DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION OF
THE STATE OF MONTANA

*****

IN THE MATTER OF Joint Application of Liberty Utilities Co., Liberty WWH, Inc., Western Water Holdings, LLC, and Mountain Water Company for Approval of a Sale and Transfer of Stock	REGULATORY DIVISION DOCKET NO. D2014.12.99

DIRECT TESTIMONY

OF

DAVID L. HAYWARD

ON BEHALF OF

THE CITY OF MISSOULA

November 4, 2015

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I. QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is David L. Hayward. I am Principal of Hayward Consulting Group (HCG). My office is located at 1047 Hygeia Avenue, Leucadia, California, 92024.

Q. PLEASE OUTLINE YOUR EDUCATIONAL BACKGROUND.

A. I hold B.S. and M.S. degrees in Economics from the University of Utah. In addition, I have attended numerous utility-related workshops and seminars including the May 2014 Utility Finance & Accounting Seminar for Financial Professionals taught by the Financial Accounting Institute (FAI). In that seminar, continuing Professional Education (CPE) credits were awarded.

Q. PLEASE PROVIDE AN OVERVIEW OF YOUR PROFESSIONAL WORK EXPERIENCE.

A. Since obtaining my Master's degree, for over 30 years I have worked in the field of public utility regulation (i.e., electric, natural gas, and water) and valuing utilities. My summary resume is included in Appendix A, Exhibit_(DLH-1).

In 1993, I formed HCG which has a broad mix of clients including: (a) investor-owned utilities; (b) law and public accounting firms; (c) consulting firms; (d) private companies; (e) professional associations; (f) federal, state, local, and other governmental entities; (g) educational institutions (e.g., Institute of Public Utilities at Michigan State University); and (h) and multinational organizations (e.g., United States Agency for International Development, and The World Bank).

My international utility consulting experience involved working in 11 developing countries. The most recent project involved: (a) preparing a draft water law; (b) designing a utility regulatory framework for all of the water and wastewater utilities in Egypt; and (c) training the Egyptian Water Regulatory Agency's staff in utility ratemaking practices and techniques. This was an 18-month assignment in Cairo, Egypt during the period 2009-2010.

During my utility career I have testified or prepared testimony in 34 cases addressing the following utility regulatory issues: (a) cost of service, (b) cost allocation, (c) rate design, (d) cost of capital/capital structure, (e) utility financings, (f) incentives for demand-side management (DSM) programs, (g) natural gas policy issues, (h) incentive regulation, and (i) purchased power or fuel adjustment clauses.

Finally, I have made presentations and/or seminars for a variety of private and public-sector clients including the National Association of Water Companies (NAWC), the National Association of Certified Valuation Analysts (NACVA), the California Water Association, and the Arizona Water Association.

More details regarding HCG's: (a) clients, (b) practice areas, (c) utility valuation/appraisal studies, (d) utility regulatory jurisdiction experience, (e) publications, and (f) management can be found at: www.haywardconsultinggroup.com and is incorporated herein by reference.

Q. WHAT OTHER WORK EXPERIENCE IS RELEVANT IN THIS CASE?

A. During my career I have developed or critiqued utility financial or planning models. Some of the models were similar to the financial model used by Algonquin,

Liberty, and/or its financial advisor in this case (Scotia Bank). The models that I have built included a Users' Manual whereby one could understand the logic of the model and its operation. No such Users' Manual was provided in this case. In particular, in this case, a flowchart describing the logic of the model did not exist. Often, it can take one weeks to fully understand a financial model and the implications of the results. For instance, I spent weeks reviewing and understanding a financial model used by the Metropolitan Water District of Southern California. In that project, a flowchart was provided and it still took weeks to understand the model.

Q. IS THERE ANY OTHER EXPERIENCE YOU WOULD LIKE TO HIGHLIGHT FOR THE COMMISSION?

A. Yes. Appendix A lists the cases where I have prepared testimony. Item No. 31 describes the merger related to El Paso Electric Company. In that case I was hired by Dona Ana County New Mexico to review various rate, financial, and policy issues related to the merger. Eventually, El Paso Electric withdrew its merger application.

Q. WOULD YOU PLEASE DESCRIBE SOME OF YOUR ADDITIONAL PROFESSIONAL ACTIVITIES?

A. I am members of NACVA (Honorary), the National Association of Water Companies (NAWC), and the Society of Utility Regulatory Financial Analysts (SURFA). I am a Certified Rate of Return Analyst (CRRA) through SURFA.

Finally, I have taught undergraduate economics courses at the University of Phoenix, San Diego.

II. TESTIMONY CONSLUSIONS

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of the City of Missoula, Montana.

Q. WHAT IS THE SCOPE OF YOUR ASSIGNMENT IN THIS CASE?

A. I was asked to comment on the Joint Application of Liberty Utilities Company (Liberty Utilities), Liberty WWH Inc., Western Water Holdings, LLC (Western), and Mountain Water Company (Mountain or Company) for approval of a sale and transfer of Western's common stock. My review encompasses: (a) a qualitative analysis of the merger from a public-policy perspective, and (b) a quantitative analysis of the merger.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS

A. I recommend that the Montana Public Service Commission (PSC or Commission) deny the application for two reasons. First, I have: (a) public policy concerns that the current regulatory resources, policies, and practices at the PSC are inadequate to effectively regulate Mountain's merger; and (b) water utilities are unique from natural gas and electric utilities in that they provide essential public and private goods. Therefore, in the long-run, Mountain's water utility operations should be under public ownership. Second, the applicants have not provided sufficiently transparent financial, rate, and other information to support that the merger is in the public's interest.

Q. WOULD YOU SUMMARIZE THE APPLICATION BEFORE THE PSC?

A. Yes. This application was filed with the PSC on December 15, 2014. A similar application was made before the California Public Utilities Commission (CPUC) on November 24, 2014 where Apple Valley Rancheros Water Company (AVR) and Park

Water Company (Park) were named as applicants in place of Mountain. AVR and Park are regulated water utilities under the CPUC's jurisdiction.

Under the proposed application, Liberty WWH would merge with and into Western, and Liberty Utilities. As a consequence of the proposed merger, Liberty Utilities would acquire Western's common stock, Liberty Utilities' parent company is Algonquin Power & Utilities Corp. (Algonquin) which either owns or has interests in 27 regulated utilities and electric generating facilities in the U.S. (Algonquin is a Canadian-based corporation whose stock is traded on the Toronto Stock Exchange.) Algonquin conducts its regulated utility businesses through Liberty, its wholly-owned subsidiary.

As the parties stated in the application, Algonquin's strategy (through Liberty) is to acquire "high-quality utility assets." Algonquin, however, is not an applicant in this proceeding.

Aside from procedural issues, the applicants are requesting that the PSC issue a final order approving the transaction set forth in the Plan and Merger Agreement and the modifications to the "ring-fencing" provisions current to Mountain as the result of its application by its current owner, The Carlyle Group.

III. <u>OVERVIEW OF MERGERS AND ACQUISITIONS IN THE UTILITY INDUSTRY</u>

Q. AS BACKGROUND, PLEASE PROVIDE A SUMMARY OF MERGERS AND ACQUITIONS (M&A) IN THE UTILITY INDUSTRY?

A. The four common rate-regulated public utility industries in the United States are: (a) electric, (b) natural gas, (c) telephone, and (d) water/wastewater. The majority of water and wastewater utilities are publicly owned whereas the others are investor owned. In the last several years, the natural gas, telecommunications, and electric utility industries have experienced various degrees of competition. However, the water utility industry still has the traditional characteristics of a natural monopoly—an industry in which technical factors preclude the efficient existence of more than one producer. The following is a short discussion of mergers and acquisitions in the electric and water utility industries. (The natural gas and telecommunications industries have also experienced consolidation; however, a discussion of these industries does not advance the major themes of this testimony. Therefore, they are not discussed.)

