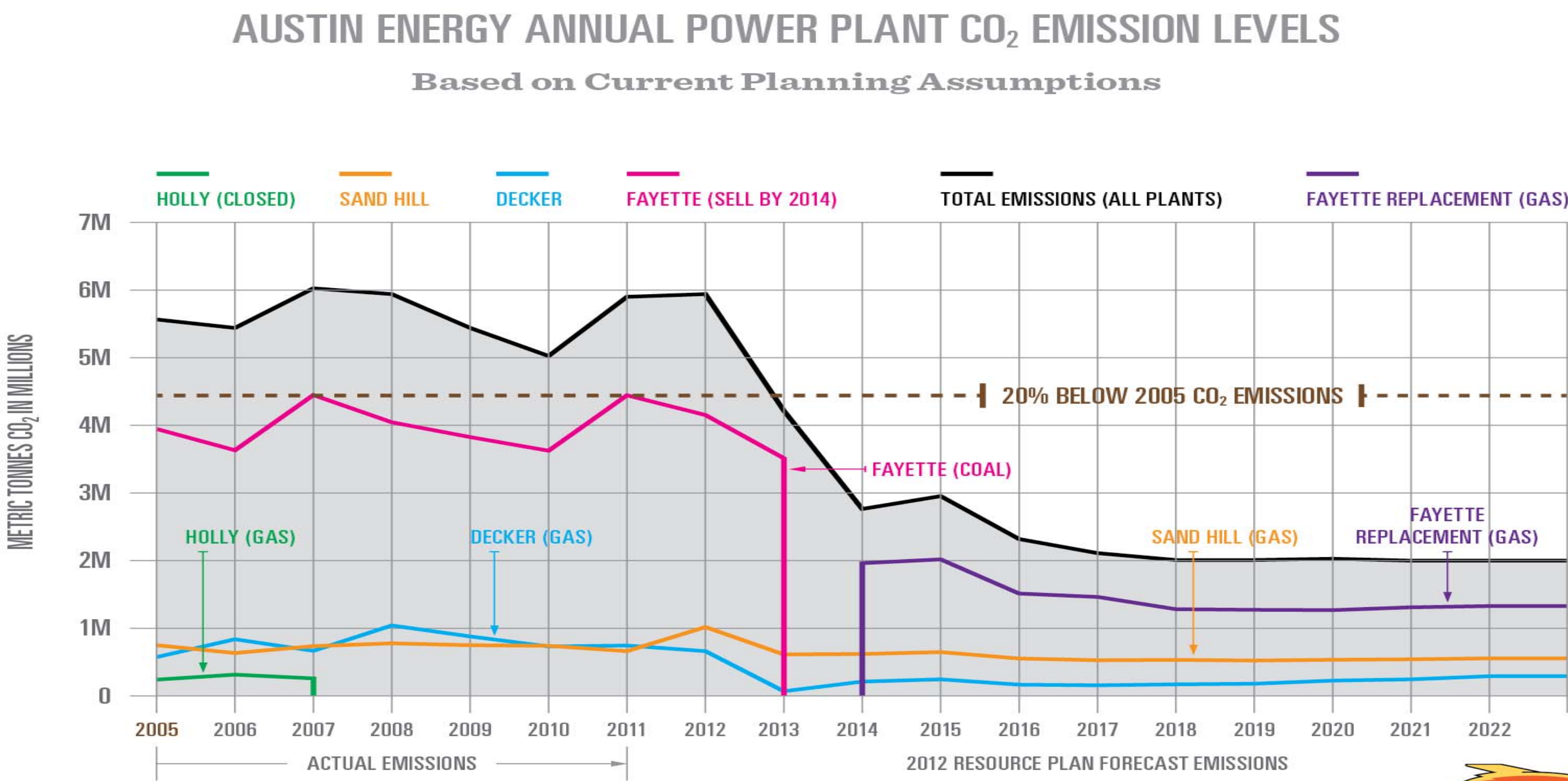
CO_2 Reduction Goal

- The Fayette Power Project represents approximately 75% of annual CO_2 emissions
- Meeting the CO_2 Goal requires a significant reduction or removal of FPP's contribution



AE Recommendation

- **AE recommends pursuing the sale of AE's share of FPP and replacing it with natural gas combined cycle generation**



AE Recommendation

- Why pursue a sale:
  - FPP's value may decline as it nears nominal end of life; 2030
  - Sale proceeds help mitigate replacement cost
  - Allows earlier achievement of CO_2 goal
  - Natural gas prices have moderated and tools to control its cost are available
  - Market and economic conditions may be favorable to purchase of other generation resources
- Replacing FPP may include one or more of the following – all of which are gas based:
  - Purchase of one or more existing power plants
  - Construction of one or more new power plants
    - Including expansion option at Sand Hill
  - Short and Long Term Power Purchase Agreements

