

IDYLWILDE PROJECT FEMA REIMBURSEMENT & POSSIBLE SOLAR PROJECT LOVELAND UTILITIES COMMISSION

July 16, 2014

COLORADO RENEWABLE ENERGY STANDARD

- ✕ Applies to municipal utilities serving more than 40k customers
- ✕ 10% by 2020
- ✕ 3x multiplier applies to:
 - + All solar electric generation resources
 - + No restrictions
 - + Resources that begin producing electricity prior to July 1, 2015
- ✕ Investment Tax Credit (ITC):
 - + capital investment used to reduce tax: the proportion of new capital investment that a company can use to reduce its taxation charge



NAMASTE FEASIBILITY STUDY

- ✕ Sites: (300 kW capacity or greater)
 - + Fort Collins/Loveland Airport
 - + Rawhide
 - + LWP Water Treatment Plant
 - + City owned property or land to acquire within GMA
- ✕ Site Audits
- ✕ Preliminary Design
- ✕ Estimated Turnkey Cost
- ✕ Design and Construction Requirements
- ✕ Financial Analysis and Strategy
- ✕ Environmental Benefits



OUTCOMES FROM THE FEASIBILITY STUDY

SELECTED SITES

Site	System Capacity (AC MW)	System Capacity (DC MW)	Estimated Capital Requirement (\$)	Estimated Annual Production (AC kWh)	Approx. Area Required (Acres)
Water Treatment Plant	1.322	1.652	\$3,601,360	2,506,045	7.6
Rawhide	61	76.355	\$119,560,000	124,611,360	284.8
Airport (Fixed Tilted)	24	30.4	\$47,280,000	49,612,800	119
Airport (Single Axis Tracker)	12	15.02	\$27,960,000	28,613,100	98.9

WHY IS THE RAWHIDE ENERGY STATION THE BEST OPTION?

- ✗ Continue to use PRPA as our generation and transmission agency
- ✗ Timing
 - + Airport – FAA requirements
 - + Water Treatment Plant – single axis tracker
 - + Rawhide – most space, fixed tilt
- ✗ MW Capacity – economies of scale
- ✗ Lots of space available
 - + Flat area
 - + Owned by PRPA
- ✗ Infrastructure already in place
 - + Ease of connection to transmission

OUTCOMES FROM THE FEASIBILITY STUDY

RAWHIDE ENERGY STATION



OUTCOMES FROM THE FEASIBILITY STUDY

PROJECT TIMELINE

System Capacity (AC kW)	System Capacity (DC kW)	Approx. Project Timeline
1,000	375	2.5 month
2,000	1,252	3.5
3,000	3,755	4
4,000	5,007	5
5,000	6,259	6
8,000	10,014	6
10,000	12,517	7

*However, looking at projects completed in the US in the last month are averaging 1.45 months per MW or 7.25 months for a 5 MW system.

FEMA ALTERNATIVE PROJECT – THE BASICS

- ✘ \$9.1 million available from FEMA reimbursements for an alternative project.
- ✘ Proposing that we use the money to do an alternate renewable project.
- ✘ Per Namaste's Feasibility Solar Study, LWP can potentially put in 5+ MWs of solar at Rawhide, the recommended site per the study.
- ✘ Need to dedicate the funds by mid Sept 2014 to FEMA.
- ✘ Needs to be installed and operational by June 2015 to take advantage of the 3x credit.
- ✘ Add as part of PRPA's generation mix, not as a community solar garden.