Q. PROVIDE A SUMMARY OF MERGERS AND ACQUITIONS (M&A) IN THE ELECTRIC UTILITY INDUSTRY?

A. Many electric utility holding companies (with a similar structure as proposed by the applicants in this case) financially collapsed in the early 1930s. A holding company is an entity that owns the stock of a subsidiary and is a form of pyramiding. It is a way to control assets with as little capital as possible. A cardinal principle of holding company finance is that everything that happens at the operating company level is magnified by the time it reaches the holding company level. As a result of this structure, during a difficult economic environment, the flow of money up from the operating utilities can be minimal or zero. In the context of this merger, this is significant in that Algonquin only has a BBB credit rating from Standard & Poor's (S&P)—one notch

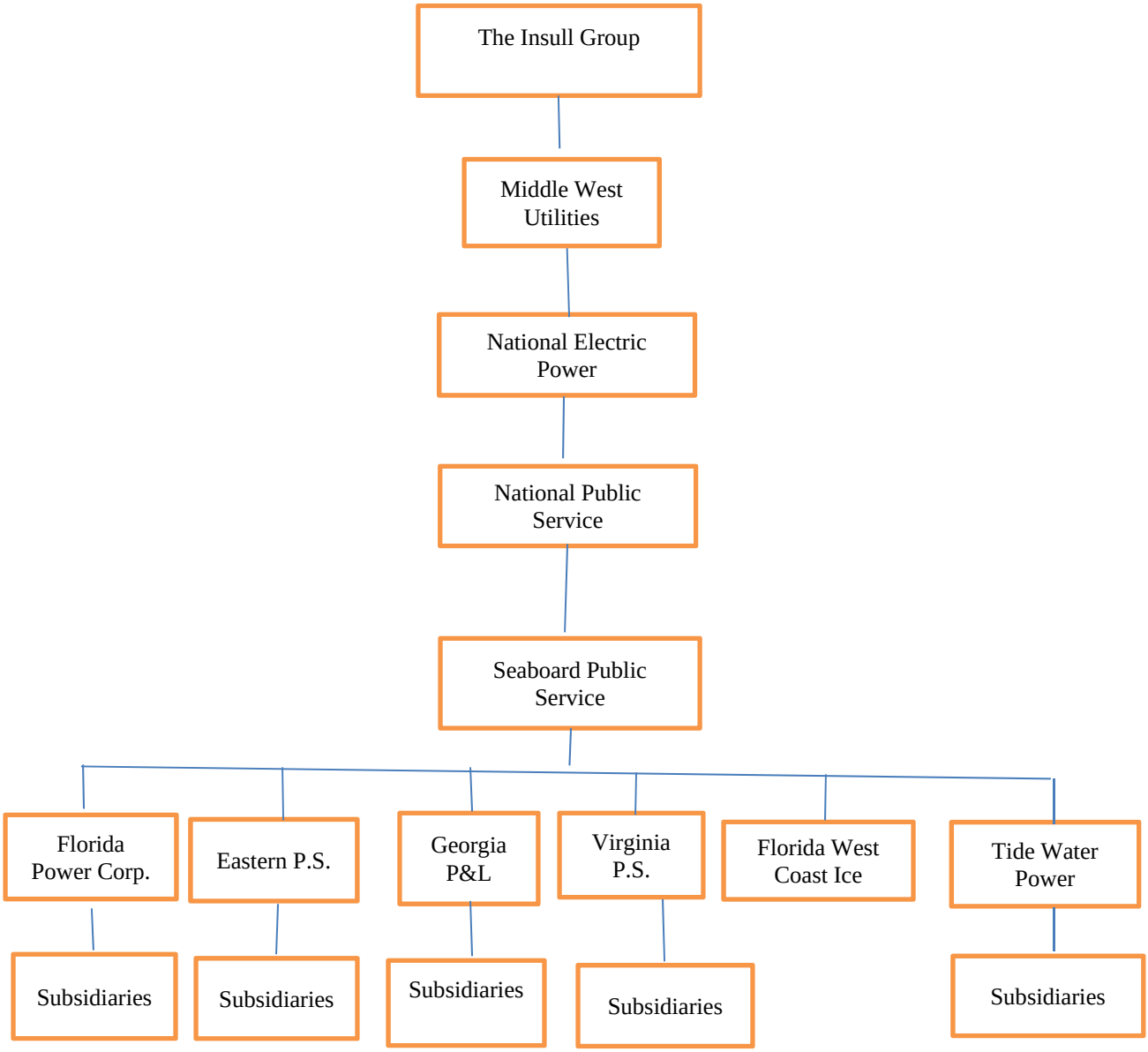
above non-investment grade. If a company's credit rating is below investment grade, attracting more capital is both more difficult and expensive. In contrast to a difficult economic environment, during good economic times, the flow of money up from the subsidiaries to the holding company can be quite large.

In 1928 the U.S. Federal Trade Commission investigated this failure and found a host of financial abuses ultimately leading to the Public Utility Holding Company Act of 1935 (PUHCA). (In 2005, the U.S. Congress repealed PUHCA.) Between 1935 and 1950, 759 utilities were spun off from holding companies. In the early days, the states regulated the operating subsidiaries that sold electricity; however, nobody regulated the holding companies.

An extreme example of a holding company was the Insull Group. The Insull Group was a giant empire that operated in 32 states and owned electric utilities, textile mills, ice houses, a paper mill, and a hotel. In 1930, with a capital investment of about $27 million, Insull controlled at least a half billion dollars in assets. As a result of this ownership, Insull controlled the lowest level operating companies by means of an investment equivalent to less than 0.01% of the securities issued by those subsidiaries.

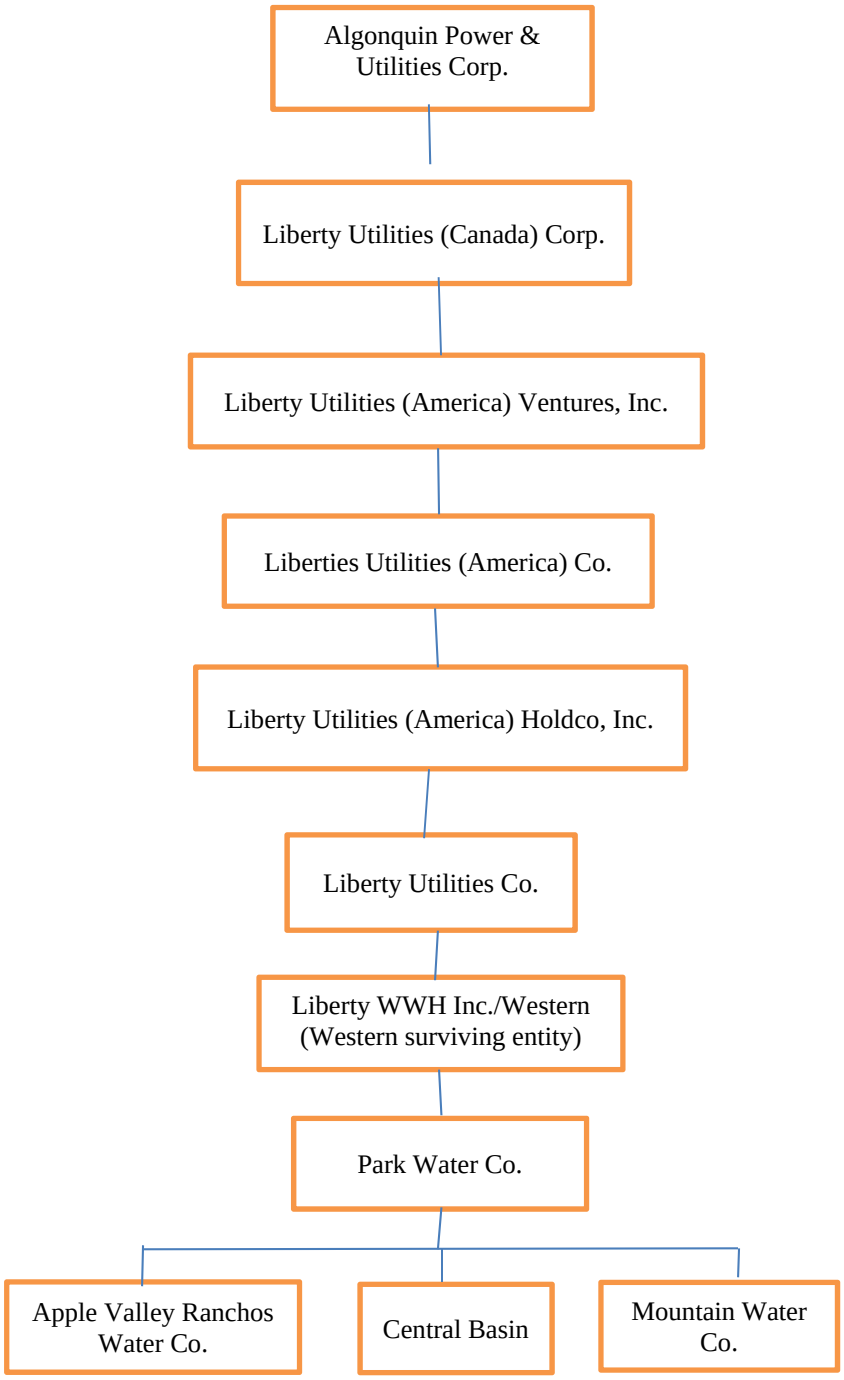
Figure 1 illustrates the organizational structure of The Insull Group and Figure 2 shows the organizational structure of Algonquin assuming the merger is approved. Note that the Algonquin structure has nine levels of ownership whereas Insull had seven. The unnecessary levels of Algonquin's organization coupled with less than transparent financial information of its subsidiaries could possibly result in the type of financial abuses of Mountain similar to electric utilities in the 1920s and 1930s.

