

## Citizen Comments: Brent Schondelmeyer

IPL Capacity Request for Proposal

Public Utilities Advisory Board

April 18, 2019

Please accept these written comments on the IPL Power Supply RFP.

My name is Brent Schondelmeyer. I live at 3704 S. Grand and am a member of Indy Energy, a citizen group that has promoted broader community engagement and understanding about the opportunities and responsibilities for providing public power to over 55,000 customers in our community.

The comments will be brief.

We support the closure of the city-owned Blue Valley power plant.

We understand the need to obtain sufficient capacity to meet the 12% in excess of demand.

The staff analysis and evaluation report identifies the Oneta options – 10, 15 or 20-years capacity only or capacity and energy – represent the most cost effective way to secure capacity.

### The Oneta Option

There are some questions I would raise about the Oneta option.

Public presentations on the Power Supply RFP Evaluation said one of the “pros” for the Oneta proposal is:

“IPL would be able to annually adjust the contract capacity to match its load requirements as it experiences changes in peak demand.”

It would be helpful to have a fuller understanding how adjustable an Oneta contract actually would be.

- Is the 45 MW an annual requirement for the length of the contract?
- Is it possible to reduce the contract capacity below the 45 MW in any given year?
- Is the flexibility limited to the amounts between 45 MW (annual minimum) and 75 (annual maximum)?
- Is there a cancellation penalty for early termination of the agreement

The proposed ordinance on the April 15 City Council agenda is for 45 MW and includes some general summary of the contract provisions; an actual contract is not yet available.

These questions become important relative to the length of the Oneta contract. There appears to be little cost differential in capacity only pricing based on figures in Table 2 of the evaluation report. **(See Table 2)**

While there is a value in having fixed predictable pricing, long-term fixed pricing limits the opportunity to take advantage of over-the-horizon opportunities to provide firm deliverable capacity through options such as wind energy with battery storage.

There is tremendous wind capacity within the Southwest Power Pool which will become deliverable firm capacity with the industrial development of battery storage.

**Table 2 – Proposal Summary**

Proposals	Location	Product(s)	Size (MW)	Term	Capacity Pricing (\$/kW-year)	Energy Pricing	Notes	
Dogwood Purchase	Pleasant Hill, MO	SPP Capacity and Energy	50-70	Life	\$44	\$1.40/MWh + \$2,618/start + 6.88 MMBtu/MWh * (\$Southern Star/MMBtu + \$0.17/MMBtu)	\$525/kw	
Able Grid Storage PPA	Blue Valley 161 kV Substation	SPP Capacity Only	12.5	2021 - 2040	\$100	N/A	Also offered 5 and 10-year terms at slightly higher cost	
				2022 - 2041	\$80			
				2023 - 2042	\$64			
			25	2021 - 2040	\$102			
				2022 - 2041	\$88			
				2023 - 2042	\$77			
			50	2021 - 2040	\$129			
2022 - 2041	\$117							
NextEra PPA	SPP	SPP Capacity Only	25 - 50	2020	\$10	N/A	Capacity sourced from renewable resources	
				2020 - 2024	\$23			
				2020 - 2029	\$33			
NextEra 3x0 Recips Purchase + Storage PPA	Blue Valley 161 kV Substation	SPP Capacity and Energy (Paper Capacity 2020-2021)	54	2022 +	\$172	\$7.18/MWh + 8.65 MMBtu/MWh * (\$Southern Star/MMBtu + \$Spire/MMBtu)	Recips \$1,996/kw	
				15	2025 - 2044	\$122	\$18.41/MWh	Storage
NextEra 4x0 Recips Purchase			73	2022 +	\$157	\$7.18/MWh + 8.65 MMBtu/MWh * (\$Southern Star/MMBtu + \$Spire/MMBtu)	Recips \$1,807/kw	
The City of Lincoln, NE PPA	Lincoln, NE	SPP Capacity Only	50	2020	\$11	N/A		
				13	2021			\$15
				3	2022			\$17
Morgan Stanley PPA	SPP South Hub	SPP Capacity and Energy	25-50	2020 - 2024	\$42	\$21.70/MWh	7x24 Must Take Energy	
				2020 - 2029	\$132	\$23.00/MWh		
				2020 - 2034	\$132	\$24.25/MWh		
Oneta Power PPA	Coweta, OK	SPP Capacity and "Look-Back" Energy	50 - 70	2020 - 2029	\$24 - \$69	\$1.05/MWh + \$2,522/start + 7.15 MMBtu/MWh * (\$ Panhandle/MMBtu + \$0.48/MMBtu)	Years 1-3 Capacity Only	
				2020 - 2034	\$24 - \$73			
				2020 - 2039	\$24 - \$78			
		SPP Capacity Only	2020 - 2024	\$27 - \$30	N/A			
			2020 - 2029	\$27 - \$34				
			2020 - 2034	\$25 - \$34				
			2020 - 2039	\$23 - \$35				
Tenaska PPA	Longview, TX	SPP Capacity	50	2020 - 2024	\$24 - \$29	N/A		
		SPP Capacity and Call Option Energy			\$33 - \$39	11.25 MMBtu/MWh * (\$ Henry Hub/MMBtu + \$0.15/MMBtu)		

Here's a headline from just last month

**Renewables 'have won the race' against coal and are starting to beat natural gas**

Mar 29, 2019

The rapidly dropping cost of renewable energy has upended energy economics in recent years, with new solar and wind plants now significantly cheaper than coal power.

But new research shows another major change is afoot: The cost of batteries has been declining so unexpectedly **rapidly that renewables plus battery storage are now cheaper than even natural gas plants in many applications**, according to a report released this week by Bloomberg New Energy Finance (BNEF).

BNEF analyzed pricing data from almost 7,000 power projects in 46 countries that span 20 energy technologies, including coal, gas, nuclear, battery storage, solar photovoltaics (PV), and wind.

They report that electricity prices "for onshore wind, solar PV and offshore wind have fallen by 49 percent, 84 percent and 56 percent respectively since 2010." Costs for lithium-ion battery storage have dropped 76 percent since 2012 — and plunged 35 percent in the past year alone.

