

Source: Water and Light Advisory Board *JP*

Agenda Item No: REP 116-13

To: **City Council**  
From: **City Manager and Staff**

**Council Meeting Date:** Aug 5, 2013

Re: Recommendation for Modifications to the Renewable Energy Ordinance

**EXECUTIVE SUMMARY:**

This report is to convey the Water & Light Advisory Board's recommendation to City Council for modifications for the Renewable Energy Standard, Section 27-106 of the City Code of Ordinances. Included with this is a redline version of the changes to Section 27-106 of the City Code of Ordinances.

**DISCUSSION:**

At the June 12 Advisory Board meeting, Dick Parker distributed a handout summarizing his suggested revisions to the renewable energy standard. After discussion the Water & Light Advisory Board requested for the staff to assess the proposal. Attached is the staff's assessment response which was considered at the July 5<sup>th</sup> Advisory Board meeting.

In this response staff indicated they were committed to adding renewable resources beyond the current standard that are most cost effective and fit with the requirements of the electric utility. Staff indicated that consideration should be given to how an aggressively defined increase in the standard would limit the ability of the electric utility to assess cost effective resources and options. Staff's assessment indicates that to stay under the 3% rate impact limit for the additional renewable energy, \$16.75/MWh would be the renewable cost limit starting in 2023 under the current ordinance and \$10.03/MWh would be the renewable cost limit starting in 2018 under these proposed ordinance changes. At this time, Staff does not believe that just changing the levels of the current renewable standard is the best solution. Staff has issued a renewable energy "Request For Proposal", the results of which should provide greater clarity to the potential for more renewable resources.

Dick Parker distributed a handout summarizing his suggested revisions to the renewable energy standard. Dick Parker made a motion, seconded by Hank Ottinger, to recommend to Council to modify Section 27-106 Renewable Energy Standard ordinance to correspond with the five elements outlined in his handout, amending (3) to read Fifteen (15) percent. Motion passed unanimously. The board would defer to the City Legal Staff on any requirements for a vote to change this ordinance.

**FISCAL IMPACT:**

**VISION IMPACT:**

<http://www.gocolumbiamo.com/Council/Meetings/visionimpact.php>

9 Vision Statement: Columbia residents and businesses conserve all the community's natural resources, work cooperatively to apply best planning practices, model energy efficiency, transition to renewable energy, and approach zero waste generation.

**SUGGESTED COUNCIL ACTIONS:**

**The Council needs to consider changing the ordinance as per the Water and Light Advisory Board recommendation.**

The Council could consider modifying the ordinance at different levels other than what is proposed by the Water and Light Advisory Board.

The Council could consider following the recommendations of staff to evaluate the Request for Proposal that is outstanding and make a recommendation based upon the outcome.

FISCAL and VISION NOTES:					
City Fiscal Impact Enter all that apply		Program Impact		Mandates	
City's current net FY cost	\$0.00	New Program/ Agency?		Federal or State mandated?	
Amount of funds already appropriated	\$0.00	Duplicates/Expands an existing program?		<b>Vision Implementation impact</b>	
Amount of budget amendment needed	\$0.00	Fiscal Impact on any local political subdivision?		Enter all that apply: Refer to Web site	
Estimated 2 year net costs:		<b>Resources Required</b>		Vision Impact?	Yes
One Time	\$0.00	Requires add'l FTE Personnel?		Primary Vision, Strategy and/or Goal Item #	9
Operating/ Ongoing	\$0.00	Requires add'l facilities?		Secondary Vision, Strategy and/or Goal Item #	
		Requires add'l capital equipment?		Fiscal year implementation Task #	

# MEMORANDUM

**TO:** Water & Light Advisory Board

**FROM:** Tad Johnsen, Director of Water & Light

**DATE:** June 27, 2013

**SUBJECT:** Mr. Parker's Renewable Standard Proposal

Mr. Parker has proposed changing the renewable energy standards in future years. The standard would increase to 20% in 2018; 25% in 2023; and 30% in 2028.

In an attempt to assess the possibility of raising the current standard, staff has utilized the following assumptions:

- 1.) Estimates of system MWH requirements are the same as used in the Integrated Resource Plan.
- 2.) Existing renewable energy resources are forecasted to provide a consistent amount of MWH's based on existing performance with the following exceptions:
  - a. Columbia landfill gas estimate includes the addition of the third generator at the end of summer, 2013 and the fourth generator before the start of calendar year 2018.
  - b. Retirement of the solid fuel units at the Municipal Power Plant is assumed to occur prior to summer 2015.
  - c. Existing solar was not included due to minimal production levels.
- 3.) Estimates of the dollars that can be spent on "renewable cost", under the 3% rate rule, include growth estimates as well as rate increases that are currently projected for bond purposes.
- 4.) The estimate of the remaining dollars available for purchase of new renewable resources is the total dollars minus the renewable cost from the 2012 Renewable Report. The value of \$1,965,271 for existing resources was assumed to remain constant.