Figure 1
Organizational Structure of The Insull Group



Source: Leonard S. Hyman, et al., America's Electric Utilities: Past Present and Future, 8th ed., Vienna, VA: Public Utilities Reports, Inc. 2005, p. 140.

Figure 2
Organizational Structure of Algonquin Power & Utilities



Source: Direct Testimony of David Pasieka on Behalf of Liberty Utilities Co. and Liberty WWH, Inc. Montana Public Service Commission, Regulatory Division, Docket No. D2014.12.99, Exhibit No. _____(DJP-1), March 12, 2015.

Q. WHAT CRITERIA HAS THE U.S. SECURITIES AND EXCHANGE COMMISSION (SEC) USED IN EVALUATING UTILITY MERGERS?

A. Section 10 of PUHCA identified criteria the U.S. Securities and Exchange Commission (SEC) should use in evaluating proposed mergers. The Federal Energy Regulatory Commission (FERC) and various state public service commissions also have various criteria for evaluating mergers. In a 1992 research paper, "Electric Utility Mergers and Regulatory Policy," prepared for the National Regulatory Research Institute (NRRI) the authors concluded that:

> *"…recent electric utility mergers are resulting in substantial wealth transfers principally to shareholders of the acquired utilities."*

Consolidation in the electric utility industry continues to this day.

Q. WOULD YOU BRIEFLY DESCRIBE THE CRITERIA UTILITY REGULATORS REQUIRE BEFORE THEY APPROVE A MERGER?

A. Yes. The principal criterion is that the merger serve the public interest. For natural gas and electric utilities under federal regulations, under Section 203(a) of the Federal Power Act, FERC can approve a merger if it finds the merger will be consistent with the public interest. The list of factors include: (a) the effect of the proposed merger on operating costs and rate levels, (b) the contemplated accounting treatment, (c) the reasonableness of the purchase price, (d) whether the acquiring company has coerced the to-be-acquired utility into accepting the merger, (e) the effect of the proposed merger on the existing competitive situation, (f) whether the consolidation will impair effective regulation either by the FERC or the appropriate state regulatory authority,

and (g) whether the merged companies can be operated economically and efficiently as a single entity.

In Montana, in October 2004 the PSC issued its "Statement of Factors For Evaluating Proposals to Acquire NorthWestern Energy." I am told by legal counsel that those factors were case specific and do not necessarily constitute the PSC's policies going forward.

Q. WHAT ARE THE STANDARDS REGULATORS USE TO EVALUATE MERGERS AND ACQUISITIONS?

A. In the U.S., there are three general standards used by utility regulators in assessing the merits of a proposed merger. These standards are: (a) no-harm to customers, (b) net-benefits, and (c) public-interest. In most states, at the minimum, the public interest standard must be met. In general, the net-benefits test is the stricter standard and is the one used by the CPUC.

Regarding the various standards in Montana, in the NorthWestern Corporation case (Order No. 6754e, July 31, 2007) the PSC stated:

> *"In prior orders, the Commission has based its authority on the duty to ensure adequate service at just and reasonable rates, but has not enunciated a specific standard,"*

In the same order, however, the PSC stated:

> *"For this docket, [the] Commission applies a no-harm to customers standard."*

If the CPUC and PSC apply different standards, a stricter standard used by the CPUC could result in shifting costs away from California customers to Montana customers to justify the merger. At a minimum, since the applicants must meet the net-

benefits-to-customers standard in California, it should also meet this more stringent test in Montana. Even if the net-benefits standards is met, questions remain as to how the merger benefits (assuming there are any) are allocated among the states and customer classes. I should note that the net-benefits standard is consistent with traditional regulatory ratemaking.

Q. PROVIDE A SUMMARY OF MERGERS AND ACQUITIONS (M&A) IN THE WATER UTILITY INDUSTRY?

A. In the late 1990s and early 2000s, several European companies (primarily British, French, and German) and some U.S.-based investor-owned electric utilities (IOU) such as DQE and Minnesota Power Company began purchasing U.S. water utilities. DQE and Minnesota Power owned their water utility subsidiaries for only a few years.

In 1998, Enron entered the water utility business through its purchase of Wessex Water P.L.C.—a British water and wastewater company. Also in 1998, the huge French company—Suez Lyonaise des Eaux (Suez) owned stock in Philadelphia Suburban and Consumers. Philadelphia Suburban later became Aqua America the second largest water IOU in the U.S.

In 2004, private-equity funds began acquiring utilities through a procedure called a leveraged buyout—the use of a target company's asset value to finance most or all of the debt incurred in acquiring the company.

In the pre-consolidation phase in the early 1990s the U.S. had 23 investor-owned and publicly-traded water utilities. Today, only nine U.S. based investor-owned water IOUs whose stock is publicly traded and followed by the investment community exist.

The companies that were acquired and their owners include, but not limited to: E'town Corporation (Thames Water PLC, U.K.), United Water Company (Suez), and American Water Works Company (RWE).

In recent years, Aqua America, American Water Works Company (after being divested by RWE and reorganized), and American States Water Company are the U.S.-based water utilities most active in acquiring water systems.

Q: HOW DOES THE INVESTMENT COMMUNITY VIEW THE WATER INDUSTRY?

A. Water is viewed as the "next oil" by many of the Wall Street mega-banks, private-equity firms, and others. In The Wall Street Journal's book, Guide to Investing in the Apocalypse (2011), the water sector was one of the major investment themes for the future. Water investment opportunities are broadly defined by the Wall Street mega-banks to include: (a) land and water rights, (b) water engineering technologies, (c) water supply infrastructure, (d) wastewater treatment, (e) water purification and treatment technologies, (f) desalination projects, (g) irrigation and well drilling technologies, and (h) water/wastewater utilities.

Some of the key mega-banks and private equity firms involved in water acquisitions include: (a) Goldman Sachs, (b) Morgan Stanley, (c) Credit Suisse, (d) Kohlberg Kravis Roberts (KKR), and (e) The Carlyle Group.

In the U.S., types of investor-owned water utility M&As can be grouped into two major categories: (a) "tuck ins" (usually resulting from asset sales), and (b) large acquisitions by major companies. The vast majority are the tuck-in variety which

generally occur when a large water utility absorbs a much smaller contiguous water system (often one which is experiencing financial trouble).

Table 1 below shows the acquisition date, name of the purchaser, name of the target utility, and date of eventual spinoff related to foreign entities owning U.S. water utilities. Table 1 is not intended to be a comprehensive list.

Table 1
Foreign Ownership of U.S. Water Utilities

Line No.	Acquisition Date	Purchaser	Target Co.	Spinoff Date
1	Oct. 1998	Enron (U.S.)	Wessex Water Ltd. 1/ 2/ 3/	2000 8/
2	Aug. 1999	Suez (French)	United Water Resources 6/	N.A.
3	Nov. 1999	Thames (U.K.)	E'Town	
4	1999	Yorkshire Water PLC (U.K.)	Aquarion Water	
5	Sept. 2001	RWE (German)	American Water Works Co.	2009 4/ 5/
6	Nov. 2001	American Water Works (U.S.)	Azurix North America	N.A.
7	2002	Liberty Utilities (Canada)	Bella Vista (AZ) 7/	N.A.
8	Oct. 2006	Macquarie Group (Australian)	Thames	
9	2006	Macquarie Group (Australian)	Aquarion Water (Kelda, U.K.)	
10	Dec. 2011	Carlyle Group (U.S.)	Western Water Holdings (Park)	Began planning its exit strategy in 2013
11	Sept 2014	Algonquin/Liberty (Canada)	Western (Park, Mountain, AVR)	Not completed

N.A. – Not applicable

Notes:

1/ Wessex Water forms the backbone of Azurix (Enron's water subsidiary)
2/ In June 1999, Azurix completes first public offering for approximately 33% of its common stock at $22/share.
3/ In fall 2000, Azurix CEO, Rebecca Mark, resigns and Enron starts looking for buyers of Azurix. The remaining shares sold for $2/share.
4/ RWE begins divestiture of American Water Works in 200x.
5/ RWE divestiture of American Water Works complete in 2009.
6/ Suez obtains the remaining 70% of shares outstanding.
7/ Liberty's first acquisition of a water utility in the U.S.
8/ Enron files for bankruptcy in December 2000.