These price drops have been global game changers.

*“SPP dispatches the most reliable and lowest-cost generation to meet load, remaining agnostic to fuel sources (i.e., SPP doesn’t favor fossil fuels, renewables or any other particular generation type over another),” the release states.*

Wind is a growing part of that. The release notes:

*“In 2008, wind energy made up just 3 percent of SPP’s annual energy production: about six gigawatt-hours (GWh) of the 176 GWh produced that year. In 2018, SPP produced 276 GWh of energy, of which wind made up 23 percent or 65 GWh. At a given moment, SPP has reliably met as much as 69 percent of its load with renewable resources and 64 percent with wind alone: a level that would have been unthinkable just a few years ago.”*

Over the past decade, SPP has invested \$10 billion in transmission infrastructure to move wind and solar energy to where it is needed.

We believe the further development of wind (combined with industrial development of battery storage) will occur early on in a 20-year capacity contract with a natural gas fired plant.

**Recommendation:** Enter into a five-year capacity only contact with Oneta at \$27/kw year (Table 2) which is the same as the 10-year rate.

A 20-year contract seems too long. Just seven years ago, IPL was looking to buy into or build a coal-power plant.

## **The Dogwood Option**

There has been some discussion about expanding IPL’s ownership interest in the Dogwood Energy Center in Pleasant Hills.

For the same reasons cited above, this would be a poor if not imprudent choice.

In 2012, IPL decided to pay \$45.8 million for 75 MW which was a 12.3% ownership interest in the power plant. IPL’s purchase was funded through a bond issue. By virtue of its ownership interest, IPL has a seat on an operating committee.

As of June 30, 2018, there is a balance of \$33.1 million left on the 2012 bond issue which has a maturity date of June 2037. The bonds are callable in 2021 which would provide an opportunity to restructure the debt at that time.

This option would require a more thorough review of Dogwood’s current financial performance and due diligence relative to assuming expanded risks and opportunity for expanded ownership.

Attached is a copy of the approved 2019 Dogwood Energy Facility annual budget and 2020-23 forecasts obtained through an open records request.

The forecast (next page) shows project net cash flow for the five-year period 2019-2023.

**DOGWOOD ENERGY FACILITY -- BUDGET 2019**  
CASH FLOW STATEMENT FORMAT

Approved

Page 2

(\$000)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2019	2020	2021	2022	2023
Generation (GWh)	136	96	62	143	173	208	257	231	150	140	82	214	1,893	1,959	1,962	1,908	1,859
<b>Revenues</b>																	
Day-Ahead Energy Sales	4,790	3,224	1,954	4,458	5,401	6,954	8,971	7,873	4,986	4,460	2,419	7,015	62,504	63,193	63,082	62,757	63,210
Real Time Energy Optimization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ancillary Services	96	64	39	89	108	139	179	157	100	89	48	140	1,250	1,264	1,262	1,255	1,264
<b>Total Revenues</b>	<b>4,886</b>	<b>3,288</b>	<b>1,993</b>	<b>4,547</b>	<b>5,509</b>	<b>7,093</b>	<b>9,151</b>	<b>8,030</b>	<b>5,085</b>	<b>4,549</b>	<b>2,467</b>	<b>7,156</b>	<b>63,754</b>	<b>64,457</b>	<b>64,343</b>	<b>64,013</b>	<b>64,474</b>
<b>Variable Operating Expense</b>																	
Fuel	3,306	2,308	1,416	2,890	3,462	4,213	5,240	4,742	3,075	2,855	1,704	4,653	39,865	39,098	38,261	37,629	37,658
VOM Consumables	160	113	73	169	239	352	410	379	177	165	97	253	2,587	2,732	2,791	2,767	2,751
LTS Variable Charge (Cash Basis)	-	302	-	-	248	-	-	918	-	-	1,332	-	2,800	3,894	3,883	3,864	3,834
Fuel Variable Transport	11	7	5	11	14	16	20	18	12	11	6	17	148	153	154	149	146
<b>Total Variable Operating Expense</b>	<b>3,477</b>	<b>2,730</b>	<b>1,494</b>	<b>3,070</b>	<b>3,963</b>	<b>4,581</b>	<b>5,670</b>	<b>6,057</b>	<b>3,265</b>	<b>3,031</b>	<b>3,139</b>	<b>4,922</b>	<b>45,400</b>	<b>45,877</b>	<b>45,088</b>	<b>44,409</b>	<b>44,388</b>
<b>Energy Gross Margin</b>	<b>1,409</b>	<b>558</b>	<b>499</b>	<b>1,477</b>	<b>1,547</b>	<b>2,511</b>	<b>3,481</b>	<b>1,973</b>	<b>1,821</b>	<b>1,518</b>	<b>(672)</b>	<b>2,233</b>	<b>18,354</b>	<b>18,580</b>	<b>19,256</b>	<b>19,603</b>	<b>20,087</b>
<b>Fixed Operating Expense</b>																	
Plant Labor	311	771	307	352	312	313	312	308	312	354	317	322	4,291	4,377	4,465	4,554	4,645
Planned Projects	9	228	30	27	1,400	114	210	210	58	25	579	30	2,920	2,700	2,754	2,809	2,865
Recurring Maintenance & Services	157	280	164	162	476	160	208	180	161	158	434	154	2,693	2,747	2,802	2,858	2,915
Water (Fixed)	28	28	28	28	28	28	28	28	28	28	28	28	338	338	338	338	338
Purchased Electricity	46	46	46	46	46	46	46	46	46	46	46	46	550	561	572	564	595
Fixed Fuel Transportation Expense	359	324	292	203	272	311	322	322	263	210	203	359	3,441	3,441	3,441	3,441	3,441
Insurance Costs	150	-	-	850	-	-	-	-	-	-	-	-	1,000	1,020	1,040	1,061	1,082
EMA Fixed Fee	36	36	36	36	36	36	36	36	36	36	36	36	435	444	453	462	471
DPM & Professional Support	44	215	40	40	250	29	32	210	29	29	210	29	1,157	1,180	1,203	1,227	1,252
<b>Total Fixed Operating Expenses</b>	<b>1,141</b>	<b>1,930</b>	<b>942</b>	<b>1,743</b>	<b>2,821</b>	<b>1,038</b>	<b>1,193</b>	<b>1,339</b>	<b>933</b>	<b>886</b>	<b>1,854</b>	<b>1,005</b>	<b>16,825</b>	<b>16,808</b>	<b>17,068</b>	<b>17,334</b>	<b>17,267</b>
<b>Capital Expenditures</b>																	
	-	1,132	-	314	-	-	100	-	-	568	1,290	-	\$3,403	1,376	2,685	2,610	500
<b>Net Cash Flow</b>	<b>267</b>	<b>(2,503)</b>	<b>(443)</b>	<b>(580)</b>	<b>(1,275)</b>	<b>1,473</b>	<b>2,188</b>	<b>634</b>	<b>887</b>	<b>64</b>	<b>(3,816)</b>	<b>1,229</b>	<b>(1,873)</b>	<b>396</b>	<b>(498)</b>	<b>(341)</b>	<b>2,319</b>

