

Resolution 5933

Update

Renewable Energy/Power Supply

January 26, 2015



Resolution 5933

7 Action Items

- New Office Building (Energy Efficiency/Renewables)
- Renewables at City Facilities
- Renewable Energy Customer Programs
- Missouri City: End Production of Energy by 1/31/16
- Missouri City Disposition Options
- Cease Coal Use at Blue Valley
- Rate Study

Office Building

“That the City Manager is hereby authorized and directed to assure the design of the remodeled electric utility office building incorporates features and designs to minimize energy use and utilize renewable energy options to supplement the power needs of the building.”



Office Building

Activities

- Oct 20: Architect (Burns & McDonnell) Approved
- Oct. 28: Kickoff Meeting
- Nov 1-14: City Staff Interviews
- Nov 24-25: Conceptual Design Workshop
- Dec 23: Initial Design Presented
- Jan 8: City Comments on Design Provided
- Jan 14: Meeting with City Code Officials

Office Building

Preliminary Status

- Gold LEED Certification Possible
- Initial Design Includes Use of Solar/Wind
 - Economics Yet to Be Evaluated
- Site
 - 4-5 Acres Needed for Building
 - 9-10 Acres Available for Future City Development
- Schedule
 - Feb 19, 2015 : Design Complete
 - Apr 16, 2015: Construction Documents Complete
 - Jun 18, 2015: Bidding Complete
 - Mar 2016: Project Closeout

Renewables

City Facilities

“That the City Manager is hereby authorized and directed to develop and present to the City Council a feasibility study to determine the practicality and economics of the use of renewable energy options such as solar, wind and geothermal at City-owned facilities to help achieve the stated renewable energy goal.”

The image shows the cover of a report titled "Renewable Energy Options Evaluation" for Independence Power & Light (IPL). The cover features the Burns & McDonnell logo (SINCE 1998) in the top left and the Brightergy logo (CLEAN ENERGY. CLEAR CHOICE.) in an orange box on the left. The title "Renewable Energy Options Evaluation" is centered in blue. Below it is the IPL logo, which consists of a sun icon and the letters "IPL" in blue. To the right of the IPL logo, the text "Independence Power & Light" is written in black, followed by "Renewable Energy Study" and "Project No. 81397" in a smaller font. At the bottom right, it says "Revision 2" and "November 25, 2014". A large, diagonal "PRELIMINARY" watermark is overlaid across the center of the cover. The cover is framed by a white border with black bars at the top and bottom.

Independence Power and Light

Solar Energy Proposal

Renewables

City Facilities

- Burns & McDonnell
 - Evaluated 29 City Facilities
 - Narrowed to 11 for Detailed Analysis
 - Considered Roof-Top Solar, Ground-Mounted Solar & Carport Solar
 - Evaluated Wind & Geothermal
- Brightergy
 - Evaluated 29 City Facilities
 - Narrowed to 12 for Detailed Analysis
 - Considered Roof-Top Solar