Q. WHAT ARE YOUR CONCLUSIONS?

A. The shareholders of the targeted companies often received substantial benefits as the result of the acquisitions. (Recall the conclusion from the NRRI report related to electric utility mergers.

However, the mergers were often not successful resulting in the spinoff of the target utility within a short time period. As a result, the PSC should give little weight to Liberty's claim that they will own Mountain's water utility assets for the long run. It is clear from the history of mergers and acquisitions in the water utility industry that the acquiring company often divests the assets of the target company within a few years of the acquisition date.

Q. GENERALLY, WHAT ARE THE MOTIVATING FACTORS FOR UTILITY M&As?

A. The general motivating factors in mergers and acquisitions (not just in the utility industry) are: (a) expected synergies (e.g., labor force reductions), and (b) growth (e.g., earnings, customers). The two general types of mergers are: (a) synergistic and (b) convergence. A convergence merger is where two or more companies combine to diversify services. An example would be the combination of a natural gas and an electric utility where the natural gas company's sales are primarily during the winter and the electric company's sales peak during the summer.

Because of the limited growth opportunities in the water utility business (it is called a "mature" industry), many large water IOUs have: (a) started offering non-utility

services such as operating and maintenance of nearby systems such as municipal water utilities, and/or (b) acquired other water systems.

Q. ARE THE EXPECTED SYNERGIES IN THE ELECTRIC UTILITY INDUSTRY LIKELY TO OCCUR AS THE RESULT OF THE PROPOSED MERGER IN THIS APPLICATION?

A. No. A significant benefit from two or more interconnected electric utilities merging relates to power pooling. Power pooling can provide the following benefits: (a) economies of scale, (b) system reliability, (c) savings in operating reserves, (d) savings resulting from installed capacity reductions, (e) staggered construction, (f) economy energy exchange, (g) load diversity, (h) maintenance coordination, (i) maximizing hydroelectric utilization, (j) siting flexibility, (k) resource diversity, (l) maximum transmission utilization, (m) emergency response, and (n) utility planning and operating quality. Most of these benefits occur as the result of two or more companies being interconnected. In the case of Mountain Water Company such system interconnections do not exist and are not likely to.

Q. WOULD YOU PLEASE ELABORATE ON THE SYNERGIES RELATED TO LABOR FORCE REDUCTIONS?

A. Yes. Anticipated cost savings related to a reduction in the number of personnel resulting from M&As is a common benefit across numerous industries including the utility industry. However, some stakeholders remain skeptical of the magnitude of this benefit (if any). In the case of the proposed merger between SCE Corp. (the parent

company of Southern California Edison) and San Diego Gas and Electric (SDG&E), an administrative law judge in California reached the following conclusion:

> *"A review of the record in this case leads to the inescapable conclusion that the Edison board of directors first concluded that the merger should be undertaken and only then did they seek the justifying labor savings premise."*

Q. ARE SIGNIFICANT LABOR-RELATED SAVINGS LIKELY TO OCCUR AS THE RESULT OF THIS MERGER?

A. No. Mr. John Kappes in his testimony dated March 12, 2015 stated that the Company had 39 employees. This staffing level is down from 46 employees in 2014. Thirty-nine employees is clearly not the same as SDG&E and SEC Corp. mentioned above. Therefore, cost savings related to a reduced number of employees is likely to be minimal at best. However, if the services currently performed by Park Water for Mountain (as specified in their Operating Agreement) could be performed internally, significant cost savings could result. AVR's 2013 Annual Report to the CPUC reflects approximately $3 million in labor costs related to the Operating Agreement between AVR and Park Water Company. Mountain's 2013 Annual Report to the PSC does not show this detail but the cost is likely to be the same magnitude. This is an annual expense and as the result of compound interest over a long period of time amounts to a significant amount of money.

Q. WHAT OTHER MOTIVATING FACTORS MAY BE INVOLVED IN MERGERS?

A. Other factors could include but are not limited to: (a) diversification (e.g., geographic, customer base), (b) income taxes, (c) asset accumulation through leveraged

buyouts, (d) management's interests, (e) defensive mechanisms, and (f) profits generated through affiliate transactions. The diversification motivation could be overstated since it could be accomplished in a more cost-effective manner by purchasing a portfolio of stocks. Achieving profits through affiliated transactions (which is currently the case with Park and its operating subsidiaries) could be a major motivation. For a water utility, affiliate transactions could include, but are not limited to: (a) engineering design, (b) engineering construction, (c) management services, and (d) financial services. As noted previously, several private equity firms have entered the utility business through leveraged buyouts.

Q. HOW SUCCESSFUL HAVE M&As BEEN IN THE UNITED STATES?

A. The overwhelming evidence in the U.S. regarding all companies is that M&As have failed to produce the anticipated benefits. To my knowledge, the benefits to the ratepayer as the result of Carlyle's acquisition of Mountain have never been quantified.

Q. IN THIS CASE, WHAT CONCLUSIONS HAVE YOU REACHED REGARDING THE LIKLIHOOD THE MERGER WOULD PROVIDE NET BENEFITS TO MOUNTAIN'S CUSTOMERS?

A. This proposed merger is likely to produce limited, if any, synergies and growth opportunities for Mountain. In addition, it could produce significant risks to Mountain's customers (i.e., the ratepayers) including, but not limited to, substantial future rate increases.

Q. DO YOU HAVE ANY FINANCIAL CONCERNS RELATED TO THE MERGER?

A. Yes. S&P uses four credit metrics in setting a utility's bond rating. These are funds from operation (FFO)/total debt, (FFO)/interest coverage (x), total debt/total capital, and pre-tax interest coverage (x). [redacted] This percentage is on the high side for Algonquin to maintain its BBB bond rating. A percentage of greater than or equal to 18% could push Algonquin's rating to below investment grade. If this were to occur, the Company's interest expenses could be much higher resulting in further deteriorating of Algonquin's financial condition.

IV. PUBLIC POLICY CONCERNS RELATED TO THE MERGER

Q. WHAT ARE YOUR PUBLIC POLICY CONCERNS REGARDING THIS APPLICATION?

A. I have two general public policy concerns regarding this application. These are: (a) The current regulatory resources, policies, and practices at the PSC are inadequate to effectively regulate Mountain Water Company under the current or proposed ownership structure, and (b) water utilities are different from natural gas and electric utilities in that they provide both public and private goods. (Public goods will be explained later in my testimony.) It is important to point out that four state commissions do not regulate water utility rates. In addition, potable water is essential for human existence whereas electric and natural gas services are not.

The public policy concerns are discussed below.

A. THE REGULATORY OVERSIGNT CONCERN

Q. PLEASE ELABORATE ON YOUR ARGUMENT THAT THE PSC CANNOT PROTECT THE PUBLIC'S INTEREST WITH RESPECT TO MOUNTAIN WATER COMPANY.

A. Montana has a sad history related to ownership changes involving their large investor-owned utilities. Historically, significant scarce public resources have been sacrificed involving utility mergers that have turned out to be disasters. The first example is the transformation of Montana Power Company (MPC) from an energy business into a telecommunications company. This led to MPC filing for bankruptcy in 2002. MPC was reorganized into NorthWestern and it filed for bankruptcy in 2003.

The second example is the June 2006 proposed merger of NorthWestern Energy and a consortium of firms including Babcock & Brown Infrastructure Limited headquartered in Sydney, Australia. In this case, the PSC spent over one year investigating the merger only to reject it as the result of not meeting the no-harm-to-customers standard.

The third example, which also involved foreign ownership, is Mountain Water Company. In 2011, The Carlyle Group obtained control of Mountain (through various subsidiaries). After Carlyle's acquisition of Mountain, its operating performance declined (e.g., water losses exceeded 50% and its infrastructure deteriorated) which prompted, in part, the City of Missoula's attempt to acquire the operating assets through eminent domain. On June 15, 2015, District Judge, Karen S. Townsend concluded that change of ownership from private (Carlyle) to public (City of Missoula, Montana) would be in the public interest. In her decision, Judge Townsend cited

numerous examples of poor management and performance of Mountain under Carlyle's ownership.