Here's a summary for the five-year period shows a net cash flow of \$3.=

2019	-\$1,873
2020	\$396
2021	-\$498
2022	-\$341
2023	\$2,319
5-year Total	\$3

The Dogwood Q4 2018 Report contains significant operating detail but also this sobering financial assessment:

*“For the full year 2018, Dogwood ended with \$2.3 million of positive cash flow. This is the first year in Dogwood’s joint-ownership period that ended in a positive cash flow position.” (Page 11)*

In short, Dogwood is far too risky.

If the PUAB does not recommend that the City purchase the capacity from Dogwood, and if the City Council decides to buy an expanded Dogwood ownership, the PUAB, acting pursuant to City Charter Section 3.18, should request that the City Council communicate to the PUAB the reasons the City Council voted to expand the City's ownership in Dogwood.

This is not the time to expand IPL’s natural gas generation mix given the changing energy market, the associated risks of ownership (generator failure, decommissioning, etc.) and does not warrant the assuming these risks on the off chance of realizing potential “profits” by selling energy in the Southwest Power Pool Integrated market.

Thanks for your voluntary service and commitment to this challenging work.

# Dogwood Energy Facility Annual Budget for 2019 and 2020-2023 Forecast

**Approved**



## 2019 Budget Revision History

Rev 0	August 10, 2018
Rev 1	August 14, 2018
Rev 2	October 5, 2018
Rev 3	November 8, 2018
For Approval	November 14, 2018
Approved	November 15, 2019

# Dogwood Energy Facility Annual Budget for 2019 and 2020-2023 Forecast

## SUMMARY POINTS

Approved

1	Metrics Changes from Prior Year	2019		2018		2019 BUDGET vs. 2018 ACTUAL		Comments
		BUDGET	EST'D ACTUAL	BUDGET	EST'D ACTUAL	Increase (Decrease)	Change %	
	Generation	1,892,628	1,900,000	1,370,195	1,900,000	(7,372)	0%	expecting 2019 similar to 2018
	Annual Capacity Factor	34.8%	34.9%	25.2%	34.9%	0%	0%	expecting 2019 similar to 2018
	Plant Starts	148	155	134	155	-7	-5%	
	Equiv. Availability Factor	90.5%	90.0%	90.5%	90.0%	1%	1%	
	Consumable VO&M Cost	\$1.37	\$1.29	\$1.23	\$1.29	\$0.1	6%	moved all wastewater costs to VOM
	Expected Avg Gas Price	\$2.82	\$2.75	\$2.99	\$2.75	\$0.1	3%	
	Base Load Production Cost	\$21.5	\$21.0	\$22.6	\$21.0	\$0.6	3%	
	Energy Gross Margin	\$18.4	\$18.5	\$10.8	\$18.5	(\$0.1)	-1%	
	Fixed O&M Cost	\$16.8	\$16.0	\$15.7	\$16.0	\$0.8	5%	
	CapEx Budget	\$3.4	\$1.0	\$1.1	\$1.0	\$2.4	240%	added LTP end-of-contract true-ups
	Net Cash Flow	(\$1.9)	\$1.5	(\$5.4)	\$1.5	(\$3.4)	-223%	trending for positive NCF for 2018
	4-Yr (common) Fixed Ops + CapEx	\$78.1	na	\$69.8	na	\$8.3	12%	added LTP true-ups and CT majors
	4-Yr (common) Net Cash Flow	(\$2.3)	na	(\$23.6)	na	\$21.3	90%	Gross Margin improved by \$6+ MM/yr. . + improved CT LTSA pricing

## 2 Business Factors Affecting 2019+

- 2019 represents a \$7 million positive step-change for Dogwood vs. 2018 budget in terms of energy margin, plus higher generation MWh
- Positive factors include: Dogwood LMP now on par with (or above) SPP average; longer duration coal outages; SPP load growth
- Higher wind dependence, lower coal availability continue to cause significant energy price volatility (high and low)
- LTSA pricing (applicable beginning in 2019) is based on actionable written offer from qualified vendor
- 5-yr CapEx plan reflects the two CT major inspections in 2021 and 2022 including owners' associated costs
- Gas transport cost has increased due to: additional 7,700 dth/d SoStar FT; released capacity pricing has increased

## 3 Dogwood is Positioned for Reliable Performance and Self-Sustaining Cash Flow

- Stable, competitive cost structure
  - + Variable Production Cost is competitive with other CCTs and higher-cost coal units
  - + At Energy Gross Margin of \$18-\$19 MM/yr, Dogwood is covering operating & CapEx costs
- Track record of reliable, predictable operations -- 7-yr average EFOF = 1.7%

