STATE OF ALASKA

THE REGULATORY COMMISSION OF ALASKA

Before Commissioners: Robert M. Pickett, Chairman
Stephen McAlpine
Rebecca L. Pauli
Norman Rokeberg
Janis W. Wilson

In the Matter of the Request Filed by the MUNICIPALITY OF ANCHORAGE d/b/a MUNICIPAL LIGHT & POWER DEPARTMENT for Approval to Establish Depreciation Rates	
In the Matter of the Tariff Revision Designated as TA357-121 Filed by the MUNICIPALITY OF ANCHORAGE d/b/a MUNICIPAL LIGHT & POWER DEPARTMENT	U-17-008

MUNICIPAL LIGHT & POWER'S RESPONSE TO PROVIDENCE HEALTH & SERVICES' FIRST REQUEST FOR DISCOVERY (PHS-MLP-1)

The Municipality of Anchorage d/b/a Municipal Light & Power ("ML&P"), hereby responds to the Providence Health & Services' ("PHS'") first request for discovery. All responses to discovery are prepared by ML&P in consultation with counsel. Witnesses at hearing will be available for cross-examination on their testimony. Documents produced in response to these requests will also be stored an electronic document management sharefile site accessible with login credentials that have been or will be provided as requested to the counsel, analysts, and consultants for PHS, AG, ANTHC, ENSTAR, FEA, and JLP. Documents will accessible in the folder "Shared / ML&P / U-17-008 Consolidated / Discovery / PHS-MLP / PHS-MLP-1 / Production Docs PHS-MLP-1 (4-3-17)."

GENERAL OBJECTION: ML&P objects to this request as unduly

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Interrogatory (No. PHS-MLP-1-8): TA357-121 at 12 says that "the combination of SCADA metering and revenue metering was used to estimate total loss rates for four (out of a system total of 60) feeders, and use engineering load flow analysis models to estimate losses over the feeder conductors. These two results are aggregated for the four feeders."

(a) What are the "two results" ML&P refers to?

(b) Who performed the analysis described?

(c) List all assumptions relied upon in this analysis and describe the justification for each.

(d) How did ML&P select four as the number of feeders for its estimate?

(e) Which four feeders did ML&P use in this analysis? Why are they representative of all 60 feeders on ML&P's system?

(f) Describe in detail the "engineering load flow analysis models" ML&P used.

Response: (a) The first result is total feeder loss from the substation bus to the customer meter. The second result is the estimated loss from the substation bus to the customer load of primary voltage customers, and the primary side of the service transformers for secondary voltage customers. In the case of the four feeders referenced, there were no primary voltage customers, so the second result is the total loss from the substation buss to the primary side of service transformers.

(b) Jim Susky.

(c) Loss is defined in the relation given below. ML&P used SCADA-recorded figures as "Energy Input" and customer meter figures for "Energy Output." Data were taken from the 2015 calendar year.

The "second result," "estimated loss," was determined using the average load for 2015 in the "Synergee Electric" software product.

(Loss) = (Energy Input) – Energy Output). Loss and Energy are expressed in kilowatt-hours (kWh)

Loss expressed as a rate or "percentage":

(Loss Rate)% = (100)*(Loss)/(Energy Input)

(d) ML&P did not select four as the number of feeders for its estimate. ML&P selected all of the feeders for which it thought it had reasonable results. ML&P would prefer to use all feeders, and intends to work toward that goal.

(e) The four feeders are Substation 7/feeder 7, Substation 15/Feeder 1, Substation 15/Feeder 8, and Substation 16/Feeder 2. The four feeders selected exhibit loss

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characteristics that seem consistent with the loss characteristics of the system, but ML&P does not know that they are representative of all 60 feeders on the system.

(f) The modeling software is "Synergee Electric," a product of DNV GL.

Person(s) Supplying Information: Jim Susky.

Interrogatory (No. PHS-MLP-1-10): TA357-121 at 12 states that "the estimated feeder conductor loss rate is deemed to be the loss rate applicable to primary customers" and applies an estimated feeder loss rate of 0.28% for primary customers. What is the basis for this estimate?

Response: The feeder conductor loss rate is specifically (by definition) the rate of loss between the substation bus and the ultimate primary voltage loads on the feeder. All of the primary voltage loads are either primary voltage customer meters, or the primary side of the secondary voltage service transformers. ML&P believes that the only reasonable distinction, from an energy cost point of view, between primary voltage customers as a group and secondary voltage customers as a group is energy losses between the primary side of the service transformer and the meter for secondary voltage customers. Therefore, ML&P believes that delivery to the primary side of a service transformer is equivalent to delivery to the meter of a primary voltage customer.

Person(s) Supplying Information: Bob Reagan.

Interrogatory (No. PHS-MLP-1-11): TA357-121 at 12 says "there is a great deal of potential for error" in ML&P's feeder line loss estimates.

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