

IPL Energy Master Plan
Request for Proposal Evaluation Report

11/8/17

Background

The Power and Light Department's last major Generation Master Plan was completed at the end of 2011. The 2011 Master Plan successfully provided recommendations for economically navigating the multitude of new environmental regulations taking effect in subsequent years.

After six years and significant changes in energy markets it is time to embark on a new Generation Master Plan. The most significant market change has been the March 1, 2014 implementation of the Southwest Power Pool's (SPP) Integrated Market (IM). The IM radically changed wholesale markets, wholesale market profitability, and the operation of generating power plants in the SPP footprint. Additionally, the wide adoption of renewable generation in SPP combined with an expanding presence of customer-based rooftop solar generation have added new challenges for traditional generating technologies. With these changes, IPL's generators may be approaching the end of their economic life.

When combined, these changes dictate the need for a detailed evaluation of our electric generating fleet and the alternative generating technologies available today. As such, the Power and Light Department issued a Request for Proposal (RFP) to obtain costing for completing these much needed evaluations.

Request for Proposal

On June 29, 2017, a Request for Proposal (RFP) for an IPL Energy Master Plan was issued.

The RFP was posted as follows:

- 1) Posted on the City's website.
- 2) Posted on Public Purchase, the City's preferred internet-based, e-procurement system, where 178 potential consultants downloaded the RFP.
- 3) Five (5) Consultants were specifically notified of the RFP: Black and Veatch; Burns and McDonnell; HDR, Inc.; Power Engineers; and Horizons Energy.

Scope of Project

The scope of this Master Planning Effort is far beyond the last two planning efforts (2008/9, 2011). Implementation of the Southwest Power Pool's (SPP) Integrated Market is one of the major contributors to the expanded scope of the currently proposed study.

The 2008 Study evaluated existing unit condition, proposed retirement dates for IPL generators, and evaluated alternative replacement generation. The final recommendation was to replace

existing coal fired generation with the construction of a new coal plant, including identification of a recommended site for the new plant. This recommendation was ultimately not pursued.

The 2011 study primarily focused on addressing options for meeting new environmental regulations. The ultimate recommendation was to stop burning coal at Blue Valley and move to 100% natural gas fuel.

The current study will once again assess the condition of IPL's existing generators to include the costs associated with continued operation for 3, 5, or 10+ years (Near-term expenses can vary widely depending on the length of time units will operate). In addition, this study will consider the issues and costs for an option to exit the generation business and procure the needed capacity and energy from outside sources. Alternatives will also include combinations of on-site and outside generation. The option of reducing capacity and energy needs through Programs targeting Peak reductions and improved end-use energy efficiency will also be evaluated.

The SPP Integrated Market includes hourly energy prices and hourly dispatch options for generators. This greatly increases the importance of providing forecasts of hourly market prices. The hourly price forecasts require extensive use of computer simulation models that mirror SPP's market price models and generator dispatch protocols. This has significantly increased the complexity and cost of the proposed Master Plan.

The scope of IPL's proposed RFP included the following major items:

- 1) Detailed condition assessment of IPL's existing generators, future costs to maintain, efficient staffing recommendations, and anticipated economic retirement schedules;
- 2) Evaluation and pre-screening of viable alternative generating technologies to replace existing generation (Alternatives evaluated include Demand Side Management and End Use Energy Efficiency programs and outsourcing capacity and energy resources);
- 3) Detailed 20-year economic evaluation of alternative generation plans and technologies; and
- 4) A recommended long-term combination of technologies and programs to provide the preferred economic and environmentally friendly generating portfolio for the long-term future.

Evaluation Criteria

The RFP informed recipients that the following categories would be used to evaluate proposals.

Table 1
RFP Evaluation Criteria

CRITERIA	SUB-CRITERIA	POINTS
Price	Base Proposed Price	20
Generation Experience	General background with operation, maintenance, proper staffing levels, economic dispatch (generation), and other issues related to generating plants	25
Experience Evaluating Existing Generator Condition	History of evaluations, recommendations, efficient staffing evaluations, and overall expertise with combustion turbines and steam boiler generation	10
Experience Installing new generation and DSM/EE program experience	Experience with the installed cost of alternative technologies including renewables, storage, etc.; permitting requirements; plus fuel costs, O&M costs, and staffing for newer technologies	10
Expertise in forecasting hourly energy market prices	Focused on experience in the SPP market, the software programs utilized for hourly price forecasts, sources of information regarding key forecasts (gas price, regulatory issues, etc.), and evaluation of alternative futures (e.g., high/low natural gas prices; carbon dioxide regulation/taxes; and other market fundamentals).	20
Experience of Assigned Experts	Work history and successes of the team dedicated to the IPL Master Plan	10
Compliance with the RFP	Did Consultant respond properly to all Deliverables and provide all required documentation	5
Total Available Points		100

The majority of points are properly tied to the Consultant's overall experience with both traditional and emerging generating technologies. Cost is always a significant criteria (20% in

this evaluation), but the potential economic impacts resulting from this study dictate that the emphasis be placed on generation experience. In addition, the quality of hourly energy market price forecasts is a major consideration (in this case, equal to the weight placed on cost).

