Power Supply RFP – Q&A

1. **Clarify total costs associated with each option**

Dogwood purchase (50 MW): Estimated all-in costs for first 20 years of ownership = $55,045,753

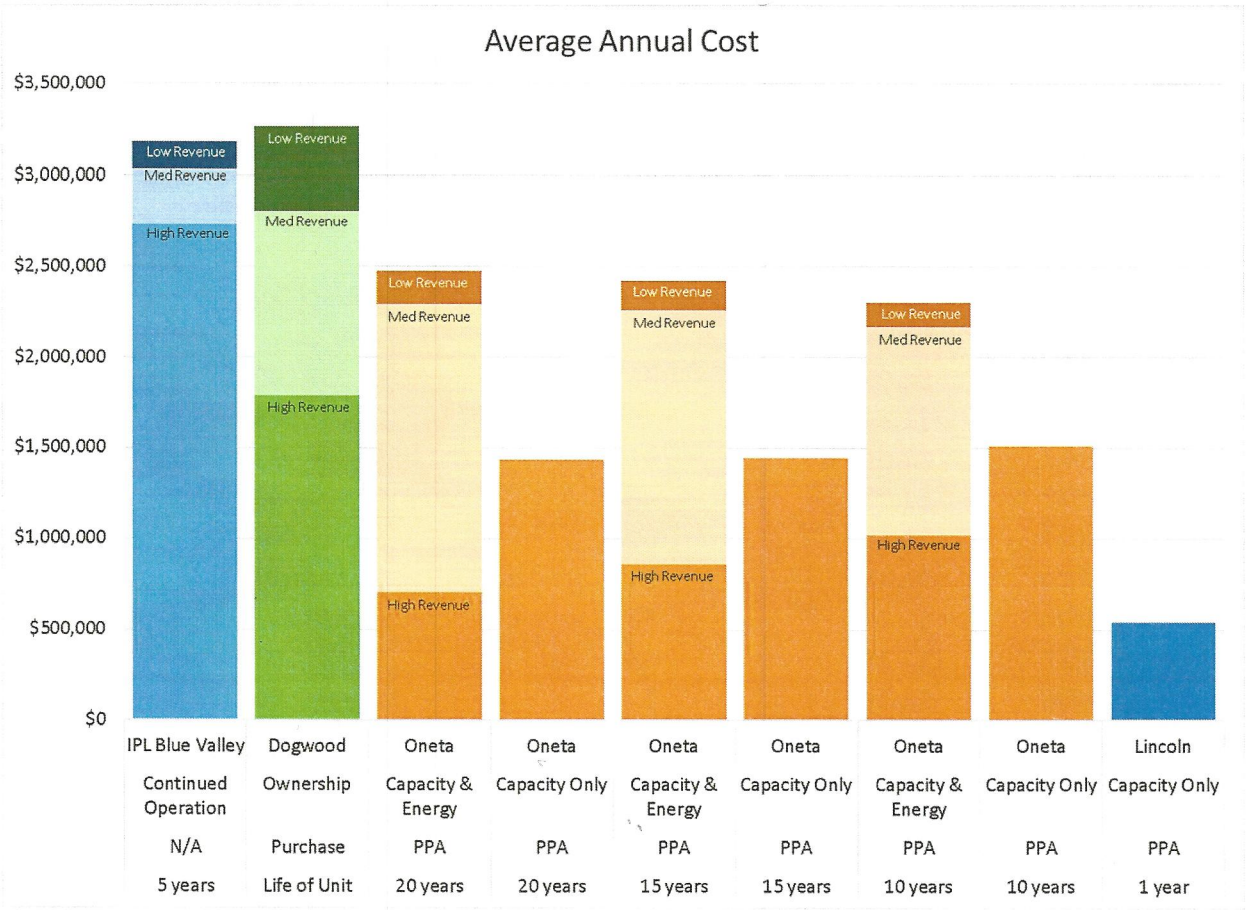
Dogwood purchase (70 MW): Estimated all-in costs for first 20 years of ownership = $77,064,054

The following table represents the Oneta 20-year Power Purchase Agreement Estimated Cost for 45-68 MW's (capacity requirement escalated each year by 0.35% for anticipated load growth).

