October 20, 2017

Bob Bartholomew
Finance Director
City and Borough of Juneau
155 South Seward Street
Juneau, Alaska 99801

Dear Mr. Bartholomew:

PFM Financial Advisors, LLC (PFM) is providing the City and Borough of Juneau (CBJ) this memorandum to assist with a determination of possible future action in regards to Alaska Electric Light & Power (AEL&P). We know the suggestion has been put forth that CBJ should consider a possible acquisition of Alaska Electric Light & Power (AEL&P) and conversion to a municipal electric utility.

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We are aware that AEL&P provides electric service to residential and commercial customers in CBJ and has been doing so for many years. And that AEL&P is wholly owned by Avista Utilities (Avista), a Spokane, Washington based investor owned utility. The suggestion that CBJ should evaluate potential action regarding AEL&P arises now owing to the recent announcement that Avista intends to be acquired by Hydro One, a major Canadian electricity transmission and distribution service provider. Approval of this potential acquisition is now a pending matter before the Regulatory Commission of Alaska.

We hope this memorandum is also useful to CBJ in identifying important issues leading to a strategy for providing comment to the Regulatory Commission of Alaska in the pending Matter of the Joint Application by Hydro One Limited and Avista Corporation for Authority to Acquire a Controlling Interest in Alaska Electric Light & Power Company.

This memorandum will not attempt to provide a recommendation to CBJ in regards to any AEL&P acquisition strategy. In our opinion, any decision by CBJ in that regard should only come after completion of extensive evaluation and research encompassing financial, legal, regulatory, and governance matters. The scope of this memorandum is not intended to accomplish those tasks with the depth and detail CBJ will need.

The objective of this memorandum is to provide an overview of AEL&P's operations and those topics which we believe would need to be considered and analyzed more deeply in order to properly inform the CBJ Assembly and staff in its decision making process.

Sincerely,

F.R. Eoff

Fred Eoff
Director
PFM Financial Advisors LLC

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I. Overview of a Potential Utility Municipalization Process

Undertaking an acquisition of an investor or privately owned utility by a municipal government ("municipalization") has always proven to be a complex and time consuming process. We see no reason to believe the process CBJ would need to undertake related to an acquisition of AEL&P would be any different. Our intent here is to identify topics which CBJ would need to evaluate as part of this process. In Sections II and III of this Memorandum we will provide a limited review of the organizational structure of AEL&P, its operating characteristics and financial performance as we believe a better understanding of these factors will be important to a determination of how CBJ should consider this proposition.

a. Goal setting. We believe CBJ should identify very clear goals it hopes and expects would be achieved from a municipalization of AEL&P. Similar municipalizations, both successful and unsuccessful, have had motivating factors underlying the decision to proceed. More often than not the motivation is rate improvement to utility customers who are citizens of the municipality. Or a desire to improve service or provide new service to areas neglected by the private utility. A municipalization process will be difficult and CBJ should determine early in the process if the time and expense of the process is justified in light of realistically determined goal(s).

b. Hydro One Position on Sale of AEL&P. In October 2016 Avista responded to an inquiry regarding purchase of AEL&P stating they strongly valued AEL&P due in part to the similarity of their corporate philosophies and as such were not interested in a sale. In August 2017 Hydro One stated that assuming the purchase transaction with Avista is approved and closed that they have no interest in a sale of Avista assets or subsidiary companies. This is a critical factor for CBJ to consider. Even in a municipalization where the utility to be acquired is a willing seller the determination of a mutually agreeable value would be a significant investment in terms both of time and expense. With Hydro One clearly stating they are an unwilling seller the process would become much more complicated, time consuming, expensive and potentially litigious.

c. Cost Matters. A recent study of the municipalization history concludes that in most cases where a municipal government takeover of an IOU or private utility is considered the municipality ultimately decides not to pursue a change of ownership.[1] Whether initiated and then abandoned or pursued to a final resolution, CBJ will need to pay particular attention to the matter of costs and determine a realistic estimate and the economic impact to CBJ. The history of municipalization attempts has not been favorable as regards original estimates of expenses when compared to actual experience. This applies both to the acquisition cost and to fees and expenses incurred in support of the process. In a review of recent completed and in-process municipalizations we find fees and expenses (largely legal) have ranged from $2,000,000 to $15,000,000.

d. Governance. CBJ should consider how an acquisition of AEL&P will affect its current governmental structure, administration and governing process. Ultimate utility policy determination and decision making responsibility would fall to the CBJ assembly and