**DOGWOOD ENERGY FACILITY -- BUDGET 2019**  
**CASH FLOW STATEMENT FORMAT**

**Approved**

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Ancillary Services	96	64	39	89	108	139	179	157	100	89	48	140	1,250	1,264	1,262	1,255	1,264	
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<b>Total Variable Operating Expense</b>	<b>3,477</b>	<b>2,730</b>	<b>1,494</b>	<b>3,070</b>	<b>3,963</b>	<b>4,581</b>	<b>5,670</b>	<b>6,057</b>	<b>3,265</b>	<b>3,031</b>	<b>3,139</b>	<b>4,922</b>	<b>45,400</b>	<b>45,877</b>	<b>45,088</b>	<b>44,409</b>	<b>44,388</b>	
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Fixed Fuel Transportation Expense	359	324	292	203	272	311	322	322	263	210	203	359	3,441	3,441	3,441	3,441	3,441	
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**DOGWOOD ENERGY FACILITY -- BUDGET 2019**  
**PROJECT MGMT AGREEMENT FORMAT**

Approved

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2019	2020	2021	2022	2023	Comments	
Generation (MWh)	135,886	95,509	61,979	142,866	172,943	208,478	257,400	231,017	150,256	139,690	82,205	214,399	1,892,628	1,959,475	1,962,109	1,907,519	1,859,117	see 5-yr forecast	
<b>Variable Operating Expense</b>																			
VOM Consumables	160,444	112,770	73,181	168,686	239,459	351,936	409,699	378,548	177,411	164,935	97,062	253,146	2,587,276	2,732,230	2,790,622	2,767,240	2,750,963	\$1.37/MMWh escl@ 2.0% per year	
LTA Variable Charge (Cash Basis)	302,198	302,198		247,523	247,523	16,322	20,152	918,127	177,411	1,332,100	6,436	16,785	2,799,948	3,893,534	3,882,780	3,863,884	3,833,542	ref. extension pricing bids (Nov 2)	
Fuel Variable Transport	10,638	7,477	4,852	11,185	13,540	16,322	20,152	18,086	11,764	10,936	6,436	16,785	148,174	153,407	153,614	149,340	145,550	@ \$0.07/MMBtu	
<b>Total Variable Operating Expense</b>	<b>171,082</b>	<b>422,445</b>	<b>78,033</b>	<b>179,871</b>	<b>500,521</b>	<b>368,258</b>	<b>429,851</b>	<b>1,314,761</b>	<b>189,174</b>	<b>175,871</b>	<b>1,435,597</b>	<b>269,931</b>	<b>5,535,397</b>	<b>6,779,171</b>	<b>6,827,015</b>	<b>6,780,463</b>	<b>6,730,055</b>		
<b>Fixed Operating Expense</b>																			
Plant Labor	311,401	771,396	307,000	351,647	312,172	313,024	311,925	307,524	311,925	353,531	317,358	322,349	4,291,251	4,377,076	4,464,618	4,553,910	4,644,989	escl at 2.0%	
Planned Projects	9,000	228,394	30,000	26,600	1,400,275	114,000	210,000	210,000	57,500	25,000	578,930	30,000	2,919,699	2,700,000	2,754,000	2,809,080	2,865,262	escl at 2.0%	
Recurring Maintenance & Services	157,465	280,249	163,590	161,832	476,007	160,057	207,632	179,507	161,057	158,115	434,065	153,890	2,693,465	2,747,335	2,802,281	2,858,327	2,915,493	escl at 2.0%	
Water (Fixed)	28,167	28,167	28,167	28,167	28,167	28,167	28,167	28,167	28,167	28,167	28,167	28,167	338,000	338,000	338,000	338,000	-	fixed payment; expires 2022	
Purchased Electricity	45,833	45,833	45,833	45,833	45,833	45,833	45,833	45,833	45,833	45,833	45,833	45,833	550,000	561,000	572,220	583,664	595,338	escl at 2.0%	
Fixed Fuel Transportation Expense	358,950	324,213	291,525	203,371	272,150	311,371	321,750	321,750	263,371	210,150	203,371	358,950	3,440,921	3,440,921	3,440,921	3,440,921	3,440,921	mostly fixed Demand Payments	
Insurance Costs	150,000	-	-	850,000	-	-	-	-	-	-	-	-	1,000,000	1,020,000	1,040,400	1,061,208	1,082,432	escl at 2.0%	
EMA Fixed Fee	36,250	36,250	36,250	36,250	36,250	36,250	36,250	36,250	36,250	36,250	36,250	36,250	435,000	443,700	452,574	461,625	470,858	escl at 2.0%	
DPM & Professional Support	44,300	215,100	39,600	39,600	250,400	29,100	31,600	209,800	29,100	29,100	209,700	29,100	1,156,500	1,179,630	1,203,223	1,227,287	1,251,833	escl at 2.0%	
<b>Total Fixed Operating Expenses</b>	<b>1,141,366</b>	<b>1,929,602</b>	<b>941,965</b>	<b>1,743,300</b>	<b>2,821,253</b>	<b>1,037,802</b>	<b>1,193,156</b>	<b>1,338,830</b>	<b>933,202</b>	<b>886,146</b>	<b>1,853,674</b>	<b>1,004,539</b>	<b>16,824,836</b>	<b>16,807,662</b>	<b>17,068,237</b>	<b>17,334,023</b>	<b>17,267,125</b>		
<b>Capital Expenditures</b>	\$0	\$1,131,600	\$0	\$313,500	\$0	\$0	\$100,000	\$0	\$0	\$567,600	\$1,290,000	\$0	\$3,402,700	1,376,000	2,685,000	2,610,000	500,000	see CapEx schedule	
<b>Approved Contingency Amount</b>													<b>2,022,754</b>	<b>1,818,366</b>	<b>1,975,324</b>	<b>1,994,402</b>	<b>1,776,712</b>	% x [Total Fixed Expenses + CapEx]	
													<b>27,785,687</b>	<b>26,781,199</b>	<b>28,555,575</b>	<b>28,718,888</b>	<b>26,273,893</b>		