Year	Capacity Rate ($/kW-Mo)	Estimated Capacity Requirement (MW)	Contract Cost Per Year
2020	$1.95	45	$1,053,000
2021	$1.99	46	$1,097,928
2022	$2.03	47	$1,144,232
2023	$2.07	48	$1,191,949
2024	$2.11	50	$1,266,446
2025	$2.15	51	$1,317,610
2026	$2.20	52	$1,370,314
2027	$2.24	53	$1,424,600
2028	$2.28	54	$1,480,509
2029	$2.33	56	$1,566,049
2030	$2.39	57	$1,631,474
2031	$2.44	58	$1,699,108
2032	$2.50	59	$1,769,021
2033	$2.56	60	$1,841,281
2034	$2.62	62	$1,947,369
2035	$2.68	63	$2,025,280
2036	$2.74	64	$2,105,777
2037	$2.81	65	$2,188,938
2038	$2.87	67	$2,309,313
2039	$2.94	68	$2,398,859
			$32,829,058

See attachment for a relative comparison of each offer based on 50, 60, and 70 MW's of capacity.

2. **For each shortlist proposal, what is the average annual cost based on historical energy market revenues?**



3. **Further clarify the transmission costs/process for determining costs?**

When a Southwest Power Pool (SPP) customer wishes to alter or add a designated generation resource, they must submit the change request to SPP. This request will be included into SPP's Aggregate Transmission Service Study (ATSS) process that is performed two times a year starting in January and June. SPP will work to complete the study within 165 days that will identify any possible transmission upgrade fees necessary meet the customer's request. Preliminary results will be supplied midway through the process and final results will be posted at the end of the study period.

There is no way to accurately estimate the transmission cost at this time. This is a very complex modeling process performed by SPP that not only considers our request but also the requests of multiple SPP customers across the multi-state service territory.

The proposed agreement with Oneta includes language that places a $1,000,000 limit on the proposed transmission upgrade fees. Should the upgrade fees exceed this amount then the City will have the right to terminate the contract.

4. **Why are we recommending 20-year term in an industry that is changing rapidly?**

   The market for capacity is historically low due to the number of wind and solar facilities that have been installed recently. It is estimated that capacity cost will increase over time when more power plants are retired and excess capacity becomes less available. IPL would like to lock in this cost for 20 years in order to take advantage of the historically low price and reduce the need to rely on variable SPP energy market revenues to bring overall costs down.

   IPL will always look toward new technologies to help reduce future costs. The recent Master Plan recommended that IPL should continue to evaluate the combustion turbine sites (93.5 MW) for eventual replacement and repurposing with new generation resources in the future. This analysis will be revisited as part of the Master Plan Update that will be performed every 3 to 5 years. If cost effective, new technologies could offer IPL options to diversify our generation portfolio in the future and take advantage of potential savings.

   Please see the attached tables that indicate our current power supply resources and what the proposed mix would look like with the retirement of Blue Valley and the addition of the Oneta contract.

5. **If we are only buying what we need today, can we increase it in the future under the same contract or are we looking at renegotiating.**

   Oneta will allow us to increase contract capacity each year based on future load growth.

   A contract with Dogwood Energy would be for a fixed amount. If we want to add additional capacity, we would need to sign a new agreement for the additional amount.