[1] *The Economic Consequences of Contested Government Takeovers of Investor-Owned Water Utilities,* p. 1, available at: www.analysisgroup.com/uploadedfiles/content/insights/publishing/sosa_contested_government_takeovers_water_utilities.pdf

administrative responsibility to CBJ staff. CBJ will need to evaluate these implications on management capacity and integration/control of an entirely new governmental responsibility.

e. Personnel. Presumably CBJ will wish to retain the AEL&P employees in order to assure seamless continuity of utility operations. Under terms of the Power Sales Agreement, AEL&P is not only obligated to purchase Snettisham Hydro power but provide ongoing operations and maintenance as well. Retaining their experience with operational characteristics and power management will be critical.

CBJ would need to make decisions regarding integration of these former AEL&P employees into CBJ not only from a management perspective but for human resources purposes as well. There may be issues of differences with compensation philosophy, benefits, retirement programs and other elements which could all need resolution and adjustments.

II. Avista Corporation, AERC, Snettisham Electric and AEL&P

AEL&P is the operating utility providing electric service to the Juneau area and is part of a larger corporate organization described in summary form in the following sections. AEL&P dates to its original formation in Juneau in 1894. In July 2014 AEL&P became a subsidiary of Avista Corporation pursuant to Avista's acquisition of Alaska Energy and Resources Company.

a. Avista Corporation is a Spokane, Washington based investor owned utility. Avista acquired all of the outstanding shares of Alaska Energy and Resources Company ("AERC") on July 1, 2014 in exchange for approximately 4.5 million shares of Avista common stock. As a condition of approval of this acquisition by the Regulatory Commission of Alaska ("RCA") AERC and Avista Corporation have agreed to maintain their separateness, both legally and financially.

b. Alaska Energy and Resources Company ("AERC") serves primarily as a subsidiary holding company for AEL&P, Snettisham Electric and AJT Mining Properties ("AJT Mining"). Snettisham Electric is a non-operating entity incorporated in 1998 for the primary purpose of acquiring ownership of the Snettisham Hydroelectric Project (the "Project") pursuant to the Option Agreement. AJT Mining is an inactive mining company that holds certain mining properties. AEL&P provides administrative and support services to AERC, Snettisham Electric and AJT Mining in return for a management fee.

c. Snettisham Electric is a wholly owned, non-operating subsidiary of AERC incorporated in 1998 for the primary purpose of acquiring ownership of the Project pursuant to an Option Agreement. AERC's other subsidiaries are AEL&P, described below; and AJT Mining Properties, Inc. ("AJT Mining"), an inactive mining company that holds certain mining properties. AEL&P provides administrative and support services to AERC, to Snettisham Electric and AJT Mining.

d. AEL&P owns and/or operates electric generation, transmission and distribution facilities and currently is the sole utility providing electric service to approximately 16,498 residential, commercial and governmental customers in the City and Borough of Juneau. Due to the geographic isolation with access only by water and air, AEL&P has no electric interconnections with the transmission facilities of other utilities and no pipeline access to natural gas or other fuels.

In addition to the power AEL&P purchases from Snettisham AEL&P owns four other hydroelectric projects and 19 oil- or diesel-fired units at three facilities. The three facilities are designed to be sufficient to cover AEL&P's peak load should Snettisham and the other hydroelectric facilities all be unavailable at the same time.

e. AEL&P Operating Characteristics

Table 1 below summarizes historical generation output from all hydroelectric resources owned or available to AEL&P.

Table 1
Hydroelectric Generation [1]
(000's of MWhs)

Generating Facility	2012	2013	2014	2015	2016
Snettisham	283	252	276	271	266
Lake Dorothy	86	87	85	86	89
Salmon Creek	28	30	25	31	28
Annex Creek	22	25	28	27	27
Gold Creek	5	5	6	7	5
Total Hydroelectric Generation	424	399	420	422	415
Normal Hydroelectric Generation[2]	430	430	430	430	430
Percentage of Normal [3]	99%	93%	98%	98%	96%

[1] Source: AEL&P
[2] "Normal hydroelectric generation" is the hydroelectric generation available in an average water year.
[3] A percentage less than 100% does not necessarily mean that 100% of firm and non-firm demands were met.

Table 2 below summarizes historic energy sales for both firm load and interruptible customers and utilization of utility resources to fulfill load demands.