Q. PLEASE CONTINUE.

A. In the acquisition of Mountain by The Carlyle Group, approval was given by the PSC based on expected merger benefits and the no-harm-to-consumers standard. One such benefit was a lower cost of capital as a result of Carlyle having greater access to financial markets. This benefit, however, never materialized. Also, as previously noted, an ex-post review of the merger benefits by the PSC never occurred.

The PSC approved the Carlyle merger plan and included numerous "ring-fencing" measures. (Ring-fencing is defined by Public Utilities Reports, Inc.—a leading publisher in the utility industry—as: "A strategy for segregating a utility's regulated rates and activities from those of its unregulated affiliates, so as to prevent unfair cross-subsidies and assure that utility ratepayers are not shouldering the costs of an unregulated affiliate.") Common examples of ring-fencing include: (a) dividend payment restrictions, (b) equity ratio requirements, (c) restrictions on non-regulated investments, (d) maintenance of stand-alone bond ratings, (e) collateralization requirements, (f) working capital restrictions, (g) prohibition of inter-company loans and asset sales, (h) independence of board members, and (i) the use of affiliate transactions.

Q. WHAT ARE THE APPLICANTS' PROPOSED RING-FENCING CONDITIONS?

A. The applicants are proposing ring-fencing conditions substantially similar to the provisions proposed by the parties and approved by the Commission in Carlyle's acquisition of Mountain (Docket No. D2011.1.8, Order No. 7149D). However, Mr. David Pasieka—witness for Liberty Utilities Co. and Liberty WWH, Inc.—in his March 12, 2015 testimony, proposed changes to the dividend and cash management ring-fencing provisions.

Q. IN YOUR OPINION AND FROM A REGULATORY PERSPECTIVE, IN THE CASE OF MOUNTAIN WATER UNDER CARLYLE'S OWNERSHIP, HAS RING-FENCING BEEN SUCCESSFUL?

A. No. Ring-fencing has not been effective. On page 17 of Dr. John W. Wilson's testimony in the Carlyle acquisition, he qualified the usefulness of ring-fencing with the phrase "if enforcement is effective." While the PSC has imposed equity ratio restrictions on Mountain for ratemaking purposes, other ring-fencing measures such as affiliate transactions and inter-company loans have not been effective. Also, the ring-fencing measure of allowing PSC access to financial information of the parent company is only useful if the PSC has resources available for monitoring. I argue later in this testimony that either the PSC does not have the resources for effective monitoring, or it chooses not to use them. Concerning the negative impact on a utility's customers, in its Final Order in the NorthWestern merger application (Docket No. D2006.6.82, Order No. 6754e) on page 51 the Commission stated:

> *"However, as the Commission learned through its experience with NorthWestern's bankruptcy and as aptly put my MCC [Montana Consumer Council]counsel John Coyle in his opening statement at hearing, 'bad decisions*

made in the boardroom don't often show up on the balance sheet of the regulatory agency until it's too late to save customers from the problems that its decisions cause.'"

For some utilities, inter-company loans and affiliate transactions are often reflected in their annual reports to utility regulatory commissions. In the case of Mountain, they are not.

Q. IS THERE A DIFFERENCE BETWEEN MOUNTAIN'S ANNUAL REPORT TO THE PSC AND INVESTOR-OWNED WATER COMPANIES' 10-K REPORTS TO THE U. S. SECURITIES AND EXCHANGE COMMISSION (SEC)?

A. Absolutely. Publicly-traded investor-owned companies are required by the SEC to file various financial statements including their Annual 10-k Report. This information is critical in disclosing important information to both investors and consumers. As an example, a large consumer of water (e.g., a beer company) would likely be concerned about the water utility's long-term sources of water before investing millions of dollars in a brewery. Similarly, some potential investors want to have comfort that a company's financial statements are accurate and meet minimum requirements such as the company follows generally accepted accounting principles (GAAP) and disclosed by the firm's certified public accountant in its Auditor's Report. Table 2 identifies these financial statements required by the SEC (using The York Water Company as an example) and those filed by Mountain. In my opinion, in terms of analytical value and usefulness, the statements are listed in order of importance. Note that the statements filed by Mountain under the PSC's regulations are the least

useful and the Company filed only two of the seven. Moreover, these two statements are woefully inadequate.

Table 2
Financial Statement Comparison

Line No.	Description	Mountain Water	York Water
1	Auditor's Rpt.		X
2	Notes		X
3	Cash Flow		X
4	Mgt. Discussion		X
5	Stockholders' Equity		X
6	Income	X	X
7	Balance Sheet	X	X

Q. IS MOUNTAIN'S ANNUAL REPORT A SIGNIFICANT DOCUMENT?

A. Yes. Mountain's Annual Report to the PSC is the <u>only</u> publicly-available document prepared by the Company on a regular basis. In 2014, the report was 16 pages and only 11 pages contained substantive material. In contrast, AVR's (one of Park Water Company's operating subsidiaries) Annual Report to the CPUC was 103 pages including the cover page through the index. (Included in this total are 96 pages of substantive material.) Finally, AVR's Annual Report tracks the accounting system required by the CPUC whereas Mountain's does not. Mountain ignores the PSC's requirement that water utilities use the National Association of Regulatory Utility Commission's (NARUC) System of Accounts.

Q. WOULD YOU PLEASE PROVIDE SOME EXAMPLES OF THE INADEQUACIES OF MOUNTAIN'S ANNUAL REPORTS?

A. Yes. First, Mountain's "Annual Report" is not a very accurate description of the filing. The Annual Report contains various financial and operating data regarding the

Company during a specific calendar year.. The final page contains a statement by Mountain's President, Mr. John Kappes that the information comes from various books and records of the utility, and "embracing all the financial transactions of said utility during the period for which the return is made. (Emphasis added.) We clearly know that this statement is not, in fact, correct.

(In the context of AVR, a Mountain affiliate, I had a discussion with senior members of the CPUC's staff regarding AVR's report. I asked them point blank: "What is the purpose of the Annual Report," and I did not receive an answer.)

Various errors and/or omissions on Mountain's 2013 Annual Report begin on page three. A sample of the errors and omissions is reflected in Table 3 and is not intended to be a comprehensive list.

Table 3
Illustration of Deficiencies in Mountain's 2013 Annual Report

Line	Page	Description	Issue	Amount($000)
1	3	Accounting format	Report does not follow NARUC Uniform System of Accounts	N.A.
2	3	Revenue in the Income Statement	"Other Revenue not Specified"	2,967
3	3	Deferred Income Taxes (federal & state)	Not consistent with the Balance Sheet	0
4	3	Non-utility expenses	Details not provided	1
5	3	Interest Income	Details not provided	470
6	3	Miscellaneous Deductions	Details not provided	89
7	4	Accumulated Depreciation & Amortization	Should be separated and not aggregated	30,913
8	4	Regulatory Accounts	Details not provided	6,124
9	4	Open Accounts	Details not provided	4,037
10	4	Contributions in Aid of Construction	Inferred as a liability; should be included in capital	3,274

		(CIAC)		
11	4	Deferred Credits	Details not provided	3,388
12	4	Advances for Construction	Information on the method of repaying advances is missing	18,821
13	5	Accumulated Depreciation & Amortization	Details regarding changes from the prior to current year inter-company transfers not provided	89
14	5	Accumulated Deferred Income Taxes	Details on how the amount was calculated is missing	10,514
15	6	Long-Term Debt	Details on Bonds from the Revolving Fund Program are missing	69
16	9	O&M Expense-materials and supplies	Negative number is not realistic	-81
17	9	Contractual Services	The amount and details of the Operating Agreement with Park Water Co. are not provided	3,099
18	10	Payments for Services Rendered	A total amount is not provided	Unknown
19	11	Sources of Water Supply	Detailed information is not available. Long-term supplies are not addressed	N.A.
20	11	Sources and Uses of Water	A balance showing: (a) sources of water, and (b) uses of water (including water losses) not provided	N.A.
21	11a	Supply, Transmission & Distribution Mains (feet)	Types of materials used (and number of feet) for mains not specified	N.A.
22	No page number	Sworn statement from John Kappes, President	Statement from a CPA firm stating that the Annual Report has been audited and meets GAAP is not included.	N.A.
23	2	Ownership & Control	Ownership and control stop with Park Water Co.	N.A.

