

Late Backup

(page 6, Solar) Change first paragraph to read: "Under the Plan, installed solar capacity would increase to at least 950 MW by 2025, including 200 MW of local solar. To ensure affordability, the Plan recommends implementing a phase down of residential and commercial incentive programs to achieve the first 110 MWs of the local solar goal by 2020, including at least 70 MWs of customer-sited solar. Current projected cost declines of solar energy, technology-improvements, financing alternatives and the implementation of supportive solar policies shall be utilized to enable the city to reach the 200-MW goal – including at least 100 MWs of customer-sited local solar - by 2025 absent further incentives."

Maintaining Subarea covered Appendix A.
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Appendix A

500 MW Plant Decker Replacement Independent Review Process for Procurement and Scope of Work

Background

As part of its 2014 Resource Plan update, Austin Energy (AE) has identified the potential for retirements and additions to its ~~natural gas units in the Austin area~~ generation fleet. In particular, it projects the potential retirement of 735 MW of steam gas fired generation at its Decker power plant site and the construction of a new combined cycle gas unit with a nominal rating of 500 MW by the end of 2018. AE plans to reduce dispatch beginning in 2020 and retire its share of Fayette Power Project (FPP) (602 MW) by as early as 2023.

As part of its plan, AE has committed to sponsor an independent economic and environmental review of the a new gas plant and other options for filling the resulting energy and capacity gaps. In addition to a new gas plant, the review should consider ~~look at an alternative scenario that would involve storage,~~ renewables, power purchase, and demand response. The review is intended to provide an economic cost/benefit perspective of the new plant taking into consideration the construction and operating costs, changes in emissions and water usage, along with potential wholesale market revenue and benefits to the AE load zone and costs and risks ~~associated with a new gas plant~~ as further detailed in the scope below. The review is intended to be shared on a public basis provided that certain specific competitive elements may be treated as confidential and shared only in executive sessions or non-public settings.

Procurement

The selection of the consultant or proposer shall be performed using the City of Austin procurement process through a competitive Request for Proposal (RFP). The RFP and resultant report by the consultant shall be managed by the office of the Chief Financial Officer at AE.

Large binding dollar investments will not be made pending the results of this report. *and council acceptance.*

The following reviews and approvals will be contained in the RFP process:

1. The Electric Utility Commission (EUC) shall review and make recommendations regarding the scope of work and data assumptions as proposed by Austin Energy to City Council using the normally adhered to process.
2. AE staff will perform the final approval matrix evaluation and recommend 3 consultants one of which shall be approved by City Council. *The EUC may make recommendations to the Council as to the best consultant.*

Generation Plan implementation

~~The development of the independent study shall not preclude the initial approval and implementation of steps for the generation plan due to the time sensitive nature of the deadlines for goals advanced by the plan. These may include the approval of initial planning and permitting contracts or the issuance of RFPs for renewable purchases. Examples of implementation items that may be advanced include:~~

- Contracting for an owner engineer's firm
- Consulting contract for environmental permitting for siting the new power plant
- Establishing a cash reserve fund for the FPP retirement
- Issuing a request for proposal for utility scale solar or wind
- Issuing a Request for Information on large scale Storage Technology
- Development of a plan and proceeding on projects associated with grid connected storage

Large binding dollar investments will not be made pending the results of this report including:

- Construction and equipment purchase contracts for the 500MW plant
- Selecting and signing with a solar or wind developer as a result of issuing an RFP
- Transferring dollars to the FPP retirement account

Qualifications of Proposer

Proposer must have ten plus years of analytic experience (individually or corporately) in the areas of wholesale power markets and the financial assessment of power generation facilities in those markets. In particular, the proposer should have a strong track record of conducting such analysis in the framework of competitive wholesale locational marginal price power markets with specific experience in the ERCOT nodal market. Proposer must demonstrate relevant experience and capabilities that include:

- Pro-forma financial analysis for power plant developments as noted above consistent with current industry practices.
- The ability to obtain or provide appropriate data inputs necessary for such analysis, including estimates of power plant construction and operating costs as well as projections of future fuel and power prices.
- The ability to support the analysis based on the use of a production cost model such as UPLAN, PROMOD or MAPs suitable for the ERCOT's nodal power market.
- The ability to analyze environmental risks and costs, including water usage and pollution impacts.
- Familiarity with energy efficiency, demand side management, renewable energy, energy storage, and purchase power agreements.
- Experience providing analytical support for with major domestic or international financing firms/ratings agencies (Fitch, Moody's, S&P) for large investments.
- The ability to use a Monte Carlo analysis for performing sensitivities. Experience in the use of Weibull distributions in engineering economics is preferred.
- Experience and understanding of the unique characteristics of a vertically integrated utility in the nodal market.