Table 2
Alaska Energy Light & Power
Historic Energy Demand and Resources [1]

	Years Ending 12/31					
	2011	**2012**	**2013**	**2014**	**2015**	**2016**
Energy Sales (MWh)						
Firm	314,263	317,555	318,950	316,627	313,668	310,906
Interruptible	50,447	81,589	58,055	82,865	84,784	82,360
Total	364,710	399,144	377,005	399,492	398,452	393,266
AEL&P Uses and Losses	20,813	25,497	23,489	20,834	24,436	22,111
Total Energy Requirements	385,523	424,641	400,494	420,326	422,888	415,377
Firm Load Increase/(Decrease) From Previous Year	4.9%	1.0%	0.4%	-0.7%	-0.9%	-0.9%
Energy Sources Utilized (MWh)						
Hydroelectric - AEL&P	124,070	140,866	147,462	143,516	151,616	148,837
Diesel	3,740	1,039	1,023	328	481	648
Hydroelectric - Snettisham	257,713	282,736	252,009	276,482	270,791	265,892
Total Energy Resources	385,523	424,641	400,494	420,326	422,888	415,377
Renewable Energy Resources	99.03%	99.76%	99.74%	99.92%	99.89%	99.84%
Generation Capacity[2] (MW)						
Hydroelectric - AEL&P	25	25	25	25	25	25
Thermal[3]	94	94	94	94	94	107
Hydroelectric - Snettisham	78	78	78	78	78	78
Total Firm Capacity	197	197	197	197	197	210
Diesel Reserves [4]	75	75	75	75	75	98
Firm Capacity Less Reserves (MW)	122	122	122	122	122	112
Peak Demand (MW)	74	80	68	78	76	78
Annual Load Factor	59%	61%	67%	62%	64%	61%

[1] Source: AEL&P

[2] Nameplate rating

[3] Includes internal combustion and turbine generators

[4] AEL&P maintains reserve capacity adequate to meet it firm demand without Snettisham, Lake Dorothy and the largest diesel unit

f. AEL&P Assets Unrelated to Core Utility Activity. AEL&P and/or AERC may own certain properties which are unrelated and not essential to primary electric utility purposes. Specifically we know that AERC owns AJT Mining Properties, Inc. which is an inactive mining company that holds certain mining properties. The full implications, or value to CBJ, of these properties is unknown and would be a potential matter needing additional research regarding potential value or risks of ownership should CBJ elect to move forward with a municipalization process.

g. Pending Purchase of Avista by Hydro One. Hydro One Limited ("Hydro One") and Avista Corporation have submitted an application to the RCA for authorization of Hydro One's acquisition of a controlling interest in AEL&P (the "Proposed Transaction"). This application relates to a broader acquisition by Hydro One of all assets and subsidiaries of Avista Corporation. Avista is a diversified investor-owned utility providing electric utility service in Washington, Idaho and Montana, and natural gas utility service in Washington, Idaho and Oregon. Hydro One is an investor-owned electric utility headquartered in Toronto, Ontario, Canada. The Province of Ontario owns 49.9% of Hydro Ones shares (as of July 31, 2017). Through its subsidiaries, Hydro One provides electric distribution service to more than 1.3 million retail end-use customers, as well as electric transmission service to man local distribution utilities and large industrial customers.

As summarized in the filing with the RCA, the Proposed Transaction entails Hydro One acquiring all of the outstanding common stock of Avista and replacing current institutional and retail investors as the owner of Avista. As additionally noted in the filing with the RCA, Avista, AERC and AEL&P all will continue to operate as they do currently. AEL&P's management, employees, operations, facilities, financing, services rates, and tariffs will not be affected by the Proposed Transaction.

h. Avista and AEL&P Ongoing Governance. The acquisition agreement between Hydro One and Avista include certain provisions regarding ongoing governance and operations of Avista. A description of these Post-Closing Matters are contained in Exhibit A and Exhibit B to the Agreement And Plan of Merger which is included within the Hydro One and Avista joint application for approval currently in docket with the RCA. This agreement is inline with an existing agreement between Avista and AEL&P dating to the acquisition of AEL&P by Avista in 2014. In summary, Avista and AEL&P will continue to maintain their respective boards of directors, maintain their respective corporate offices and manage their utility affairs in keeping with current philosophy and operational standards. AEL&P will be permitted to maintain its current level of community involvement and support initiatives in its existing service territory,

i. Utility Rates and Rate Regulation. AEL&P does not have independent ability to increase its rates, nor are rate increases dictated or controlled by Avista or Hydro One (assuming final closing of the pending purchase of Avista). AEL&P operates subject to the jurisdiction of the Regulatory Commission of Alaska ("RCA") with respect to rates, standards of service, facilities, accounting and other matters, including power sales agreements, and also is subject to State regulation in connection with dam safety, land use and air and water quality. AEL&P may seek rate adjustments under RCA regulations by providing the RCA with detailed revenue requirements, cost of service and rate design studies. The rate-making process also may include the participation of the public by the submission of written statements and a public hearing before the RCA.