10%

TABLE A. COST COMPARISON 2019 vs. 2018

(\$000)	2018 Budget	2019	Change	Change %	Explanation
Generation (GWh)	1,370	1,893	522	38.1%	see cover page
<b>Variable Operating Expense</b>					
VOM Consumables	1,691	2,587	896	53.0%	incr MWh; moved all WW costs to VOM
L.TSA Variable Charge	3,314	2,800	(514)	-15.5%	f <incr starts>
Fuel Commodity	107	148	41	38.1%	f <incr MWh>
<b>Total Variable Operating Expense</b>	<b>5,112</b>	<b>5,535</b>	<b>423</b>	<b>8.3%</b>	
<b>Fixed Operating Expense</b>					
Labor	4,077	4,291	214	5.3%	3% normal esci; add I&C tech
Planned Projects	3,011	2,920	(91)	-3.0%	
Recurring Maint	2,385	2,693	309	12.9%	5-yr PMs on transformers, CT torque conv.
KCMO Water	338	338	-	0.0%	no change in fixed component
Purchased Electricity	600	550	(50)	-8.3%	more self-gen = less purch power
Fixed Fuel Transportation Expense	2,749	3,441	692	25.2%	higher release capacity pricing for 2019+
Insurance Costs	1,000	1,000	-	0.0%	expect similar pricing
EMA Costs	435	435	-	0.0%	
DPM & Professional Costs	1,137	1,157	20	1.7%	add'l legal for new LTP agmt
<b>Total Fixed Operating Expenses</b>	<b>15,732</b>	<b>16,825</b>	<b>1,093</b>	<b>6.9%</b>	
<b>Capital Expenditures</b>	1,068	3,403	2,335	218.6%	added LTP true-up payments (\$1.8MM) + other
<b>Approved Contingency Amount</b>	1,680	2,023	343	20.4%	calc
<b>10%</b>					
	<b>23,592</b>	<b>27,786</b>	<b>4,194</b>	<b>17.8%</b>	

TABLE C. REV TRACKING - 4-YEAR TOTAL NET CASH FLOW (\$000)

Rev 1	NCF Value	Changes from Rev to Rev
revenue	-	added LTP true-ups; higher gas transport; incr. maint
expenses	891	
<b>= Rev 2</b>	<b>(6,110)</b>	higher winter gas transport costs; add'l steam valve work and breaker replacement projects
revenue	-	model re-run produced deminimus changes
expenses	(2,681)	reduced CT2 true-up; reduced purch elec
<b>= Rev 3</b>	<b>(3,429)</b>	New LTP incl. no U1 prmts in Q1&2
revenue	-	
expenses	(1,114)	reflects improved CT MM Offer 11/12
<b>= Approval</b>	<b>(2,315)</b>	

TABLE B. 4 YEAR COMPARISON (\$000)

(\$000)	2018 DPM Budget (OLD)			
	2019	2020	2021	2019 - 2022
Generation (GWh)	1,362	1,332	1,310	5,195
Energy Gross Margin	11,100	11,400	11,700	46,200
<b>Variable Operating Expense</b>				
VOM Consumables	1,715	1,710	1,715	6,731
L.TSA Variable Charge	3,518	4,048	4,387	16,388
Fuel Commodity	107	104	103	407
<b>Total Variable Ops Expense</b>	<b>5,339</b>	<b>5,862</b>	<b>6,205</b>	<b>23,525</b>
<b>Fixed Operating Expense</b>				
Labor	4,158	4,241	4,326	17,139
Planned Projects	2,500	2,550	2,601	10,304
Recurring Maint	2,433	2,481	2,531	10,026
KCMO Water	338	338	338	1,352
Purchased Electricity	612	624	637	2,522
Fixed Fuel Transportation Expense	2,749	2,749	2,749	10,998
Insurance Costs	1,025	1,051	1,077	4,256
EMA Costs	435	435	435	1,740
DPM & Professional Costs	1,159	1,183	1,206	4,779
<b>Total Fixed Ops Expenses</b>	<b>15,410</b>	<b>15,653</b>	<b>15,901</b>	<b>63,116</b>
<b>Capital Expenditures</b>	1,094	863	1,510	6,652
<b>Approved Contingency Amount</b>	1,650	1,652	1,741	6,977
<b>10%</b>				
<b>Net Cash Flow (w/o Contingency)</b>	<b>(5,404)</b>	<b>(5,116)</b>	<b>(5,711)</b>	<b>(23,568)</b>

(\$000)	2019 DPM Budget (NEW)			
	2019	2020	2021	2019 - 2022
Generation (GWh)	1,893	1,959	1,962	7,722
Energy Gross Margin	18,354	18,580	19,256	75,793
<b>Variable Operating Expense</b>				
VOM Consumables	2,587	2,732	2,791	10,877
L.TSA Variable Charge	2,800	3,894	3,883	14,440
Fuel Commodity	148	153	154	605
<b>Total Variable Ops Expense</b>	<b>5,535</b>	<b>6,779</b>	<b>6,827</b>	<b>25,922</b>
<b>Fixed Operating Expense</b>				
Labor	4,291	4,377	4,465	17,687
Planned Projects	2,920	2,700	2,754	11,183
Recurring Maint	2,693	2,747	2,802	11,101
KCMO Water	338	338	338	1,352
Purchased Electricity	550	561	572	2,267
Fixed Fuel Transportation Expense	3,441	3,441	3,441	13,764
Insurance Costs	1,000	1,020	1,040	4,122
EMA Costs	435	444	453	1,793
DPM & Professional Costs	1,157	1,180	1,203	4,767
<b>Total Fixed Ops Expenses</b>	<b>16,825</b>	<b>16,808</b>	<b>17,068</b>	<b>68,035</b>
<b>Capital Expenditures</b>	3,403	1,376	2,685	10,074
<b>Approved Contingency Amount</b>	2,023	1,818	1,975	7,811
<b>10%</b>				
<b>Net Cash Flow (w/o Contingency)</b>	<b>(1,873)</b>	<b>396</b>	<b>(498)</b>	<b>(341)</b>
	<b>3,531</b>	<b>5,512</b>	<b>5,213</b>	<b>6,998</b>

4-yr Increase (Decrease)	Chg Explanation
2,527	49% see Cover notes
29,593	64% see Cover notes
4,147	62% incr MWh; moved WW costs to VOM; incr water cost
(1,948)	-12% new contract offsets incr. MWh & starts
198	49% f <incr MWh>
2,397	10%
548	3% 3% normal esci; add I&C tech
879	9%
1,075	11% incr. HRSG work; ZLD area; tank maint
(256)	0% no change in fixed component
2,766	-10% more self-gen = less purch power
(135)	25% higher release capacity pricing for 2019+
53	-3% expect similar pricing 2018-->2019
(12)	3% added CPI escalating price
4,918	8% 0% expect steady state
3,422	51% LTP true ups; CT majors; breaker repl.
834	12% calc
<b>21,253</b>	<b>90%</b> net cash result improves v. pre-2018

= Increase (decrease) from prior year budget

# GENERATION & STARTS FORECAST

NOTE: Monthly generation and combustion turbine starts are provided by Energy Management.