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Scope of Work

AE seeks a financial assessment of the costs and benefits of a nominal 500 MW natural gas combined cycle plant to be constructed in the Austin area at either its Decker Creek plant site or its Sand Hill

Energy Center site ~~as an alternate~~, to the costs and benefits of alternatives such as, as well as an alternative involving large-scale storage, renewables, purchased power and demand response. The assessment must include the following elements at a minimum:

- Expected and hi/lo sensitivities for construction costs of the gas plant facility including direct and financing costs
- Projected operation and dispatch of the gas plant facility that includes:
 - Detailed facility performance characteristics including heat rates, ramp constraints and other relevant operational limits
 - Hourly level dispatch using an appropriate production cost model such as UPLAN, PROMOD or MAPs that considers transmission topology in a security constrained economic dispatch approach based on the ERCOT market.
 - Must include detailed description of the market driver inputs such as load, generating capacity and fuel
 - Expected and hi/lo sensitivities for on-going operating costs including operations and maintenance, fuel, and financing
 - Expected and hi/lo sensitivities for power market prices and plant revenue derived from energy and ancillary services
- The impact to revenue, cost and associated risks in the AE load zone under scenarios that include:
 - A retirement of its Decker steam units and FPP without a new generator in the Austin Energy load zone
 - A retirement of its Decker steam units with the construction of a the new 500 MW gas combined cycle plant at the Decker site
 - A retirement of its Decker steam units with the construction of a the new 500 MW gas combined cycle plant at the Sand Hill Energy Center site
- Comparison with ~~two or more~~ other scenarios that uses reasonable combinations a portfolio of energy storage, demand response, and or renewable energy in lieu of investing in a new plant
- Validation of inputs to be used for analysis
- Other benefits and impacts associated with the alternatives plant such as:
 - Resultant impact on water use
 - Resultant impact on local criteria pollutants and broader effects of these pollutants
 - Land use impacts at Sand Hill or Decker
 - Revenue benefits and costs to AE customers
 - General fund transfer/tax effects for Austin taxpayers
 - Local Economic impact of project/plant

The assessment shall result in recommendations to Council of the costs and impacts of each of the scenarios.

The Base Deliverables desired for this project are:

1. ~~Provide~~ a written executive summary of the findings.

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• Ability of the city to meet its climate change goals

2. ~~Prepare~~ a PowerPoint slide deck of the findings.
3. ~~Provide~~ a written report which includes the findings as well as narrative details regarding the findings, methods and assumptions used in the report.
4. A minimum of three meetings to be held in the Austin area to present the findings. These meetings may be held on non-consecutive dates over a period of several days or weeks.

Optional Deliverables may include:

5. Options for Proposer to attend one or more additional meetings in the Austin within the next 90 days.
6. Option to perform an assessment of local economic development impacts of the alternatives project.

As previously noted, it is AE's intent that the majority of the deliverables will be publicly available. However, proposer may be required to execute a confidentiality agreement in order to receive access to competitive, non-public information from AE and to protect such information as it relates to the deliverables.

~~AE contemplates the above to be completed within a cost not to exceed \$100,000.~~

Please include the following in your response:

1. A list of staff to be involved in the project including resumes and work experience applicable to the requirements
2. Workplan and costing for the base deliverables
3. Costs for optional deliverables

Timeline

AE will endeavor to adhere to the following schedule:

- Present scope to EUC for review on December 15, 2014
- Present consultant selection to Council Committee on AE (CCAЕ) for review
- Review assumptions to be used in analysis with CCAЕ as soon as available
- A preliminary draft report to be reviewed by staff and EUC will be delivered no later than May 29, 2015
- The final report will be delivered for presentation to the EUC, Austin City Council or the CCAЕ by June 27, 2015.

Delish Summary pt 2

Generation Plan Amendments

CM Kathie Tovo

December 11, 2014

Amendment 1.

On p. 4 of 9 of the Generation Plan Summary, replace item 1 to read:

The Plan adopts and acts immediately on:

1. Commencing a third party economic and environmental review [Appendix A] of up to 500 MW of the most efficient gas generation.

Amendment 2.

Insert a heading titled "Appendix A" into related study titled, "500 MW Plant Decker Replacement Independent Review Process for Procurement and Scope of Work".

commencing 3rd Party IR to replace Fayette plant
Decker plant
COP
Decker plant

Amendment 3.

On p. 6 of 9, under Fossil Fuel Additions

Fossil Fuel Additions

The Plan would add 500 MW of additional gas units by the beginning of 2018 at the Sand Hill Energy Center or Decker. Prior to the addition of any gas generation, Austin Energy will issue an RFP to select a consultant with the expertise to analyze the ERCOT nodal market using a production cost model to perform an independent review of the 500 MW investment to fully report benefits and risks of this strategy, before any large binding investments are made.

5/15/15

Amendment 4.

In the proposed study titled, " 500 MW Plant Decker Replacement Independent Review Process for Procurement and Scope of Work" [now called Appendix A] , p. 1 under "Generation Plan Implementation":

Generation Plan implementation

The development of the independent study shall not preclude the initial approval and implementation of steps for the generation plan due to the time sensitive nature of the deadlines for goals advanced by the plan. These may include the ~~approval~~ issuance of RFPs for initial planning and permitting contracts or the issuance of RFPs for renewable purchases. No contracts pertaining to the design, construction, or permitting for any new gas generation shall be negotiated prior to the completion and subsequent Council action responding to the independent economic and environmental review. Examples of implementation items that may be advanced include:

- ~~Contracting~~ Issuing an RFP for an owner engineer's firm
- Issuing an RFP for ~~consulting contract services~~ for environmental permitting for siting the new power plant
- Establishing a cash reserve fund for the FPP retirement
- Issuing a request for ~~proposal~~ for utility scale solar or wind
- Issuing a Request for Information on large-scale Storage Technology
- Development of a plan and proceeding on projects associated with grid connected storage.