

**Columbia City Council Pre-Council Minutes  
Monday, December 20, 2010 – 6 p.m.  
Conference Rooms 1A and 1B – City Hall Addition  
Columbia, Missouri**

Council members present: Mayor McDavid, Paul Sturtz, Jason Thornhill, Gary Kespohl, Daryl Dudley, Laura Nauser, Barbara Hoppe

Absent: None

---

Mayor Bob McDavid called the meeting to order at 6 p.m.

**Responsive Government Initiative – REDI/Economic Development**

Mike Brooks reviewed the initiatives being undertaken pertaining to REDI/Economic Development.

- Attraction
- Retention and Expansion
- Economic gardening
- Entrepreneurial Summit (February 4)
- Business Climate (March 3 IT workforce summit)
- Marking (web site development in progress)
- Smarter Cities Program – described the different steps involved in this program

*Supporting document: none*

**CEC (Columbia Energy Center) and B310-10 Solar Photovoltaic Renewable Energy**

The Council conducted a telephone conference with John Kirkland, who explained his role and what their company does. The Council then had an opportunity to ask questions. Tad Johnsen, W/L Director, reviewed the items contained in the contract summary/equipment lease. Mr. Johnsen then reviewed a power point presentation pertaining to Columbia Energy Center.

*Supporting documents – Power point presentations: Columbia Energy Center and Photovoltaic Power Supply (attached)*

**City Manager Search Process Update**

Margrace Buckler, HR Director, provided an update to the City Manager's search process. A draft proposal was forwarded to the Mayor and will be forwarded to entire Council for comment with the goal of posting the position notice next week.

*Supporting documentation – none*

With no further business, the meeting adjourned at 6:55 p.m.



Columbia Energy Center

# Columbia Energy Center (CEC) Background



- 4 X 36MW Combustion Turbines, 144MW Natural Gas Fired Generation Facility.
- Developed by Ameren Energy Marketing (AEM) in 2001.
  - On Columbia Water & Light (CWL) Property, next to Bolstad Substation
  - Connected at 69KV to Bolstad Substation
- Current Facility Contracts and Ownership Participation
  - 1<sup>st</sup> contract – May 2001 PSA for 25% (36MW) Capacity with Purchase Option
  - 2<sup>nd</sup> contract – Oct 2003 PSA for 25% (36MW) Capacity with Purchase Option
  - 1<sup>st</sup> Ownership Purchase for 25% (36MW) Capacity - January 2010
- AEM Owns 75% of this facility
  - 50% Leased to Columbia
- Columbia Owns 25% of this facility
- AEM has made an offer for Columbia to Purchase AEM's 75% Ownership Share in Columbia Energy Center

# Contract Option - Termination



- 1<sup>st</sup> Contract 2001 PSA
  - Termination Date – January 1, 2015
  - Lease for 25% (36MW) for Capacity with Energy Dispatch Rights
  - Requires \$12,039,840 to Lease Capacity – January 2011 through December 2014
  - If Agreement Runs to Termination, Capacity Would Need To Be Replaced.
- 2<sup>nd</sup> Contract 2003 PSA
  - Termination Date – January 1, 2018
  - Lease for 25% (36MW) for Capacity with Energy Dispatch Rights
  - Requires \$21,643,200 to Lease Capacity – January 2011 through December 2017
  - If Agreement Runs to Termination, Capacity Would Need To Be Replaced
- If Both Contracts Run to Termination
  - \$33,683,040 to lease Capacity 72MW through 2014, then 36MW through 2017
  - New Capacity Resource Will Be Needed

# Contract Option - Purchase



- 1<sup>st</sup> Contract 2001 PSA Taking Purchase Option
  - Notification of Purchase Required by June 2011
  - Purchase Required by December 31, 2011
  - \$14,900,000 Purchase Price for 25% Share (36MW)
  - Requires \$2,898,720 to Lease Capacity from January 2011 through December 2011
- 2<sup>nd</sup> Contract 2003 PSA Taking Purchase
  - Notification of Purchase Required by June 2013
  - Purchase Required by December 31, 2013
  - \$15,500,000 Purchase Price for 25% Share (36MW)
  - Requires \$8,916,480 to Lease Capacity from January 2011 through December 2013
- If Purchase Option Taken on Both Contracts
  - \$11,815,200 to lease 72MW of Capacity through 2011 then 36MW of Capacity through 2013.
  - \$30,400,000 to Purchase 72MW of Capacity, 36MW in 2012 then 36MW in 2014
  - \$42,215,200 Total Purchase Option Cost for 72MW