There will be variations that occur such as the potential for not retiring one of the solid fuel units at the Municipal Power Plant; however, staff believes the following table can be utilized as a general guideline for assessing the impact of an increased renewable energy requirement.

The Cost per MWh (columns J & K) is the remaining dollars available for purchase of new renewable resources (column I) divided by the MWh shortage (column F & G) to meet the renewable standard.

A – Calendar Year

B – Estimate of MWH's For System

C – Renewable MWH's Required Under Current Ordinance

D – Renewable MWH's Required Under Parker Proposal

E – Estimate of Renewable MWH's Produced From Existing Resources/Contracts

F – Renewable MWH Shortage Under Current Ordinance

G – Renewable MWH Shortage Under Parker Proposal

H – Total Dollars That Can Be Spent For Renewables Under 3% Rule

I – Remaining Dollars Assuming 2012 Renewable Costs Remain Constant (\$1,965,271)

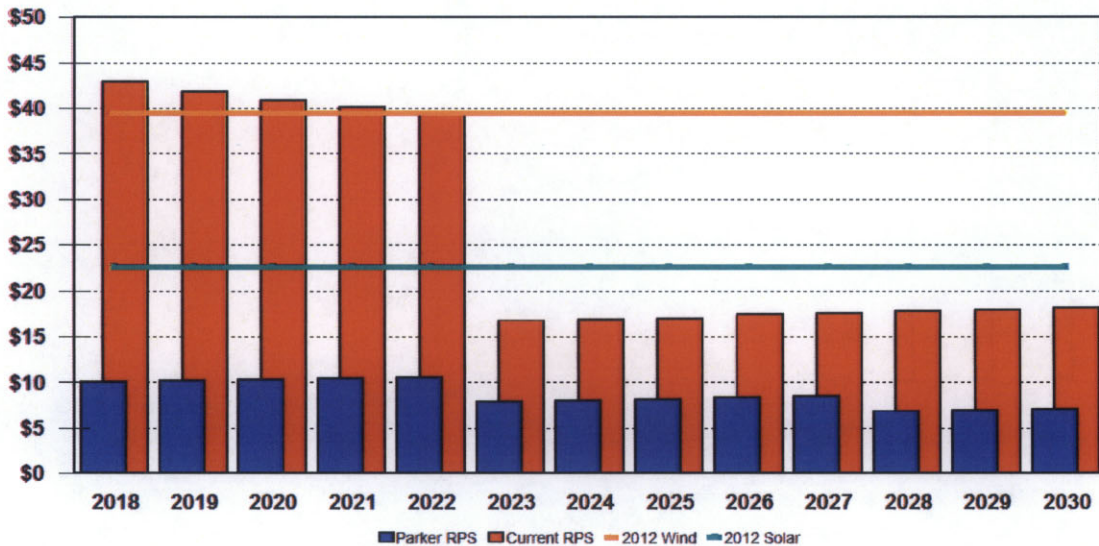
J – “Renewable” Cost Per MWH That New Sources Can Not Exceed To Meet Current RPS