Renewables

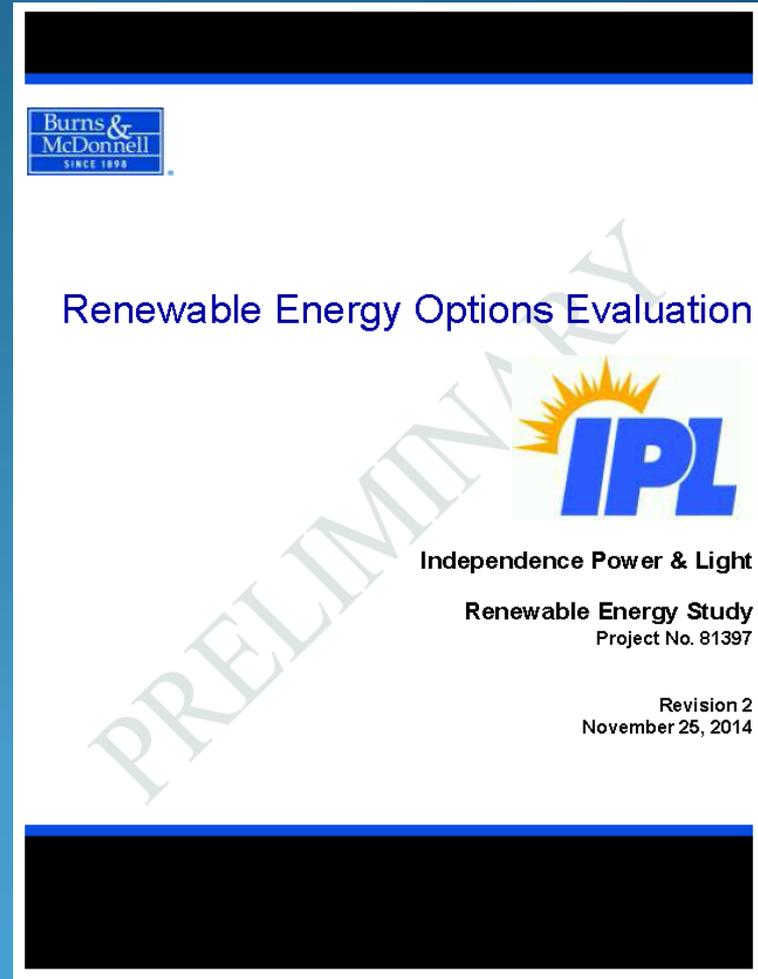
City Facilities

- Burns & McDonnell
 - Small Scale Wind Not Economically Viable
 - Geothermal Not Be Pursued at this Time
 - Top Solar Candidates
 - WPC Rock Creek, IPL Service Center, PW Maintenance and Fire Station 7
- Brightergy
 - Top Solar Candidates
 - IPL Service Center & Events Center

Renewables/Efficiency

Customer Programs

“That the City Manager is hereby authorized and directed to develop and present to the City Council a study to evaluate potential incentives and sustainable programs which can be provided to customers for the use of renewable energy options.”



Renewables/Efficiency

Customer Programs

- IPL's Current Programs
 - Net Metering
 - Home Energy Loan Program (HELP)
 - Residential Energy Efficiency Rebates
 - New Homes with Energy Star Program
 - Commercial Rebate Program
 - Low Income Weatherization
 - Energy Assessments
 - Infrared Scanning

Renewables/Efficiency

Customer Programs

- Surveyed Other Utilities in U.S.
 - Interviews/Websites
- 5 Recommendations
 - Utility Purchased Efficiency Program
 - Community Solar Program
 - Improvements in IPL's HELP Program
 - Increase Marketing Efforts
 - Review Current Rate Structure for Subsidization Issues

Missouri City

End Production

“That the City Manager is hereby authorized and directed to end production of energy at the Missouri City power plant by January 31, 2016 in compliance with the Industrial Boiler MACT rule.”



Missouri City

End Production

- IB MACT
 - Compliance Date = January 31, 2016
 - Over \$60 million Needed for Retrofit
- On-Track For Shutdown
 - Unit Available to Run in 2015
 - Limited Coal Pile (< 1 month operation)
 - DNR Air Permit Application under Review
 - Cease coal-firing by January 31, 2016

Missouri City

Disposition Options

“That the City Manager is hereby authorized and directed to produce a report outlining the options and associated costs for the disposition of the Missouri City Power Plant, ranging from retirement to demolition by July, 2015.”



Missouri City

Disposition Options

- Sega Draft Report (Dec 2013)
 - Budgetary Costs Estimates
 - Retirement = \$0.9 million
 - Dismantlement = \$18 million
- Enlist Sega
 - Refine Estimates
 - Consider Other Options
- Ash Pond Closure
 - Groundwater Sampling Underway
 - Costs Dependent on DNR Requirements
 - New EPA Coal Ash Regulation just passed

Blue Valley

Cease Coal Use

“That the City Manager is hereby authorized and directed to cease the use of coal as a fuel source at the Blue Valley Power Plant by January 2016.”