In addition to the above errors and/or omissions, Park Water Company has Operating Agreements with its subsidiaries (Mountain, AVR, and Central Basin). To my knowledge there has not been any competitive bidding for the services Park provides its subsidiaries. Moreover, the terms of the transaction are less than fully transparent. For instance, in AVR's 2014 Annual Report to the CPUC, Schedule C-1, "Engineering and Management Fees and Expenses, etc. During Year," Line 9 asks: "Base for determining such amounts." AVR's response was: "direct charge for identifiable costs plus percentage." In this case, AVR failed to provide the specific percentage. This is not

a trivial issue. For 2014 this amount was over $3 million or approximately 29% of AVR's total operating expenses for the year. Even more troubling, Mountain Water's Annual report to the PSC does not provide <u>any</u> information related to a similar Agreement between Park and Mountain.

Q. WHAT OTHER PROBLEMS DO YOU SEE REGARDING THE PSC'S ENFORCEMENT OF RING-FENCING MECHANISMS?

A. In 2012 an equity interest in WWH was granted to various Park employees. This equity interest resulted in income tax liabilities for these employees. Funds from some or all of the operating companies (Mountain, AVR, and Central Basin) flowed from the ratepayers to the operating utilities to the parent (Park) which were provided to the employees to pay their income tax obligations. In effect, the operating utilities were acting as bankers lending money to these employees. Clearly, this type of business is unrelated to the normal operations of a water utility. In addition, AVR's Annual Report, Schedule A-29 (Account 223—Payables to Associated Companies) does not specify a year-end balance to Park Water Company, and the interest rate is reflected as "varies."

Finally, under Liberty's proposed ring-fencing provisions, the payment of dividends could have a higher priority than the repair or maintenance of Mountain's water utility system.

Q. WHY HAS THE PSC BEEN SO INEFFECTIVE MONITORING MOUNTAIN'S FINANCIAL PERFORMANCE AND ENFORCING RING-FENCING MEASURES?

A. Public service commissions are creations of state legislatures and the Montana state legislature is partly responsible for the PSC's annual funding. In effect, the legislature has chosen to allocate scarce state resources to regulate water utilities under the PSC's jurisdiction and Mountain is the only large water utility it regulates. In terms of size (i.e., number of employees), the PSC ranks in the lowest quintile nationally among state public service commissions. In addition, its staff does not file testimony; rather, its capacity is only advisory. Thus, the size of the PSC's staff and funding resources are likely reasons ring-fencing measures have not been adequately monitored and enforced. To a certain extent, this result is understandable if the context was a small water utility. Mountain, however, is classified by NAWC as "A-1" –the largest class (i.e., companies with annual revenues of $10 million or more and in the same group as York Water). Mountain's parent (Park Water) operating companies had the following gross revenues during 2013: (a) Mountain ($18.6 million), (b) AVR ($21.9 million, and (c) Central Basin ($20 million). Together they had gross revenues of approximately $60.5 million.

Q. DO YOU BELIEVE THAT A BANKER WOULD FIND MOUNTAIN'S ANNUAL REPORT ACCEPTABLE?

A. No. On the Commission's website is a section titled: "How utility rates are set." The PSC compares the ratemaking process to a banker analyzing a potential borrower's loan application. The website states: "Before the PSC sets a utility's rates, it analyzes the company's financial statements for accuracy." Mountain's Annual Reports are not even close to being useful in analyzing the financial condition of the Company. The

Commission's staff and the Montana Consumer Council audit a company's accounting books and records only when it files a rate case. However, the PSC should constantly monitor the Company's financial condition and not just in the context of a rate case. Without constant monitoring of a company's financial statements, a utility could experience a serious erosion in its financial capability such that, if discovered by the utility regulator, might be too late to remedy the problem.

Q. SHOULD THE PSC CONSIDER YORK WATER AS A POINT OF COMPARISON TO MOUNTAIN WATER?

A. Yes. The following table compares the two utilities under current ownership and operations.

Table 4
Comparison of York Water and Mountain Water Co.

Line No.	Description	Mountain Water	York Water
1	Bond rating	None (parent BBB)	A- (Standard & Poor's)
2	Payments to Affiliates	Indirectly and not-transparent	None
3	Dividend history	Never	199 consecutive years
4	No. of employees (year-end)	39	106
5	Target capital structure	None	50% to 54% equity
6	Executive team (Officers/managers)	Nine	Eight
7	Type of company	Water utility with multiple affiliate transactions	Almost "plain vanilla' water utility; no affiliate transactions
8	Customer growth	"little organic growth"	approximately1%
9	Customer mix	Residential, commercial	Primarily residential, commercial
10	Rate regulation	One state (MT)	Once state (PA)
11	Service area	Single (Missoula)	Single, (York & Adam Counties)
12	2014 ROE		13%
13	Recent acquisitions	None	"Immaterial"
14	Audited financial statements	No	Yes
15	Use of off-balance sheet financing,	Not known	Very limited (interest rate swaps)

	financial derivatives		
16	Operations	Stand-alone entity	Stand-alone entity
17	Control	Holding company structure/out of state board of directors	Stand-alone company/in-state board of directors

York Water Company has a very long history of providing water utility service at the same time as providing a reasonable rate of return to its shareholders. As Table 4 indicates, York and Mountain are very comparable in a number of areas. As a result, a stand-alone utility modeled after York Water would be preferable to the organizational structure under the proposed merger.

Q. WOULD REQUIRING MOUNTAIN TO FILE ANNUAL REPORTS APPROXIMATING THE SAME LEVEL OF DETAIL AS YORK WATER COMPANY'S 10-K CREATE AN EXTRAORDINARY BURDEN ON THE COMPANY?

A. No. Clearly, Park is not a "mom and pop" company. As a point of comparison, The York Water Company (an investor-owned water utility serving the area in and around York, Pennsylvania and regulated by the Pennsylvania Public Utility Commission) had total revenues in 2013 of approximately $42.4 million. Despite having fewer revenues as compared to Park, York has been able to meet the SEC's filing requirements and thus providing more accurate and transparent information to investors and ratepayers. By not requiring Mountain to file complete and transparent financial information, the inescapable conclusion is that utility investors have a higher level of protection than the ratepayers.

Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION REGARDING RING-FENCING AND FINANCIAL REPORTING?

A. In the context of Mountain, assuming that the PSC wants to "effectively" (to use Dr. Wilson's term) regulate the Company, it should prohibit the use of all affiliate transactions. Furthermore, the PSC should implement similar (if not identical) financial reporting requirements as the SEC requires of publicly-traded IOUs. While Mountain is clearly not under the jurisdiction of the SEC, the PSC is not precluded from implementing similar reporting requirements.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE ORGANIZATIONAL STRUCTURE OF MOUNTAIN?

A. If the City of Missoula is unsuccessful in its attempt to acquire Mountain, the optimal organizational structure would be a stand-alone utility (modeled after York Water Company) with local owners, officers, managers, and members of the board of directors.

B. THE UNIQUE CHARACTERISTICS OF WATER

Q. PLEASE EXPLAIN HOW WATER UTILITY SERVICE IS DIFFERENT FROM NATURAL GAS AND ELECTRIC UTILITY SERVICE.

A. Potable water is essential for human survival and unlike other utility products, it is ingested. Enron, through its water subsidiary (Azurix) eventually discovered that water is not like energy. As I have mentioned previously, in the U.S., potable water utility service (unlike natural gas and electric service) has been overwhelmingly under

public ownership. In addition, water is both a private and public good. (A public good is a commodity the consumption of which has to be decided by society as a whole, rather than by individuals.) Water, as a public good, provides the following (but not limited to) benefits for the public: (a) dissemination of waste for health and safety purposes, and (b) recreational activities.

Public goods have three characteristics which are:

1. They yield non-rivalrous consumption (i.e., one person's use of them does not deprive others from using them);
2. They are non-excludable. That is, if one person consumes them it is impossible to restrict others from consuming them; and
3. They are non-rejectable (i.e. individuals cannot abstain from their consumption even if they want to).

A good example of a public good is national defense.

The general public could also be a different stakeholder from the Company's ratepayers or utility investors. For instance, some of Missoula's citizens have their own wells; therefore, they are not Montana Water Company customers.

Furthermore, private consumption of a good can have either positive or negative impacts on third-parties. Economists call these impacts externalities. An example of a negative externality with respect to a water utility is the case where a polluter damages or contaminates a water aquifer. Examples of where this has occurred with investor-owned water utilities can be found. For ratemaking purposes, externalities (assuming

that they can be reasonably quantified) are considered costs and in some cases included in a utility's rates.