K – “Renewable” Cost Per MWH That New Sources Can Not Exceed To Meet Parker RPS

A	B	C	D	E	F	G	H	I	J	K
2013	1,251,000	62,550	62,550	95,800			\$3,308,746	\$1,343,475		
2014	1,278,000	63,900	63,900	101,800			\$3,348,180	\$1,382,909		
2015	1,304,000	65,200	65,200	94,800			\$3,517,598	\$1,552,327		
2016	1,329,000	66,450	66,450	89,800			\$3,587,950	\$1,622,679		
2017	1,358,000	67,900	67,900	89,800			\$3,696,306	\$1,731,035		
2018	1,393,000	139,300	278,600	96,800	42,500	181,800	\$3,788,714	\$1,823,443	\$42.90	\$10.03
2019	1,427,000	142,700	285,400	96,800	45,900	188,600	\$3,883,431	\$1,918,160	\$41.79	\$10.17
2020	1,461,000	146,100	292,200	96,800	49,300	119,400	\$3,980,517	\$2,015,246	\$40.88	\$10.31
2021	1,495,000	149,500	299,000	96,800	52,700	202,200	\$4,080,030	\$2,114,759	\$40.13	\$10.46
2022	1,532,000	153,200	306,400	96,800	56,400	209,600	\$4,182,031	\$2,216,760	\$39.30	\$10.58
2023	1,569,000	235,350	392,250	96,800	138,550	295,450	\$4,286,582	\$2,321,311	\$16.75	\$7.86
2024	1,607,000	241,050	401,750	96,800	144,250	304,950	\$4,393,746	\$2,428,475	\$16.84	\$7.96
2025	1,645,000	246,750	411,250	96,800	149,950	314,450	\$4,503,590	\$2,538,319	\$16.93	\$8.07
2026	1,663,000	249,450	415,750	96,800	152,650	318,950	\$4,616,180	\$2,650,909	\$17.37	\$8.31
2027	1,695,000	254,250	423,750	96,800	157,450	326,950	\$4,731,584	\$2,766,313	\$17.57	\$8.46
2028	1,727,000	259,050	431,750	96,800	162,250	334,950	\$4,849,874	\$2,884,603	\$17.78	\$6.85
2029	1,762,000	264,300	528,600	96,800	167,500	431,800	\$4,971,121	\$3,005,850	\$17.95	\$6.96
2030	1,797,000	269,550	539,100	96,800	172,750	442,300	\$5,095,399	\$3,130,128	\$18.12	\$7.08

Below is a graph that illustrates the estimated cost for new renewable resources compared to the lowest additional cost of wind and solar resources in 2012.

## Maximum Renewable Cost for New Resources Compared with 2012 Lowest Renewable Cost for Wind and Solar



Staff has issued a renewable energy request for proposal (RFP) and the results of that RFP process should provide greater clarity to the potential for more renewable resources.

As seen in the results from current performance, staff is committed to adding renewable resources beyond the current standard that are most cost effective and fit with the requirements of the electric utility. Consideration should be given to how an aggressively defined increase in the standard would limit the ability of the electric utility to assess cost effective resources and options. Technological changes that could make self-generation of renewable energy more attractive may not fit with a predefined implementation schedule. How to give the utility clear direction to aggressively pursue renewable energy resources and the ability to make economically well timed decisions should be an important consideration. At this time, staff does not believe that just changing the levels of the current renewable standard is the best solution.

Material to be deleted in strikeout; material to be added underlined.

### **Section 27-106 Renewable energy standard.**

(a) The city shall generate or purchase electricity generated from eligible renewable energy sources at the following levels:

1. Two percent (2%) of electric retail sales (kWhs) by December 31, 2007;
2. Five percent (5%) of electric retail sales (kWhs) by December 31, 2012;
3. ~~Ten-Fifteen~~ percent (~~10%15%~~) of electric retail sales (kWhs) by December 31, 2017; and
4. ~~Fifteen-Twenty-five~~ percent (~~15%25%~~) of electric retail sales (kWhs) by December 31, 2022.
5. Thirty percent (30%) of electric retail sales (kWhs) by December 31, 2028.

(b) This renewable energy shall be added up to these kilowatt hour levels only to the extent that it is possible without increasing electric rates more than three percent (3%) higher than the electric rates that would otherwise be attributable to the cost of continuing to generate or purchase electricity generated from one hundred percent (100%) non-renewable sources (including coal, natural gas, nuclear energy and other non-renewable sources).

(c) Eligible renewable energy generation may be provided by wind power, solar energy, bio-energy sources or other renewable sources which meet the environmental criteria approved by the City Council after review by the Environment and Energy Commission and the Water and Light Advisory Board. Electricity purchased from on-site renewable energy systems owned by Columbia Water and Light customers (“net metering”) may be included within the calculation of the levels required in subsection (a).

(d) Renewable energy generation sources located within Missouri may receive preferential consideration in the selection process.

(e) Each year prior to February 1, the Water and Light Department shall publicly release a renewable energy plan detailing a proposal for how the city would comply with this section during the following year. The plan will explain the city’s due diligence in pursuing renewable energy opportunities and detail all cost assumptions and related utility rate calculations, except with regard to confidential information that may be withheld pursuant to state law. The plan will then be reviewed by the Environment and Energy Commission and Water and Light Advisory Board and submitted to the City Council for approval following a public hearing.

(f) Renewable energy shall be added to meet future energy needs as long as its addition does not result in the electric utility falling below required generating capacity requirements.