# New Proposal – Full Ownership



- AEM has made an offer for Columbia to Purchase their 75% Ownership in Columbia Energy Center
  - Only Generation Facility In Missouri
  - Co-Ownership Not Typical Business Model
  - Would Provide Working Capital For Other Projects
  - Energy Market at a low
- Based on Termination of Existing PSA Contracts with CWL, AEM has Proposed the Following Sale
  - \$45,200,000 for Remaining 75% (108 MW) of CEC
  - Price Based on Purchase on May 31, 2011
  - \$2,415,600 to Continue Contracted Capacity Payments Through May 2011

# Comparative Costs



- Current Contacts - Termination Option
  - \$33,683,040 to lease Capacity 72MW through 2014, then 36MW through 2017
  - New Capacity Sources Required at termination
- Current Contacts - Purchase Option
  - \$11,815,200 to lease 72MW of Capacity through 2011 then 36MW of Capacity through 2013
  - \$30,400,000 to Purchase 72MW of Capacity, 36MW in 2012 then 36MW in 2014
  - \$42,215,200 Total Purchase Option Cost for 72MW
- New Proposal - Full Ownership
  - \$2,415,600 to lease 72 MW of Capacity through May 31, 2011
  - \$45,200,000 for purchase of Full Ownership of Facility on May 31, 2011
  - \$47,615,600 Total Full Ownership Cost for 108MW
  - \$5,400,400 – Effective Price of Final 25% Share

# Benefits



- System Support
  - Ownership of Generation Internal to the Columbia System
- Low-Cost Capacity
  - \$2.58 /KW-Month over life of debt
  - Long Term Cost Stabilization of Converting Current Capacity Leases to Ownership
- Support of Renewable Purchases
  - Resource to Provide the Capacity Support of Future Renewable Resources
- Low Carbon Generation Source
- Eliminates Third-Party Operational Issues

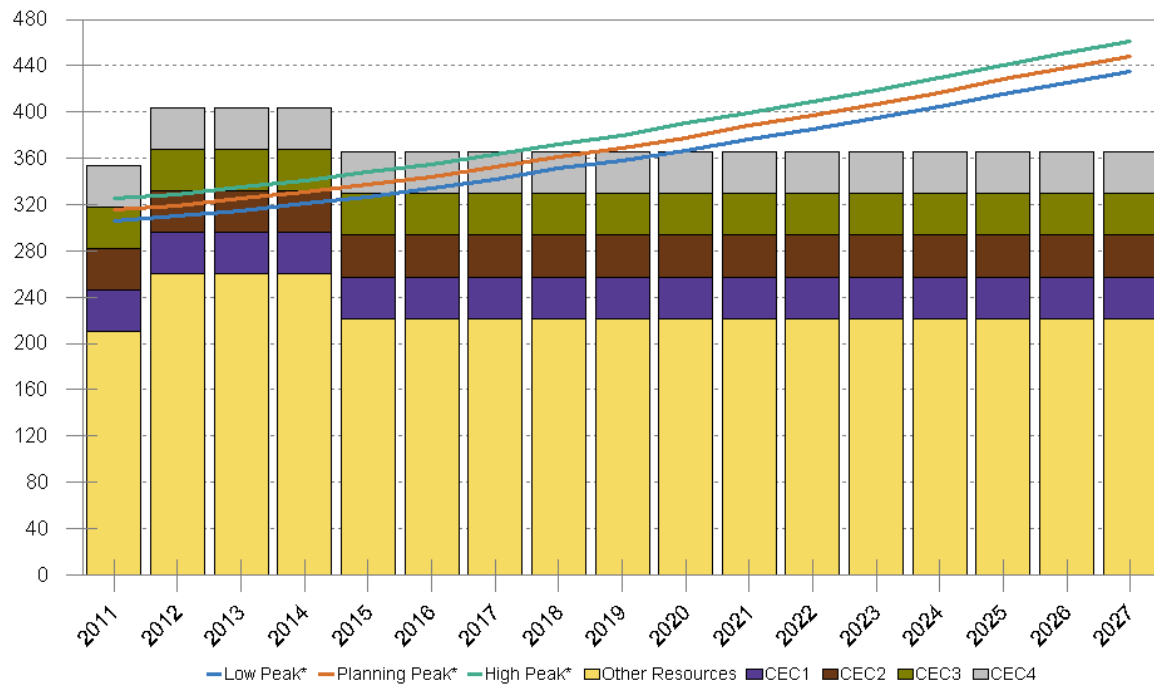


# Costs



## Short-Term Excess Capacity

**Forecasted Load with Reserves and Potential Resources**



\*With Reserves

# Financing



- \$49,500,000 Bond Proposal
  - Includes \$45,200,000 For Purchase of CEC
  - Includes \$ 3,622,000 For Reserve Requirement
    - Last Principle and Interest Payment
  - Includes \$678,000 For Cost of Issuance
- No Rate Change Required
  - Current Capacity Charges are Higher Than Debt Service and Operating Costs