In general, it is the responsibility of the RCA to periodically review rate requests of utilities subject to its jurisdiction and determine final rate structures and tariffs. This review

process considers operating costs (including cost of purchased power), investment in new or replacement capital assets, and allowance of a reasonable rate of return on equity capital commensurate with the evaluated risk exposure. A regulated utility does not have the unilateral ability to establish rates to be paid by its customers, but can only apply those rates approved by the RCA.

Table 3 below provides a summary of electric rates for selected communities in Alaska. Based upon residential rates in effect during the RCA's fiscal year ended June 30, 2017, residential rates charged by AEL&P are the lowest regulated rates in the state for nearly all categories.

Table 3
Alaska Utility Rate Comparisons [1]
As of June 30, 2017

		Customer Usage	
City	**Utility**	**500 kWh**	**750 kWh**
Juneau	AEL&P	$69.15	$99.12
Skagway	Alaska Power Company	$119.19	$178.81
Anchorage	Chugach Electric	$95.03	$138.54
Anchorage	Anchorage ML&P	$118.92	$175.10
Fairbanks	Golden Valley Electric	$128.26	$183.64
Homer	Homer Electric	$128.99	$183.49
Wasilla	Matanuska Electric	$101.27	$149.08
Haines	Alaska Power Company	$119.19	$178.81
Kenai	Homer Electric	$128.99	$183.49

j. Financial Performance

Table 4 on the following page provides a summary of AEL&P operating income, expenses and net operating income for Fiscal Years 12/31/15 and 12/31/16. Net Income has been adjusted to identify Net Cash Provided by Operations and Uses of Cash. FY 2016 Operating Revenues increased approximately 2.8% over FY 2015 primarily due to increased demand from commercial and industrial customers. The debt service coverage ratio after payment of operating expenses in both years was strong. After use of cash for capital investment in utility plant, retirement of debt principal and payment of dividends net cash flow was very close to breakeven. The application of cash to utility plant additions is consistent with ongoing maintenance and replacement of capital assets considering total utility plant cost. (See Table 5, page 9)

If operated as a municipal utility, elimination or reduction of taxes and dividends could add significantly to surplus cash. This increase in surplus cash might be offset by increased annual debt service related to CBJ financing of the acquisition which could exceed $10,000,000 annually.

[1] Source: *http://rca.alaska.gov/RCAWEB/documents/Reports/2017Electric.pdf*

Table 4

Alaska Energy Light & Power

Summary of Net Income and Cash Flow [1]

	Fiscal Years Ending 12/31	
	2016	2015
Operating Revenues:		
Residential	$17,267,114	$17,182,000
Commercial/Industrial	20,429,842	19,055,237
Street lighting	261,370	201,616
Government agencies	6,143,267	6,428,336
Cost-or-power adjustments	(1,839,639)	(1,501,348)
Other	716,152	454,144
Total Revenues	$42,978,106	$41,819,985
Operating Expenses:		
Operations	$18,399,014	$18,513,049
Maintenance	3,075,869	3,235,285
Depreciation	5,201,772	5,111,744
Taxes, other	866,707	887,830
Income Taxes	4,876,756	4,108,652
Total Expenses	$32,420,118	$31,856,560
Other Income/Expense	695,942	169,915
Income Before Interest Expense	$11,253,930	$10,133,340
Less: Interest Expense	3,285,549	3,492,067
Net Income	$7,968,381	$6,641,273
Adjustments to reconcile Net Income to Net Cash Provided by Operations:		
Depreciation	5,353,039	5,265,128
Deferred Taxes	2,008,423	1,005,481
Amortization of capital lease property	2,295,000	2,169,972
Other changes providing/(using) cash	2,261,457	1,302,681
Net Cash Provided by Operations	$19,886,300	$16,384,535
Uses of Cash:		
Additions to utility plant	(15,268,111)	(11,572,940)
Principal payments on debt	(2,295,000)	(2,169,972)
Dividends paid on common stock	(2,600,000)	(2,600,000)
Net increase (decrease) in cash	($276,811)	$41,623