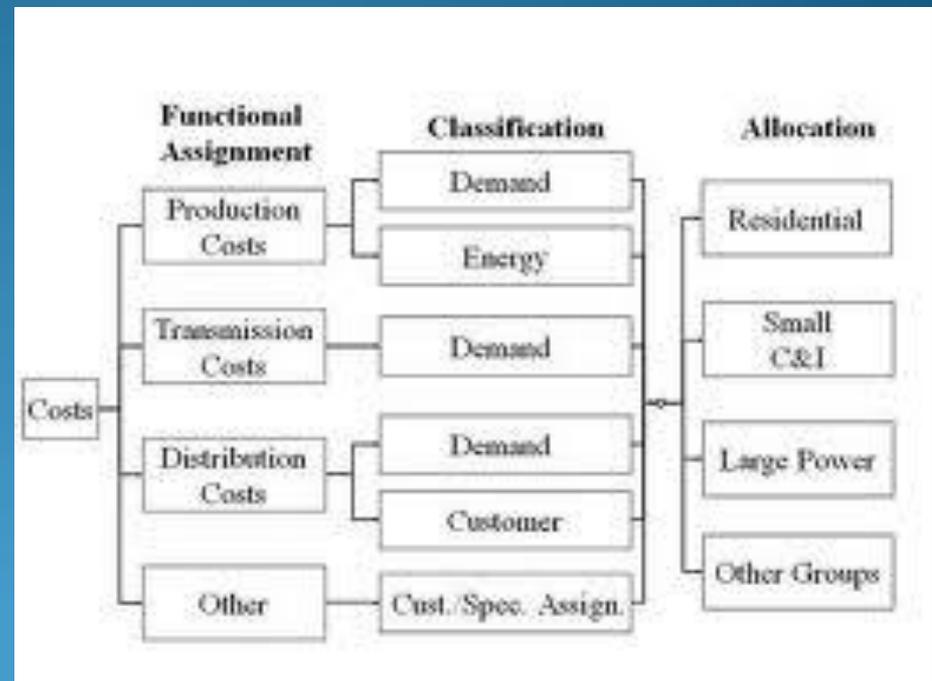
Blue Valley

Cease Coal Use

- Utility MATS – Unit 3
 - Compliance Date = April 16, 2015
- IB MACT – Units 1 & 2
 - Compliance Date = January 31, 2016
- Over \$75 million Needed for Retrofit
- On-Track For Cessation of Coal
 - Coal stockpile = 3-4 month operation
 - Plant Designed/Capable of Burning Natural Gas
 - Letter to DNR stating coal cessation for BV 3 by April 16, 2015

Rate Study

“That the City Manager is hereby authorized and directed to do a rate study of electric rates for residential, commercial and industrial customer classes including provisions to incorporate renewable energy programs identified by the study included in Section 3 of this Resolution and report back to the City Council by May 2015.”



Rate Study

Activities

- Oct 6: Consultant (Sawvel & Associates) Hired
- Oct 21: Kickoff Meeting
- Nov 14: Financial Forecast/Revenue Requirements
- Dec 17: Rate Design Strategy
 - Consultant met with 2 Councilmembers to obtain Input
- Jan 16: Cost of Service Meeting

Schedule is tight, but on schedule to report back in May 2015

Wind Power RFP

Summary of RFP

- Requested Proposals for 5-20 MW of Wind Power
 - Utility Scale Wind Turbines
- Purchase Power Arrangement
 - City Can't Take Advantage of Tax Incentives
- Received 3 Proposals (Oct 27, 2014)
- Shortlisted to 2 Projects
- Positive Economics
- Contract Negotiation Underway
- Recommendation to Come in February/March
 - Increase Renewable Energy Portfolio by 5-10%

Solar Power RFP

Summary of RFP

- Nov 10: Requested Proposals for 3-10 MW Solar
 - Farm to be built on City/IPL Property
 - Alternate Proposal/Sites would be Considered
- Purchase Power Arrangement
 - City unable to take advantage of Tax Incentives
 - Possible Purchase by City After Year 7
- Dec 23: Received Proposals From 8 Companies
 - 4 Local Missouri Companies/Others from VA, IN, WI & NY
 - 6 Companies Bid City Site Only
 - 1 Company Bid City Site Plus Alternate Site (within City Limits)
 - 1 Company No Site Proposed

Solar Power RFP

City Site



Solar Power RFP

Next Steps

- Sega Assisting with Evaluation
 - Team Met on Jan 7 for initial Review of Proposals
- Seeking Clarification from 4 Companies
- Initial Economics
 - 5 MW Solar Farm = 1% of IPL's Energy Requirements
 - Prices approximately 2-3 times higher than Wind
 - Energy Provided during Peak Periods
- Project will Allow for Community Solar Program

Questions?