Assumed Quarterly CT Starts for 4Q2017

40

Assumed Quarterly CT Hours for 4Q2017

817

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
<b>Base Capacity</b>													
Generation (MWh)	122,238	85,980	55,486	126,960	152,906	183,961	226,797	203,556	133,011	124,308	73,638	193,136	1,681,978
Number of Plant Starts (2x1)	10	8	5	11	15	19	19	21	15	12	5	8	148
Average Capacity MW	565	565	545	545	535	515	515	515	535	545	545	565	541
Run Hours (2x1)	283	197	148	236	295	361	449	402	256	236	196	335	3,393
Avg Run per start	27	24	30	22	20	19	23	19	18	20	38	40	23
<b>Duct Firing</b>													
Generation (MWh)	13,648	9,529	6,494	15,906	20,037	24,518	30,603	27,461	17,244	15,381	8,567	21,263	210,650
Average Capacity MW	80	80	80	80	80	80	80	80	80	80	80	80	80
Run Hours	171	119	81	199	250	306	383	343	216	192	107	266	2,633
<b>Combined Operation</b>													
Generation (MWh)	135,886	95,509	61,979	142,866	172,943	208,478	257,400	231,017	150,256	139,690	82,205	214,399	1,892,628
Average Capacity MW (w/o PAG)	645	645	625	625	615	595	595	595	615	625	625	645	621

## LTP Payment Calculator

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Quarterly Billing Basis		starts			starts			starts			starts		
Quarterly CT Starts			47			88			110			51	296
Quarterly CT Hours			1,256			1,782			2,214			1,534	6,787
Quarterly Variable Fee		\$302,198			\$247,523			\$918,127			\$1,332,100		\$2,799,948
Total Quarterly Fee		\$302,198			\$247,523			\$918,127			\$1,332,100		\$2,799,948

## Fuel Consumption Estimate

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
Baseload Generation (MWh)	122,238	85,980	55,486	126,960	152,906	183,961	226,797	203,556	133,011	124,308	73,638	193,136	1,681,978
Baseload Avg Heat Rate (MMBtu/MWh)	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150	7,150
Baseload Fuel Req't (MMBtu)	874,004	614,754	396,723	907,767	1,093,277	1,315,318	1,621,598	1,455,428	951,031	888,804	526,514	1,380,922	12,026,141
Starts (2x1)	10	8	5	11	15	19	19	21	15	12	5	8	148
Avg Fuel to Min Load (MMBtu/start)	5,000	5,000	3,000	2,500	2,500	2,200	2,200	2,200	2,500	2,500	3,000	5,000	3,133
Startup Fuel Req't (MMBtu)	52,213	41,050	14,970	26,775	36,888	41,019	42,554	46,332	36,275	29,444	15,390	41,850	424,758
DF Generation (MWh)	13,648	9,529	6,494	15,906	20,037	24,518	30,603	27,461	17,244	15,381	8,567	21,263	210,650
DF Avg Heat Rate (MMBtu/MWh)	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800	8,800
DF Fuel Req't (MMBtu)	120,098	83,859	57,144	139,971	176,329	215,757	269,307	241,654	151,749	135,355	75,387	187,112	1,853,723
Total Fuel Req't (MMBtu)	1,046,314	739,663	468,837	1,074,514	1,306,494	1,572,094	1,933,459	1,743,414	1,139,055	1,053,603	617,291	1,609,884	14,304,622
Imputed Avg All-in HR (MMBtu/MWh)	7,700	7,744	7,564	7,521	7,554	7,541	7,511	7,547	7,581	7,542	7,509	7,509	7,558

Note: Heat rates are an approximation and incorporate rough estimates of part-load and ramp operation. "All-In" HR includes start-up fuel.

= inputs or import values from plant model

**DOGWOOD 2019 CAPITAL PLAN AND CASH REQUIREMENT**

Project	Jan-19	Feb-19	Mar-19	Q1	Apr-19	May-19	Jun-19	Q2	Jul-19	Aug-19	Sep-19	Q3	Oct-19	Nov-19	Dec-19	Q4	Totals - 2018
Unit 2 Combustion Inspection Crane & Support Service				\$0				\$0				\$0	\$198,000			\$198,000	\$198,000
Unit 2 Extra Work During Combustion Inspection				\$0				\$0				\$0	\$169,600			\$169,600	\$169,600
Unit 1 IGV Rotary Replacement & Tuning				\$0	\$99,500			\$99,500				\$0	\$0			\$0	\$99,500
Unit 1 LTP Combustion Inspection True Up		\$1,131,600		\$1,131,600				\$0				\$0	\$0			\$0	\$1,131,600
Unit 2 LTP Combustion Inspection True Up				\$0				\$0				\$0	\$0	\$700,000		\$700,000	\$700,000
STG Minor Inspection (Valve Overhauls; no LP)				\$0				\$0				\$0	\$0	\$590,000		\$590,000	\$590,000
Site Asphalt Repair				\$0				\$0	\$100,000			\$0	\$0			\$0	\$100,000
Add Access and Rails to Mechanical Packages for U1 / U2				\$0	\$24,000			\$24,000				\$0	\$0			\$0	\$24,000
Add devices to replace HIM Modules				\$0	\$100,000			\$100,000				\$0	\$0			\$0	\$100,000
Circuit breaker upgrade project				\$0	\$90,000			\$90,000				\$0	\$200,000			\$200,000	\$200,000
Install ZLD Monoblock / Impeller				\$0	\$90,000			\$90,000				\$0	\$0			\$0	\$90,000
<b>Capital Budget Cost</b>	<b>\$0</b>	<b>\$1,131,600</b>	<b>\$0</b>	<b>\$1,131,600</b>	<b>\$313,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$313,500</b>	<b>\$100,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$100,000</b>	<b>\$567,600</b>	<b>\$1,290,000</b>	<b>\$0</b>	<b>\$1,857,600</b>	<b>\$3,402,700</b>