[1] Source: AEL&P audited financial statements

Table 5
Alaska Energy Light & Power
Utility Plant Summary [1]

	Fiscal Years Ending 12/31	
Utility Plant, at cost	2016	2015
Hydraulic plant	$67,619,340	$67,412,413
Internal combustion plant	26,321,050	3,980,299
Distribution and transmission system	38,197,633	35,709,900
General plant	9,492,728	11,133,426
Franchises	4,144,444	3,283,764
	$145,775,195	$121,519,802
Less accumulated depreciation	(9,741,855)	(5,499,088)
	$136,033,340	$116,020,714
Construction work in progress	2,203,022	10,686,708
Other property, plant, and equipment	230,708	232,326
Utility property under capital lease, net [2]	61,903,973	65,545,383
Total utility plant	$200,371,043	$192,485,131

III. Snettisham Hydroelectric Project

a. History and Overview. The Snettisham Hydroelectric Project (the "Project") was constructed by the U.S. Army Corps of Engineers and placed in service in 1973. Until purchased by Alaska Industrial Development & Export Authority ("AIDEA") in 1998, was operated by the Alaska Power Administration, then an agency within the U.S. Department of Energy. The Project is located approximately 28 miles south of, and across the Taku Inlet from, the business district of Juneau and includes the Long Lake Reservoir, completed in 1973, and the Crater Lake Reservoir, which became operational in 1990. The Project also includes the Thane Substation; approximately 43 miles of 138 kilovolt overhead transmission lines; seven 138 kilovolt submarine cables (each three miles long) under Taku Inlet (excluding additional capacity in excess of 383 amperes); and a powerhouse, power tunnels, switchyard and related buildings, fixtures and equipment.

Certain equipment at these locations and the excess submarine cable capacity are separately owned by AEL&P and made available for Project use.

[1] Source: AEL&P audited financial statements (extracted)
[2] Relates to the debt service component of cost paid to AIDEA under the Power Sales Agreement

b. Power Sales Agreement. AIDEA and AEL&P entered into the Power Sales Agreement as of July 15, 1998. The Power Sales Agreement was approved by the Alaska Public Utilities Commission (now the RCA) and unless extended or terminated earlier, the initial term of the Power Sales Agreement expires on December 31, 2038 (December 31, 2048 if no Bonds or Parity Obligations are outstanding and AIDEA still owns the Project).

Under the provisions of the Power Sales Agreement, AEL&P is obligated to purchase all of the Capability of the Project, and to make payments to AIDEA in an aggregate amount sufficient to pay all Project Costs, including debt service on all Bonds and Parity Obligations (plus the debt service coverage percentage required by the Resolution) and any amounts required to maintain the reserves established under the Resolution. "Capability of the Project" means the entire capability of the Project to generate and transport electric power at any and all times, regardless of the actual output from the Project, including periods when the project is inoperable, is curtailed, or is not operating, in each case in whole or in part for any reason whatsoever. The Power Sales Agreement also requires AEL&P to bear all costs of managing, operating, maintaining and improving the Project and to pay all Project Costs, notwithstanding a suspension or reduction in the capability of the Project or any interruption, interference or curtailment, in whole or in part, of power supplied by the Project.

c. Option Agreement. On August 18, 1998, AIDEA, AEL&P and Snettisham Electric entered into the Snettisham Option Agreement for the purpose of permitting Snettisham Electric to acquire ownership of the Project (subject to the Deed of Trust, the Security Assignments and to the Security Agreement) at any time on or after August 18, 2003. The Option Agreement provides that concurrent with the transfer of the Project, Snettisham Electric may either (A) provide moneys and Defeasance Obligations that, in accordance with the requirements of the Resolution, are sufficient to provide for the defeasance of all then outstanding Bonds and Parity Obligations, plus any other amounts owed by AEL&P to AIDEA, or (B) deliver to the Trustee a Project Note evidencing the unconditional obligation of Snettisham Electric to make all of the payments required under the Project Sale Agreement; and to satisfy each of the conditions precedent to the transfer. The Option Agreement provides that if all of the conditions precedent are satisfied, then Snettisham Electric will become the owner of the Project.

d. Juneau's Right of First Refusal. In March 1998, AEL&P and the City and Borough of Juneau entered into an agreement (the "CBJ Agreement") that, among other things, granted to the City and Borough of Juneau a right of first refusal to purchase the Project should AEL&P or an affiliate, having acquired the Project from AIDEA, endeavor to sell the Project to an unaffiliated third party.