LWP RESPONSIBILITIES

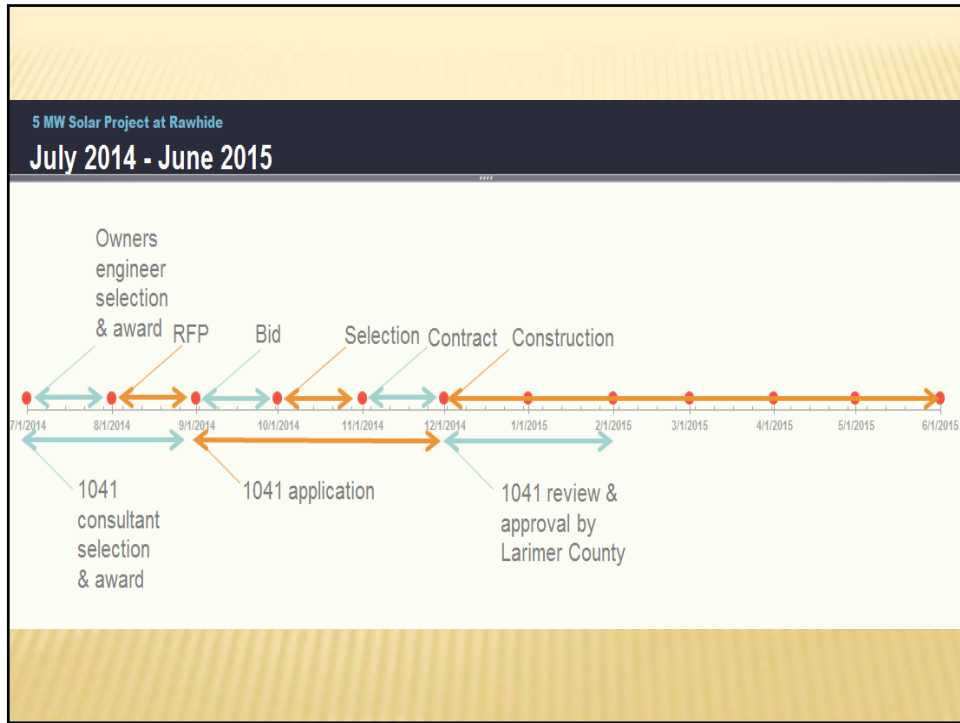
- ✗ Work with FEMA to confirm the process, requirements and funding timeline and use of the funds
- ✗ Submit project scope to FEMA by September 2014
- ✗ Contract with Ryley Carlock & Applewhite for additional legal services
- ✗ Review the requirements and applicability of the 3x multiplier for large scale solar projects
- ✗ Communicate, participate and support PRPA responsibilities
- ✗ Continue to look at alternative projects if timeline and project scope can not be met



PRPA RESPONSIBILITIES

- ✗ Seeking an “owner’s engineer” who has experience writing RFPs for PPAs and for engineering, procurement, and construction (EPC) contracts.
- ✗ Procured a consultant to help with the 1041 permitting process.
- ✗ Using Legal services to help with details of the 3x multiplier.
- ✗ Issue an RFP for a solar developer who will build, own, and operate up to 30 MW of PV for all of the cities, delivered via a power purchase agreement (PPA).
 - + If for some reason the 30 MW is not approved, help will still be provided for the 5 MW.





SPRING CANYON II

- ✖ Approved the purchase of an additional 28 MW
- ✖ A total of 60 MW for a term of 25 years
- ✖ Deliveries are expected to begin in September 2014, and the full output is expected to be available by the end of 2014.
- ✖ Platte River now has contracts for the output of 78 MW of wind generation, which will provide approximately 9% of the power purchased by the owner Municipalities.
- ✖ When hydro power resources are included, about 30% of the energy sold by Platte River to the owner Municipalities will be carbon free for 2015.
- ✖ This will serve all of Platte River's owner communities through Platte River's standard municipal sale tariff.
- ✖ Expected to raise the wholesale rates of Platte River by approximately two percent. The average retail rate increase would be approximately 1.4%.
- ✖ The benefits:
 - + Helps mitigate fuel price risk for coal and natural gas
 - + Better positions Platte River for potential new CO₂ regulations
 - + Allows the communities to exceed the current Colorado renewable energy standard
 - + Responds to the interests of the owner municipalities communities