**Five Year Capital Budget**

	2019	2020	2021	2022	2023	Five Year Total	Comments
<b>Gas Turbine and Steam Turbine</b>	<b>\$2,888,700</b>	<b>\$600,000</b>	<b>\$2,435,000</b>	<b>\$2,435,000</b>	<b>\$0</b>	<b>\$8,358,700</b>	
Unit 2 Combustion Inspection Crane & Support Service	\$198,000					\$198,000	Verified dollars and included scaffolding and insulation (escalated, based on current projections). See below (Cell A51) for includes U2 IGV Rotary Replacement U2 Thrust Bearing Replacement Generator Drip Pan Inspection U2 ITMD (Bearing
Unit 2 Extra Work During Combustion Inspection	\$169,600					\$169,600	
Unit 1 IGV Rotary Replacement & Tuning	\$99,500					\$99,500	Complete during U2 Combustion Inspection
Unit 1 LTP Combustion Inspection True Up	\$1,131,600					\$1,131,600	Final calculation
Unit 2 LTP Combustion Inspection True Up	\$700,000					\$700,000	Actual True-Up will not be known until the U2 CI outage
Unit 1 Major --Crane & Support Service Costs	\$920,000					\$920,000	Estimated costs based on previous MI
Unit 1 Major --Life Extension Projects (RCIE)	\$1,515,000					\$1,515,000	In conjunction with CT1 Major Inspection. Scope under development.
Unit 2 Major --Crane & Support Service Costs	\$920,000			\$920,000		\$920,000	Estimated costs based on previous MI
Unit 2 Major --Life Extension Projects (RCIE)	\$1,515,000			\$1,515,000		\$1,515,000	In conjunction with CT2 Major Inspection. Scope under development.
STG Minor Inspection (Valve Overhauls; no LP)	\$590,000					\$590,000	OEM recommended 5 calendar year interval. Overall will include HP and HRR intercept valves during this outage and
Plant DCS Hardware/Software Update	\$250,000					\$250,000	For both units
Duct Burner Controls Upgrade (Coincide with DCS	\$250,000					\$250,000	Move indoors and will become part Siemens T3K
Upgrade U1/U2 Bypass System BLAC Hydraulic Controls	\$100,000					\$100,000	
<b>Sub Total</b>	<b>\$2,888,700</b>	<b>\$600,000</b>	<b>\$2,435,000</b>	<b>\$2,435,000</b>	<b>\$0</b>	<b>\$8,358,700</b>	
<b>Buildings &amp; Grounds</b>							
Site Asphalt Repair	\$100,000					\$100,000	
Add Stairs to Evaporative Cooler Grating both Units	\$40,000					\$40,000	Quote Received
Add Access and Rails to Mechanical Packages for U1 / U2	\$24,000					\$24,000	Quote received
<b>Sub Total</b>	<b>\$124,000</b>	<b>\$40,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$164,000</b>	
<b>Mobile/Equipment</b>							
SkyTrak/all terrain forklift	\$150,000					\$150,000	Based on estimate for used equipment with low operating hours. Does not include any trade in value
Articulated Battery Operated Man-Lift				\$75,000		\$60,000	Quote received
<b>Sub Total</b>	<b>\$150,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$75,000</b>	<b>\$0</b>	<b>\$210,000</b>	
<b>Balance of Plant</b>							
SCR Catalyst Replacement					\$0	\$0	Testing shows catalyst in good condition. (was \$617k based on quote)
Document Management System	\$76,000					\$76,000	Quote dated 11/5/14, Purchase hard drives. Continue research into viable options
Compressor Bleed to Plant Air Project - MOC	\$40,000					\$40,000	MOC not yet completed. Estimated based on concept.
Rerouting Gas line from T7 to Aux Boiler	\$70,000					\$70,000	CDI quote dated August 26, 2016
Add devices to replace HIM Modules	\$100,000	\$100,000	\$50,000			\$250,000	Multyear project 2017 / 2018 / 2019. Added 2020 cost to cover additional HIM module work for temperature elements
Circuit breaker upgrade project	\$200,000	\$200,000	\$100,000			\$500,000	Upgrade obsolete breakers to include functionality to reduce Arc Flash Hazards
Install ZLD Monoblock / Impeller	\$90,000					\$90,000	To complete vapor compressor overhaul project
Future Capital Planning		\$100,000	\$100,000	\$100,000	\$500,000	\$800,000	
<b>Sub Total</b>	<b>\$390,000</b>	<b>\$586,000</b>	<b>\$250,000</b>	<b>\$100,000</b>	<b>\$500,000</b>	<b>\$1,826,000</b>	
<b>Total</b>	<b>\$3,402,700</b>	<b>\$1,376,000</b>	<b>\$2,685,000</b>	<b>\$2,610,000</b>	<b>\$500,000</b>	<b>\$10,573,700</b>	

