



January 11, 2022

Mrs. Luly Massaro  
Commission Clerk  
RI Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**The Hon. Jorge O. Elorza**  
Mayor

**Ricky Caruolo**  
General Manager

RE: Dk 4994; New Cost of Service Study Data Requests

Dear Mrs. Massaro:

Enclosed, please find Providence Water's responses to the fourteenth (14<sup>th</sup>) set of data requests from Bristol County Water Authority.

Thank you for your attention to this matter.

Sincerely,

*Mary L. Deignan-White*

Mary L. Deignan-White  
Division Manager-Finance

cc: service list(via email)

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RIPUC DK. 4994  
**Bristol County Water Authority Set 14**  
**NEW COST OF SERVICE STUDY**

(Issued December 22, 2021)

**BCWA 14-1:** On page 4 of his Compliance Rebuttal Testimony, Mr. Smith states that Transmission and Distribution (T&D) costs were allocated using data from the hydraulic analysis performed by PARE:

- a. Please identify and provide copies of all treatises, publications and writings that evidence, document, support or memorialize the fact that the methodology Mr. Smith used for allocating T&D costs in Providence's compliance filing using the type of data provided by PARE from the type of hydraulic modeling PARE performed is a generally accepted ratemaking principle.
- b. Please state whether the methodology Mr. Smith used for allocating T&D costs in Providence's compliance filing using the type of data provided by PARE from the type of hydraulic modeling PARE performed has been subjected to peer review or publication, and if so, please fully identify and provide copies of the peer reviews and publications.

**Response:**

- a. Providence Water is not aware of any treatises, publications and writings that address the *exact* approach employed to allocate costs using the hydraulic model analysis conducted by Pare. However, American Water Works Manual M1 Principles of Water: Rates, Fees and Charges (AWWA M1) identified hydraulic modeling as a valid approach to distinguishing transmission and distribution costs:

*Another approach to determining distribution versus transmission mains, though less common in practice and more complex to perform, is to use system hydraulic analyses to determine which water mains, by size diameter and location, function as transmission mains. (AWWA M1, 7<sup>th</sup> Edition p. 303)*

- b. Providence Water is not aware of any peer reviewed publications which address the use of hydraulic modeling for the the purposes of allocating transmission and distribution system costs.

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**NEW COST OF SERVICE STUDY**

(Issued December 22, 2021)

**BCWA 14-2:** On page 4 of his Compliance Rebuttal Testimony, Mr. Smith states that Transmission and Distribution (T&D) costs were allocated using data from the hydraulic analysis performed by PARE, and the remaining costs were allocated using the base-extra capacity method:

- a. Please identify and provide copies of all treatises, publications and writings that evidence, document, support or memorialize the fact that the use of these two different methodologies for allocating costs in the same cost of service study is a generally accepted ratemaking principle.
- b. Please state whether the use of these two different methodologies for allocating costs in the same cost of service study has been subjected to peer review or publication, and if so, please fully identify and provide copies of the peer reviews and publications.

**Response:**

- a. Providence Water is not aware of any treatises, publications and writings that address the *exact* approach employed to allocate costs using the hydraulic model analysis conducted by Pare. However, the logic of allocating different components of a water system differently is well established in American Water Works Manual M1 Principles of Water: Rates, Fees and Charges (AWWA M1). Providence Water used the best available information and approach for each component of the Providenc Water system. For treatment the base-extra capacity approach was used to allocate costs. For transmission and distribution costs, the hydraulic model provided more accurate information so it was used in place of the base extra capacity method. The two approaches are different, but together represent an improvement in accuracy over using the base-extra capacity method alone.
- b. Providence Water is not aware of any peer reviewed publications which address the use of these two different methodologies for allocating costs in the same cost of service study.

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**(Issued December 22, 2021)**

**BCWA 14-3:** At the May 4, 2021 Technical Session, Mr. Smith stated that Providence “consulted with Pare and basically, we had to decide on one method to use and there are multiple, different ways, and I’m sure there are other hydraulic modelers out there that might recommend a slightly different approach than what Pare took, and there are possibly tweaks.” With respect to the method Pare used:

- a. Please identify and provide copies of all treatises, publications and writings that evidence, document, support or memorialize the fact that the use of this method of hydraulic modeling to allocate T&D unit costs is a generally accepted ratemaking principle.
- b. Please state whether the use of this method of hydraulic modeling to allocate T&D unit costs has been subjected to peer review or publication, and if so, please fully identify and provide copies of the peer reviews and publications.

**Response:**

- a. Please see response to BCWA 14-1a
- b. Please see response to BCWA 14-1b