# Next Steps



- Bond Election Ordinance
  - Council Work sessions
  - Jan 3, 2011
    - First Read of Bond Election Ordinance
  - Jan 17, 2011
    - Approval of Bond Election Ordinance
- Negotiate Sale Contract for Council Approval
  - To Council After Approval of Bond Election Ordinance and prior to Bond Election
  - Contract contingent upon Bond Approval
- April 5, 2011 – Bond Election



Questions?



Photovoltaic Power Supply

# Free Power Company(FPC)

<http://www.freepowercompany.com>



- Has been installing alternative energy systems including photovoltaic systems for over a decade
- Systems in four states and under contract in six
- Performed alternative energy work for corporations, individuals, non-profit organizations, Federal, State, County, City governments, School Districts and Public Utility companies
- Tom Blair, VP-Engineering & Development
  - 20 years of Utility Experience
  - Columbia's Project Manager

# Solar Photovoltaic Equipment Lease



- 1(a): FPC agrees to lease the system to the City and provide related maintenance services
- 1(b): System will consist of photovoltaic panels, racking, inverters and equipment required for City to connect
- 1(c): FPC will build the system to the inverters, interconnection point
- Develop in stages 6,000 MWhs by Sept. 30 2011 and 12,000 MWhs by Sept. 30 2012
- No new installations added after May 31, 2016

# Solar Photovoltaic Equipment Lease



- 1(d): Timing of installation and activation will depend upon City's ability to identify, prepare and provide service to sites
- City shall determine and approve site location. City shall prepare and secure site for installation
- 2(c): Conditions
  - (i): Signed no later than December 21, 2010
  - (ii): Lessor eligible for Section 1603 Tax Credits



# Solar Photovoltaic Equipment Lease



- 3(a): FPC shall provide operation, repair, monitoring and maintenance for the system
- 3(c): City shall provide metering for measurement of the energy generated by the system
- 4(a): City's leasing of the system includes 100% of energy produced as well as all environmental attributes
- 4(b): City's leasing does not include the right to any tax credits

# Solar Photovoltaic Equipment Lease



- 5: lease payments are calculated based on the MWhs of energy produced by the system
- 6(a): Monthly leasing fee equals \$54.00 per MWh for the energy produced in prior month
- 6(c): Increase by 1.75% each year after 2011
- 6(d): 70% of Profits from resale of this energy outside City's electric system paid to FPC

# Solar Photovoltaic Equipment Lease



- 10(a): Term to expire 24 years after the operation date
- 10(d): At end of term, City shall have the option to purchase system at fair market value

# Columbia Power Supply Costs

Sikeston	\$37/MWh	All-in costs
Columbia Landfill	\$38/MWh	w/out capital
KC BPU	\$55/MWh	All-in costs
Iatan II	\$48/MWh	Not delivering yet
Ameren	\$51/MWh	Short-term contract
Jeff City Landfill	\$53/MWh	All-in costs
MISO	Variable	Wholesale purchases
AECI (wind)	\$74/MWh	Average cost with trans.
CEC	\$65/MWh	Energy Cost Only
Solar One	\$330/MWh	Total energy 38.3 KW
Prairie State	\$50/MWh	Not delivering yet
Columbia PP	\$65/MWh	Load following operation

# Renewable energy development



- Currently have around 5% renewable energy
- Required to have 5% by 2013, 10% by 2018 and 15% by 2023
- 6,000 MWhs = 0.5% of Columbia's annual electric usage
- One MW of solar will take about 8 acres
- 5 MW of solar should produce 6,000 MWhs/year
- 6,000 MWhs/year requires approximately 40 acres

# Amount of energy



- Photovoltaic generation fits Columbia system
  - Summer peaking
  - Higher day time loads
  - Offset market purchases
  - Backed up by peaking capacity
- Projecting 6,000 megawatt hours annually by Sept. 30, 2011, and 12,000 Sept. 30, 2012
- Capacity of the installed solar collectors would be about 5 megawatts in 2011 and 10 megawatts in 2012

# Site Selection



Planning to develop City owned sites first on a case by case basis

Possible sites:

- Bernadette and Tiger Lane (1 acre)
  - Site is currently being used for solar
- Bolstad substation
- Columbia Water & Light property north of Columbia (300 acres)
- Buffer land (landfill, surrounding airport, etc)



Questions?