**FIXED GAS TRANSPORT EXPENSE**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
	31	28	31	30	31	30	31	31	30	31	30	31	
<b>Year-Round Fixed Transport (Southern Star)</b>													
Fixed Fuel Transportation (MDQ)	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716	42,716
Fixed Demand Payment (\$/MDQ-day)	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587	\$ 0.1587
<b>Subtotal Fixed Demand</b>	<b>210,150</b>	<b>189,813</b>	<b>210,150</b>	<b>203,371</b>	<b>210,150</b>	<b>203,371</b>	<b>210,150</b>	<b>210,150</b>	<b>203,371</b>	<b>210,150</b>	<b>203,371</b>	<b>210,150</b>	<b>2,474,346</b>
<b>Incremental Summer FT (non recallable)</b>													
Fixed Fuel Transportation (MDQ)	17,500	17,500	17,500										17,500
Fixed Demand Payment (\$/MDQ-day)	\$ 0.274	\$ 0.274	\$ 0.150										\$ 0.274
<b>Subtotal Incr. Summer FT</b>	<b>148,800</b>	<b>134,400</b>	<b>81,375</b>	<b>-</b>	<b>62,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60,000</b>	<b>-</b>	<b>-</b>	<b>148,800</b>	<b>635,375</b>
<b>Incremental FT (recallable)</b>													
Fixed Fuel Transportation (MDQ)	17,500	17,500	17,500										17,500
Fixed Demand Payment (\$/MDQ-day)	\$ 0.274	\$ 0.274	\$ 0.150										\$ 0.274
<b>Subtotal Incr. FT (recallable)</b>	<b>148,800</b>	<b>134,400</b>	<b>81,375</b>	<b>-</b>	<b>62,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>60,000</b>	<b>-</b>	<b>-</b>	<b>148,800</b>	<b>635,375</b>
<b>Total Fixed Gas Transport</b>	<b>358,950</b>	<b>324,213</b>	<b>291,525</b>	<b>203,371</b>	<b>272,150</b>	<b>311,371</b>	<b>321,750</b>	<b>321,750</b>	<b>263,371</b>	<b>210,150</b>	<b>203,371</b>	<b>358,950</b>	<b>3,440,921</b>
<b>TOTAL Firm Transportation</b>	<b>60,216</b>	<b>60,216</b>	<b>60,216</b>	<b>42,716</b>	<b>62,716</b>	<b>72,716</b>	<b>72,716</b>	<b>72,716</b>	<b>62,716</b>	<b>42,716</b>	<b>42,716</b>	<b>60,216</b>	<b>60,216</b>
Southern Star FT	42,716	42,716	42,716	42,716	62,716	72,716	72,716	72,716	62,716	42,716	42,716	42,716	42,716
Pan Handle FT	17,500	17,500	17,500									17,500	17,500

**Notes:**

Fixed demand payments calculated as : MDQ x \$/MDQ x days

MDQ = Maximum Daily Quantity (Dth)

= input quantities / prices



**DPM COSTS**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
<b>DPM Labor &amp; Fee (Acct: 6817-0000 -- FERC 923)</b>													
Monthly Fixed Fee	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$300,000
Labor	\$0	\$165,000	\$0	\$0	\$165,000	\$0	\$0	\$165,000	\$0	\$0	\$165,000	\$0	\$660,000
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal DPM Labor &amp; Fee</b>	<b>\$25,000</b>	<b>\$190,000</b>	<b>\$25,000</b>	<b>\$960,000</b>									
<b>DPM Travel (Acct: 6324-0003 -- FERC 923)</b>													
NAES EH&S + NERC Conferences	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$0	\$0	\$0	\$0	\$5,000
NERC Conferences (2)	\$0	\$0	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$0	\$5,000
Vendor User Groups (e.g., Siemens)	\$2,500	\$0	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000
MO DNR Conference	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$0	\$0	\$0	\$0	\$2,500
MRO RE NERC Workshop	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$0	\$5,000
SPP Meetings	\$0	\$0	\$1,500	\$0	\$0	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$3,000
Management Committee Meetings	\$0	\$3,400	\$0	\$0	\$3,400	\$0	\$0	\$3,400	\$0	\$0	\$5,100	\$0	\$15,300
Plant Trips / Meetings	\$1,700	\$0	\$1,700	\$3,400	\$0	\$0	\$3,400	\$0	\$1,700	\$1,700	\$0	\$0	\$13,600
Westar Meetings	\$0	\$0	\$0	\$3,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,400
<b>Subtotal Travel</b>	<b>\$6,700</b>	<b>\$5,900</b>	<b>\$3,200</b>	<b>\$11,800</b>	<b>\$3,400</b>	<b>\$0</b>	<b>\$3,400</b>	<b>\$8,400</b>	<b>\$3,200</b>	<b>\$1,700</b>	<b>\$10,100</b>	<b>\$0</b>	<b>\$57,800</b>
<b>Photocopy, FedEx (Acct: 6324-0000 -- FERC 923)</b>													
Photocopy/Q Report Production	\$0	\$250	\$0	\$0	\$250	\$0	\$0	\$300	\$0	\$0	\$400	\$0	\$1,200
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal Photocopy, FedEx</b>	<b>\$0</b>	<b>\$250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$250</b>	<b>\$0</b>	<b>\$0</b>	<b>\$300</b>	<b>\$0</b>	<b>\$0</b>	<b>\$400</b>	<b>\$0</b>	<b>\$1,200</b>
<b>Total DPM Costs</b>													
	<b>\$31,700</b>	<b>\$196,150</b>	<b>\$28,200</b>	<b>\$36,800</b>	<b>\$193,650</b>	<b>\$25,000</b>	<b>\$28,400</b>	<b>\$198,700</b>	<b>\$28,200</b>	<b>\$26,700</b>	<b>\$200,500</b>	<b>\$25,000</b>	<b>\$1,019,000</b>
<b>Monthly Cash Flow for Budget</b>													
Monthly Fee	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$300,000
Labor, Travel, Other	\$6,700	\$171,150	\$3,200	\$11,800	\$168,650	\$0	\$3,400	\$173,700	\$3,200	\$1,700	\$175,500	\$0	\$719,000
Photocopy	\$0	\$250	\$0	\$0	\$250	\$0	\$0	\$300	\$0	\$0	\$400	\$0	\$0
<b>Monthly Cash Req't (ref for summary)</b>	<b>\$31,700</b>	<b>\$200,000</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$206,300</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$205,700</b>	<b>\$25,000</b>	<b>\$25,000</b>	<b>\$205,600</b>	<b>\$25,000</b>	<b>\$1,024,300</b>
		Est'd 4Q2018			From 1Q			From 2Q			From 3Q		