6. What is the cost of that capacity for 10 years, 15 years, and 20 years?

Oneta Power Purchase Agreement
Estimated Annual Costs

Year	Estimated Capacity (MW)	10-year Capacity Rate ($/kW-Mo)	10-year Contract Cost Per Year	15- year Capacity Rate ($/kW-Mo)	15-year Contract Cost Per Year	20-year Capacity Rate ($/kW-Mo)	20-year Contract Cost Per Year
2020	45	$2.25	$1,215,000	$2.05	$1,107,000	$1.95	$1,053,000
2021	46	$2.31	$1,275,120	$2.10	$1,159,200	$1.99	$1,097,928
2022	47	$2.36	$1,331,040	$2.14	$1,206,960	$2.03	$1,144,232
2023	48	$2.42	$1,393,920	$2.19	$1,261,440	$2.07	$1,191,949
2024	50	$2.48	$1,488,000	$2.24	$1,344,000	$2.11	$1,266,446
2025	51	$2.55	$1,560,600	$2.29	$1,401,480	$2.15	$1,317,610
2026	52	$2.61	$1,628,640	$2.34	$1,460,160	$2.20	$1,370,314
2027	53	$2.67	$1,698,120	$2.40	$1,526,400	$2.24	$1,424,600
2028	54	$2.74	$1,775,520	$2.45	$1,587,600	$2.28	$1,480,509
2029	56	$2.81	$1,888,320	$2.50	$1,680,000	$2.33	$1,566,049
2030	57	**TOTAL:**	**$15,254,280**	$2.56	$1,751,040	$2.39	$1,631,474
2031	58			$2.62	$1,823,520	$2.44	$1,699,108
2032	59			$2.68	$1,897,440	$2.50	$1,769,021
2033	60			$2.74	$1,972,800	$2.56	$1,841,281
2034	62			$2.80	$2,083,200	$2.62	$1,947,369
2035	63			**TOTAL:**	**$23,262,240**	$2.68	$2,025,280
2036	64					$2.74	$2,105,777
2037	65					$2.81	$2,188,938
2038	67					$2.87	$2,309,313
2039	68					$2.94	$2,398,859
						TOTAL:	**$32,829,058**

Dogwood RFP Response - Estimated costs over the first 20 years of Ownership

MW	Total Fixed Costs CapEx	O&M	Debt Service	Projected Ave Revenues	All-in Cost	Ann. Avg. All-in Cost
50	$ 2,510,496	$ 34,223,612	$ 42,127,358	$ 23,815,714	$ 55,045,753	$ 2,752,288
60	$ 3,012,596	$ 41,068,334	$ 50,552,830	$ 28,578,856	$ 66,054,903	$ 3,302,745
70	$ 3,514,695	$ 47,913,057	$ 58,978,302	$ 33,341,999	$ 77,064,054	$ 3,853,203

Oneta RFP Response - Estimated costs for 20 year Capacity Only PPA

MW	Total Fixed Costs CapEx	O&M	Debt Service	Projected Ave Revenues	Average All-in Cost	Ann. Avg. All-in Cost
50	$ -	$ -	$ -	$ -	$ 28,740,000	$ 1,437,000
60	$ -	$ -	$ -	$ -	$ 34,488,000	$ 1,724,400
70	$ -	$ -	$ -	$ -	$ 40,236,000	$ 2,011,800

NOTES:

Debt service to purchase Dogwood at a price of $525/kW was calculated assuming a 20-year term and 5% interest rate. Fixed O&M and capital expenditure costs were calculated using Dogwood's 2020-2023 approved budget and escalated for the remainder of the study period.

Debt service to purchase Dogwood would end in 20 years which would decrease the average annual costs beyond this point. In 20 years, Dogwood would be in its 37th year of operation and close to the practical end of life. At this point, additional costs for O&M would be expected which are not factored into this study.

All-in costs for Dogwood were determined assuming the average annual energy revenue scenario. Average values were determing using historical energy market revenues from 2016 and were escalated by 2.5% each year to nominal dollars. This assumes that energy market revenues will keep pace with inflation.

All-in Costs for Dogwood do not include transmission deliverability costs, unexpected O&M expenses, environmental compliance upgrades, and future decommissioning costs.

All-in Costs for Oneta are based on the average 20-year Contract Capacity rate.

All-in Costs for Oneta do not include transmission deliverability costs and change in law costs that would be based on the percentage of the Contract Capacity in comparison to the total capacity of the Oneta Facility.