FPP Sale & Replacement

- Sale Process:
  - Process could take 12 – 24 months to complete
    - Issue an RFP
    - Evaluate
      - LCRA has a right of first refusal
    - Negotiate, Execute a transaction
- Concurrently evaluate replacement options
- If favorable sale terms can't be achieved:
  - Target a reduced use of AE's share of FPP to meet the 2020 CO_2 goal
  - Acquire additional gas resources will help achieve this
- AE believes both approaches are affordable
- Any changes in approach will be reflected in future Generation Plan updates

Projected Conventional Generation Portfolio with FPP Sale/Replacement

MEGAWATT CAPACITY

Year	Coal	Nuclear	Gas	Total
2013	602	436	1497	2535
2014	(602)[1]		1000[2]	398
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
TOTAL	**0**	**436**	**2,497**	**2,933**

Notes:

1) Potential sale of FPP

2) Gas Plant Purchase up to 1000 MW

Balancing Goals and Affordability

- The Plan does not commit AE to any specific action - it is only a roadmap and will continue to be updated to reflect changing conditions
- AE must meet affordability objectives
  - A sale of FPP depends on favorable terms – if not the Plan will be adjusted to achieve the CO_2 goal by a reduction of FPP's usage
- Future actions to build, acquire or remove resources will be presented to council with a current assessment of the impact to goals and affordability

Projected Overall Generation Portfolio

MEGAWATT CAPACITY

Year	Coal	Nuclear	Gas	Biomass	Wind	Solar	Renewable Portfolio
2013	602	436	1497	112	849	36	27.5%
2014	(602)[1]		1000[2]				27.3%
2015					150	25	31.6%
2016					100[3]	25	29.9%
2017					100[3]	25	30.6%
2018					100[3]	30	31.9%
2019					35	25	32.7%
2020					75	34	35.0%
2021					25		35.0%
2022					25		35.1%
TOTAL	**0**	**436**	**2,497**	**112**	**1,137**	**200**	

Notes:

1) Potential sale of FPP

2) Gas Plant Purchase up to 1000 MW

3) Wind Contracts totaling 322 MW expire 2016-2018

Summary

- The plan is designed:
  - To be flexible
  - To meet current goals
  - To remain affordable
- Asset purchases and sales may impact both base and PSA* rates (* PSA replaces Fuel Charge October 2012)
  - Asset purchases to replace or reduce FPP are likely to require a base rate increase
  - Base rate increases may be offset in part or in whole by PSA decreases
  - The net impacts are expected to be affordable
- No commitments – each transaction will be analyzed and approved on its own

End

RESOLUTION NO. 20111006-059

WHEREAS, the City of Austin and the Lower Colorado River Authority (LCRA) are joint owners of the Fayette Power Plant (FPP), with the City owning 50% of units 1 and 2, and LCRA owning 50% of units 1 and 2 and 100% of unit 3; and

WHEREAS, in April 2010, the Austin City Council unanimously adopted the *Austin Energy Resource, Generation, and Climate Protection Plan to 2020* (the *Generation Plan*); and

WHEREAS, implementing the *Generation Plan* would reduce the amount of energy Austin Energy receives from FPP by about 24% by 2020; and

WHEREAS, Austin Energy is required to reassess the *Generation Plan* in a public forum every two years, and the 2012 review will include Item 40 of the *Additional Objectives and Initiatives* section of the *Generation* Plan, which specifies a goal of accelerating the phase-out and eventual closure of the city's share of FPP by 2020, if economically and technologically feasible; **NOW THEREFORE,**

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

That the City Manager and General Manager of Austin Energy are directed to prepare a report analyzing various strategies for near-term resource, generation, and climate protection goals relating to FPP and other resources. The report should include scenarios specific to Item 40 of the *Generation* Plan and FPP that examine the affordability, environmental, and legal impacts on Austin Energy, the City of Austin, and electric ratepayers of:

- the potential impact of the EPA Cross-State Air Pollution Rule and other proposed EPA regulations that could impact FPP's costs of operation;
- the feasibility of selling the City's share of FPP to LCRA or a third party; and
- the feasibility of "mothballing" the City's share of FPP.

The analysis should discuss:

- the potential revenue and operational savings from the potential sale of the City's share of FPP;
- the carbon reduction effects and value upon closure;
- the projected revenues from sales of FPP output into the ERCOT wholesale market; and
- the future costs to adhere to environmental regulations such as local water curtailment, fly ash regulations, or federal clean air standards should the Austin area or the plant fall out of compliance.

BE IT FURTHER RESOLVED:

That the City Manager shall present the report to the Electric Utility Commission at its September 2012 meeting, and to the City Council at the following regularly scheduled Austin Energy quarterly update.

ADOPTED: October 6 , 2011 **ATTEST:** Shirley A. Gentry

Shirley A. Gentry
City Clerk