Evaluation Process

The RFP Evaluation Team was formed that included eight Power Light staff members (five Managers). The evaluation process included two major evaluation steps: 1) An initial scoring to select a short list of the top two or three respondents; and 2) Final evaluations after short-list Consultants made presentations to the Evaluation Team. Also, after the last candidate made their presentation, each candidate was asked to provide their Best and Final offer.

STEP 1. Prior to developing individual scores for selecting the short-list candidates, each Evaluation Team member reviewed the proposals received and the example studies provided by each respondent. The Team then met to discuss initial views of the pros/cons and strength/weaknesses of each proposal. Team members then scored candidates based on their views. The results of the initial ranking are shown below:

MASTER PLAN INITIAL RFP SCORES (100 PTS POSSIBLE)		
	Weighted Total	Rank
Burns & McDonnell	84.43	2
GDS Associates	76.00	4
HDR	54.86	5
Lutz, Daily, Brain	79.43	3
DL English	52.57	6
Power Engineers	87.57	1

The top three based on the above rankings were selected for further consideration and were asked to present 2-hour presentations to the Evaluation Team. A uniform list of discussion topics with a timeline for each topic was provided to the short list candidates. Once all

presentations were completed and we received the Best and Final offers from each candidate, the Evaluation Team met to once again to discuss the pro/cons and strengths/weaknesses of each candidate. Team members then individually scored candidates based on their understanding of qualifications. The results of final scoring are shown in the table below.

IPL MASTER PLAN SHORTLIST EVALUATION RESULTS		
CONSULTANT	Weighted Average	Rank
Burns & McDonnell	91.63	1
Lutz, Daily & Brain	85.00	2
Power Engineers	82.88	3

The presentations were an invaluable opportunity for each consultant to demonstrate their experience and expertise as well as revealing areas of weakness. As reflected by the change in scores from the initial rating to the final scoring, both Burns and McDonnell and Lutz, Daily, and Brain improved their ranking while Power Engineers lost ground. Specifically, Burns and McDonnell demonstrated leading expertise in every category included as a required Deliverable. Additionally, Burns and McDonnell proved their ability to respond to questions and to explain detailed issues and complex evaluation considerations rationally and in easily understood language. Their expertise, experience, and understanding of all critical issues—including newer technologies such as energy storage—is outstanding.

Cost Considerations

The not-to-exceed price proposals from initial submittals are shown in the Table below.

INITIAL NOT-TO-EXCEED PRICE PROPOSALS		
Consultant	Not-To-Exceed \$	Scored per Procurement Formula
Burns & McDonnell	\$ 428,400	14
GDS Associates	\$ 495,000	12
HDR	\$ 378,705	16
Lutz, Daily, Brain	\$ 302,200	20
DL English	\$ 604,800	10
Power Engineers	\$ 298,249	20

After all short-list candidates delivered their presentations, each was asked to provide their Best and Final offer. The results are shown in the Table below.

BEST AND FINAL PRICE PROPOSALS		
Consultant	Not-To-Exceed \$	Score per Procurement Formula
Burns & McDonnell	\$ 325,000	16
Lutz, Daily & Brain	\$ 247,200	20
Power Engineers	\$ 280,651	18

For Power and Light, the results of the Master Plan can maximize revenues from the SPP Integrated Market, position the utility for the future, and impact utility finances by millions of dollars per year. The higher cost of the Burns and McDonnell proposal is insignificant in relation to the importance of completing a thorough evaluation. This is critical for the City, the utility, and our Citizens. The final Evaluation Team scoring reflects this level of importance.

Budget Issues

The Power and Light Capital budget includes \$300,000 for completing the Master Plan. The Burns and McDonnell not-to-exceed price is above this amount. However, Power and Light has identified the Blue Valley unit 1 and 2 Major Generator Inspections (project 70201502) as a Capital project that will be delayed pending results of the Master Plan (project 70201707). Funds will be allocated as needed from project 70201502 to project 70201707. The net result will be a reduction in total spending for the fiscal year.

Recommendation

Burns and McDonnell is strongly recommended by Power and Light staff as the preferred consultant.