Q. IN WHAT OTHER WAYS IS WATER UTILITY SERVICE DIFFERENT FROM NATURAL GAS AND ELECTRIC UTILITY SERVICE?

A. Many water-related assets (e.g., dams) are constructed using public funds. Federal government capital projects using public funds are analyzed differently from private (e.g., IOU) projects. For instance, the cost of capital for a federal project is linked to the cost of long-term U.S. Treasury bonds whereas an IOU would evaluate the reasonableness of a project by using it weighted average cost of capital (WACC).

Since water utility service is essential to the survival of a community, it should not be left to the vicissitudes of private owners (some of whom do not even live in the utility's service territory). Such investors' (or future investors) ownership time horizon does not necessarily match the planning and operational requirements of a complex system such as a water utility. For the above-mentioned reasons, ownership of a water system should not remain in private hands.

Q. WHAT OTHER CONCERNS DO YOU HAVE WITH WATER BEING UNDER PRIVATE OWNERSHIP?

A. Under the current regulatory oversite of the PSC, critical assets (including water rights) could be transferred through affiliate transactions to unknown parties. Given the complex holding company structure of both the current and prospective owners, ultimate ownership and control of an asset could be obscured. The capability and financial stability of a water utility is critical to any contract. Capital is needed not only

to pay for infrastructure improvements, but also to guarantee liabilities. For instance, if a violation of water quality or effluent standards results in fines to the utility, the utility must be able to pay the fines (i.e., presumably below the line) while also investing to comply with the standards to avoid future violations. As an illustration, in the case of Azurix North America (with the parents being Azurix and ultimately Enron) it submitted a bid (which was later accepted) to provide design, construction, operations and maintenance work for Fulton County, Georgia. When the company submitted its proposal, it acted as its own guarantor. Prior to the bankruptcy, Azurix North America was sold to American Water Works. As a result of Enron filing for bankruptcy, had Azurix North America not been sold to American Water, its guarantees to Fulton County to assume full liability would have been meaningless.

V. FINANCIAL AND ECONOMIC CONCERNS REGARDING THE MERGER

Q. HAVE YOU REVIEWED VARIOUS PROTECTED DATA REGARDING THE MERGER?

A. Yes. During the morning of October 6, 2015, at the law firm of Crowley Fleck PLLP, Mr. Craig Close, Natasha Prinzing Jones, Esq., and I reviewed: (a) portions of Liberty's income tax returns for 2012 and 2013, (b) Algonquin's PowerPoint presentation, "Transaction Overview," (c) Algonquin's PowerPoint presentation, "Transaction Update," and (d) a four-page Excel spreadsheet with pro-forma financial statements without any supporting work papers. On October 29 and 30, 2015, I returned to the Crowley law firm and continued reviewing the above-mentioned documents.

In addition, on November 3, I met with Mr. Dale D. Bickell, City of Missoula Central Services Director to confirm my observations of the above information.

Q. WHAT ARE YOUR CONCERNS REGARDING THE FINANCIAL AND ECONOMIC ASPECTS OF THE PROPOSED MERGER?

A. In short, the application provides insufficient financial information to conclude that the merger is in the public's interest and meets the net-benefit to consumers standard. [redacted]). The Montana PSC, however, has the responsibility to balance the interests of both the shareholders and the ratepayers.

Q. WOULD YOU PLEASE ELABORATE ON YOUR SPECIFIC FINDINGS

A. Yes. The key findings of my review include:

1. [redacted]

1 3. [redacted]

[redacted]

[redacted]

[redacted]

1 7. [redacted]

1 [redacted]

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VI. TESTIMONY SUMMARY

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. Yes. This testimony makes the following key points.

1. The organizational structure proposed by the applicants is not in the public's interest. Specifically, it is very similar to the electric utility holding companies in the 1920s. The U.S. Congress passed PUHCA to curb the financial abuses made by some electric utility holding companies. I suggest that the PSC learn from this historical mistake.

2. With respect to Mountain Water, the PSC has demonstrated it has not effectively regulated the Company particularly with respect to the ring-fencing provisions established as a result of the Carlyle acquisition, or financial monitoring.
3. In the case of Montana and Mountain Water Company, the optimum model would be public control and ownership of the Company.
4. The appropriate measure for the PSC to use is the net-benefits-to-consumers standard. A less stringent standard (i.e., no-harm-to-customers) could result in shifting costs from California utilities to Mountain's customers.
5. The output reports from the financial model do not support the PSC's approval of the application.
6. The success of The York Water Company (e.g., it has paid dividends to its shareholders for nearly 200 years, and has recently obtained long-term financing at 4.5%) demonstrates that a water IOU can have a simple organizational structure, provide reasonable service, and allow for local control.
7. Despite Liberty's pledge to own Mountain indefinitely, it is likely that Liberty will dispose of Mountain's assets if the Company's financial performance is unsatisfactory. The recent history is clear that several non-U.S. based companies have sold their interests in water utilities shortly after their acquisition.

8. Liberty's benefits of synergies resulting from the acquisition of the three water utilities are likely overstated. In Liberty's own words the savings are "highly speculative."
9. Publicly-available information regarding the financial and operational condition of Mountain is very limited and extremely poor.
10. Missoula citizens have recently experienced a very long and expensive legal case involving the acquisition of Mountain's water utility operating assets by eminent domain. The applicants have not shown why or how the new owners (i.e., Liberty) will likely achieve better results than the current owners (i.e., Carlyle).
11. Future capital expenditures under Liberty's ownership could result in overinvestment in California relative to Missoula as a result of California offering a more lucrative water utility investment climate.
12. Mountain's payment of dividends to Park could precede (and preclude) the capital investments in the Company's infrastructure.

Q. DOES THIS CONCLUDE YOUR PREPARED DIRECT TESTIMONY AT THIS TIME?

A. Yes, it does.

Appendix A

David L. Hayward, Summary of Professional Qualifications

Experience

Mr. Hayward has over 30 years of experience in the water, natural gas, and electric utility industries and currently is Principal of Hayward Consulting Group (www.haywardconsultinggroup.com). He has worked for two U.S. investor-owned utilities (Mountain Fuel Supply Company and PG&E Corp.); two state public service commissions (Nevada and New Mexico), and several consulting firms.

He has been involved in 18 utility-related valuation projects including preparing formal written valuation reports and critiquing valuation studies. The studies have related to mergers and acquisitions, ad valorem (property taxes), water rights, and buy-sell agreements. Previously, he was an instructor for the National Association of Valuation Analysts' (NACVA) Learning Institute – "Valuing Utilities" and Michigan State University, Institute of Public Utilities. Related to public utility matters.

He has prepared expert witness testimony in 35 cases and/or project work in 14 jurisdictions throughout the U.S. Topics of his testimony include: cost of capital/capital structure, rate design, cost allocation, regulatory policy issues, utility financing.

Mr. Hayward served as an economics instructor at the College of Business and Management, University of Phoenix, San Diego.

Through the United States Agency for International Development (USAID), the World Bank, and the Asian Development Bank (ADB), Mr. Hayward has provided utility-related consulting services to cabinet-level government officials in: Armenia, Bolivia, Czech Republic, Egypt, Guyana, India, Montenegro, Nigeria, Pakistan, Philippines, and Poland. His most recent international assignment (18 months) was serving as the lead economist for a Water Policy Regulatory Reform (WPRR) project in Egypt. Key deliverables in the project included: (a) preparing a draft Water Law for the country, (b) training the newly formed regulatory staff, and (c) creating a new regulatory framework for reviewing and analyzing changes in tariffs.

Education/Training

Master of Science and Bachelor of Science degrees in economics, University of Utah; continuing education, Financial Accounting Institute (May 2014).

Professional Affiliations

National Association of Water Companies (NAWC), Society of Utility and Regulatory Financial Analysts (SURFA).

Selected Publications

Valuing A Water Utility, 3rd ed., West Conshohocken, PA: Infinity Publishing Co., 2013.

Water Utility Costs, Values, Rates, and Subsidies: A Strategy for Regulatory Reform, West Conshohocken, PA: Infinity Publishing Co., 2012.

The Economic Value of Water Utility Services: A Survey of Theory, Methods, and Applications, West Conshohocken, PA: Infinity Publishing Co., 2009.

"Water Utility Valuation: Beyond the Dartboard Approach," Business Appraisal Practice, spring and summer 2006.

"Valuation Implications of the Distressed Asset Crisis: The Regulatory Challenge," Electric Light & Power, June 2003.

"Generators Don't Pay Their Share of Taxes," North County Times, June 24, 2001.