LOVELAND'S PORTFOLIO WITH 3X MULTIPLIER

		2010 ENERGY		2011 ENERGY		2012 ENERGY		2013 ENERGY		PROJECTION		PROJECTION	
GENERATION TYPE		MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL
GENERATION POWER SUPPLY													
Coal	Coal	503,854	74.77%	491,058	70.74%	535,627	74.90%	564,569	78.08%	554,814	76.73%		0.00%
Gas	Natural Gas	9,535	1.41%	2,680	0.39%	5,453	0.76%	5,789	0.80%	5,659	0.78%		0.00%
Other	Market Purchases (not renewable)	20,572	3.05%	9,403	1.35%	28,281	3.95%	9,145	1.26%	14,219	1.97%		0.00%
Greenswitch - Customer Purchased													
Wind	Medicine Bow Energy (WY)	978	0.15%	597	0.09%	358	0.05%	403	0.06%	331	0.05%		0.00%
Wind	Silver Sage Energy (WY)	1,575	0.23%	1,806	0.26%	1,099	0.15%	759	0.11%	902	0.12%		0.00%
Wind	Wind RECs (CO, OK, KS)	2,872	0.43%	3,239	0.47%	3,071	0.43%	1,189	0.16%	1,118	0.15%		0.00%
Biomass	Spring Canyon 2 Energy Center (CO)												0.00%
Landfill	Landfill (Gas ID)	331	0.05%	-	0.00%	-	0.00%	-	0.00%	-	0.00%		0.00%
Hydro	PPRA Hydro	130,750	19.40%	182,468	26.28%	138,946	19.43%	136,736	18.91%	133,665	18.49%		0.00%
TOTAL GENERATION POWER SUPPLY RENEWABLES		136,507	20.25%	188,111	27.10%	143,474	20.06%	139,088	19.24%	136,017	18.81%	2,352	0.00%
DEFAULT MIX		534,061	79.24%	503,142	72.48%	569,361	79.62%	579,503	80.15%	574,692	79.48%	666,442	0.00%
TOTAL GENERATION POWER SUPPLY		670,567	99.49%	691,253	99.57%	712,835	99.69%	718,592	99.38%	710,709	98.29%	668,794	0.00%
DISTRIBUTION POWER SUPPLY													
Wind	Greenswitch - City Owned	743	0.11%	958	0.14%		0.00%		0.00%		0.00%	3,148	0.41%
Wind	Medicine Bow Energy (WY)					172	0.02%	762	0.11%	640	0.09%		0.00%
Wind	Silver Sage Energy (WY)					527	0.07%	1,436	0.20%	1,745	0.24%		0.00%
Wind	Wind RECs (CO, OK, KS)					1,473	0.21%	2,250	0.31%	2,163	0.30%		0.00%
Wind	Spring Canyon II - 23% of 60 MW						0.00%		0.00%	7,783	1.08%	46,793	6.15%
Hydro	Loveland Hydro Plant	2,674	0.40%	2,000	0.29%	78	0.01%	-	0.00%	-	0.00%		0.00%
TOTAL DISTRIBUTION POWER SUPPLY RENEWABLES		3,417	0.51%	2,957	0.43%	2,250	0.31%	4,448	0.62%	12,331	1.71%	49,941	6.56%
FUTURE ADDITIONS													
Solar	Solar - Rawhide 5 MW	-	0.00%	-	0.00%	-	0.00%	-	0.00%	-	0.00%	30,645	4.03%
TOTAL RENEWABLES WITH PROJECTED RAWHIDE 5 MW		3,417	0.51%	2,957	0.43%	2,250	0.31%	4,448	0.62%	12,331	1.71%	80,586	10.59%
Solar	Solar - Rawhide 23% of 25 MW	-	0.00%	-	0.00%	-	0.00%	-	0.00%	-	0.00%	11,746	1.54%
RENEWABLES WITH ALL PROJECTED FUTURE ADDITIONS		3,417	0.51%	2,957	0.43%	2,250	0.31%	4,448	0.62%	12,331	1.71%	92,332	12.13%
Notes:													
2014 & 2015	Please note that these years are projections based on current information from our Solar Feasibility Study and PPRA.												
Hydro	The Colorado Renewable Energy Standard does allow use of "small" hydropower. Hydropower generation sources existing before the standard was in place can be counted towards the RES if they are sized at 30 MW or less. Newly constructed hydropower sources can be used to meet the standard if they are 10 MW or less.												
RES	The Colorado Renewable Energy Standard applies to municipalities that have over 40,000 and asks for 10% renewables by 2020.												
Wind	Customers purchased wind energy could NOT be included in the RES.												

LOVELAND'S PORTFOLIO WITHOUT THE MULTIPLIER

GENERATION TYPE		2010 ENERGY		2011 ENERGY		2012 ENERGY		2013 ENERGY		PROJECTION		PROJECTION	
		MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL	MIX IN MWH	% OF TOTAL
GENERATION POWER SUPPLY													
Coal		503,354	74.77%	491,050	70.74%	535,627	74.30%	564,503	78.00%	554,094	75.72%		0.00%
Gas		9,539	1.41%	2,680	0.39%	5,453	0.76%	5,789	0.80%	5,859	0.78%		0.00%
Other		20,572	3.08%	9,403	1.35%	28,281	3.95%	9,145	1.26%	14,219	1.97%		0.00%
Greenwich - Customer Purchased													
Wind		578	0.85%	597	0.86%	350	0.49%	403	0.56%	331	0.45%	2,262	3.13%
Wind		1,575	0.23%	1,806	0.26%	1,099	0.15%	759	0.10%	902	0.12%		0.00%
Wind		2,872	0.43%	3,239	0.47%	3,071	0.43%	1,189	0.16%	1,188	0.16%		0.00%
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													
Wind													

QUESTIONS?