Valuing an Electric Utility: Theory and Application, (primary author) Vienna, VA: Public Utilities Reports, Inc., 1999.

"Plant Valuations: Book Value and Beyond," Public Utilities Fortnightly, September 1, 1999.

Valuing A Utility Company: What You Absolutely Need to Know, (NACVA/Hayward Consulting Group), 1998.

"Valuing Water Companies: Opportunities and Challenges," Water, (National Association of Water Companies), Vol. 37, No. 4., winter 1996.

"Confidential Business Plan," prepared for Teplo-Vratimov (Czech Republic), unpublished report under a USAID-funded project, July 1995.

Employment Record

R.W. Beck, Executive Consultant, San Diego, CA
Resource Management International, Consultant, Sacramento, CA
J.W. Wilson & Associates, Associate, Washington, DC
Energy & Environmental Analysis, Project Manager, Arlington, VA
New Mexico Public Service Commission, Utility Economist, Santa Fe, NM
Nevada Public Service Commission, Policy Advisor to the Commissioners, Carson City, NV
Pacific Gas & Electric Company, Rate Economist, San Francisco, CA
Mountain Fuel Supply Company, Cost Analyst, Salt Lake City, UT

Presentations at Valuation Conferences and Seminars

California Water Association; Institute of Public Utilities, Michigan State University; IBC USA; Informa; Intertec Publishing Company; National Association of Certified Valuation Analysts (3); National Association of Water Companies (2); Public Utilities Risk Management Association; and Water Utility Association of Arizona.

Utility Valuation and Related Projects (Subject Company/Client/Year)

- Mountain Water Company, (public/2014-2015);
- Apple Valley Ranchos Water Company, (public/2014-2015);
- Francisco Grande Utilities Company, (private/2014-2015);
- Monarch Water Utility, (public/2012);
- Northern Waterworks, Inc., (private/2011);
- Basic Water Company, (private/2007);
- Power Holding Company of Nigeria, (public/2007);
- Moongate Water Company, (private/2006);
- Golden State Water Company, (Consolidation of Small Water Utilities in California) (private/2005);
- Johnson Utilities—water and wastewater, (private/2003);
- Montenegro Electric Company, (public/2002);
- Encina Generating Plant for Property Tax Purposes, (academic research project/2001);
- Egyptian Electricity Sector Privatization, (public/2000);
- Sierra Pacific Resources (Westpac Utilities), (private/2000);
- Chattanooga-American Water Works, Inc., (private/1999);
- Cottonwood Water Works, Inc., (private/1998);
- USAID Privatization Project in the Czech Republic, (public/1995); and
- El Paso Electric Company, (public/1994).

Valuation Software

Water Utility Financial Valuation Model—FinMod--© Hayward Consulting Group. All Rights Reserved.

DAVID L. HAYWARD, RECORD OF TESTIMONY

Line	Utility	Regulatory Agency	Docket No.	Date	Organization on Whose Behalf Testimony was Presented	Subjects of Testimony
1	Texas-New Mexico Power Co.	NMPSC	1859	N.A.	Commission Staff	Financing
2	Southern Union Co.	NMPSC	1796	Nov. 1983	Commission Staff	Cost of Gas Investigation, Strategic Planning
3	Southern Union Co.	NMPSC	1871	May 1884	Commission Staff	Transportation Rate for Natural Gas
4	Sunlit Hills of Santa Fe, Inc.	NMPSC	1904	N.A.	Commission Staff	Cost of Capital, Rate Design
5	Sierra Electric Cooperative, Inc.	NMPSC	1909	Oct. 1984	Commission Staff	Cost of Service, Cost of Capital, Rate Design
6	Jamiz Mountains Electric Cooperative, Inc.	NMPSC	1855	May 1984	Commission Staff	Rate Design, Cost of Capital, Capital Structure
7	Gas Company of New Mexico	NMPSC	1901	July 1984	Commission Staff	Staff's Proposal of Contract Carriage General Order
8	Gas Company of New Mexico	NMPSC	1902	Sept. 1984	Commission Staff	Staff's Proposal of Natural Gas Pricing Rule General Order
9	Sierra Electric Cooperative, Inc.	NMPSC	1939	April 1985	Commission Staff	Rate Design, Cost of Service
10	Rio Grande Utility Corp.	NMPSC	1934	April 1985	Commission Staff	Rate Design, Cost of Service
11	Public Service Co. of New Mexico	NMPSC	1965/1969	N.A.	Commission Staff	Sale of assets to the City of Santa Fe (testimony was not filed)
12	Gas Company of New Mexico	NMPSC	1971	May 1986	Commission Staff	Continuation of Purchased Gas Adjustment Clause
13	El Paso Electric Co.	NMPSC	2009	Aug. 1986	Commission Staff	Rate Moderation Due to Nuclear Plant in Rate Base, Critique of Financial Model, Rate Comparison
14	Raton Natural Gas Co.	NMPSC	2012	April 1986	Commission Staff	Cost of Service
15	El Dorado Utilities, Inc.	NMPSC	2023	May 1986	Commission Staff	Financing
16	El Paso Electric Co.	NMPSC	2026	N.A.	Commission Staff	Implementation of an oil pipeline rate
17	Central New Mexico	NMPSC	2080	N.A.	Commission Staff	Cost of Service, Rate Design

	Electric Cooperative					
18	Gas Company of New Mexico	NMPSC	2068 (Interim)	Feb. 1987	Commission Staff	Contract Carriage (off-system sales, release of gas)
19	Gas Company of New Mexico	NMPSC	2068 (Phase I)	Aug 1987	Commission Staff	Comments on NMPSC's Contract Carriage Rulemaking
20	Gas Company of New Mexico	NMPSC	2100	Aug. 1987	Commission Staff	Purchased Gas Adjustment Clause Filing
21	Gas Company of New Mexico	NMPSC	2147	March 1988	Commission Staff	Rate Design, Cost Allocation, Unbundling Natural Gas Services
22	Tribune/Swab-Fox Co., Inc.	NMPSC	2158	June 1988	Commission Staff	Certificate of Public Convenience and Necessity; Determination of the company as a Utility
23	New Mexico American Water Co.	NMPSC	2202	Oct. 1988	Commission Staff	Cost of Service, Rate Design, Cost of Capital
24	Consolidated Edison Co. of New York, Inc.	New York Public Service Commission	91-E-0462	Oct. 1991	U.S. General Services Administration	Cost Allocation, Rate Design, DSM Incentives, Cost Recovery of DSM Programs
25	Pacific Gas & Electric Co.	FERC	ER91-505-001, ER92-2-000, ER91-8-000, ER92-18-000	July 1992	Transmission Agency of Northern California (TANC)	Cost of Equity, (Testimony not Filed)
26	Delmarva Power & Light Co.	FERC	ER92-236-000	Nov. 1992	Old Dominion Electric Coop.	Cost of Service, Prudence of Plant Investment, Gain on Sale/Leaseback of Utility Assets (Cost of Capital Prepared but not Filed)
27	Pacific Gas & Electric Co.	FERC	ER92-595-000	Dec. 1992	TANC	Cost of Capital, Capital Structure
28	Raton Natural Gas Co.	NMPSC	2541	Feb. 1994	Raton Natural Gas Company	Purchased Gas Adjustment Filing
29	Georgia PSC NOI	Georgia Public Service Commission	4229-U	April 1994	Consumer's Utility Counsel	Revenue Decoupling
30	Southwest Gas Co.	Arizona Corporation Commission	U-1551-93-272	May 1994	Residential Utility Consumer Office	Cost of Capital, Capital Structure
31	El Paso Electric Co.	NMPSC	2575/2576	Application Withdrawn	Dona Ana County New Mexico	Analysis of Merger
32	San Diego Gas & Electric Co.	California Public	A.95-10-035	Oct. 1995	Utility Consumer Action Network	Cost of Capital, Incentive Mechanism

		Utilities Commission				
33	Guyana Power & Light Co.	Arbitration Panel	N.A.	March 2002	The Cooperative Republic of Guyana	Regulatory Policy
34	Golden State Water Co.	California Public Utilities Commission	N.A.	Nov. 2005	Golden State Water Company	Water Industry Consolidation, Valuation, Asset Impairment, Distribution System Investment Charge, and Rate Design

Notes:
1/ NMPSC: New Mexico Public Service Commission
2/ N.A.: Not available.

CERTIFICATE OF SERVICE

This is to certify that the foregoing was duly served by mail and email upon the following counsel of record at their addresses this 6th day of November 2015:

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Kate M. Palmer