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MISSOURI PUBLIC SERVICE COMMISSION

**CASE NO. WR-2011-0337**  
**CASE NO. SR-2011-0338**

**DIRECT TESTIMONY**

**OF**

**KARL A. MCDERMOTT**

**ON BEHALF OF**

**MISSOURI-AMERICAN WATER COMPANY**

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

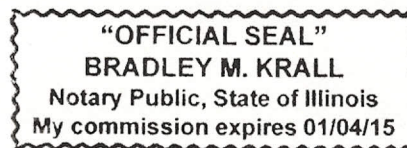
IN THE MATTER OF MISSOURI-AMERICAN )	
WATER COMPANY FOR AUTHORITY TO )	
FILE TARIFFS REFLECTING INCREASED )	CASE NO. WR-2011-XXXX
RATES FOR WATER AND SEWER )	CASE NO. SR-2011-XXX
SERVICE )	

AFFIDAVIT OF KARL MCDERMOTT

Karl McDermott, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Karl McDermott"; that said testimony and schedules were prepared by him and/or under his direction and supervision; that if inquires were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge.

Karl A. McDermott  
Karl McDermott

State of Illinois  
County of Champaign  
SUBSCRIBED and sworn to  
Before me this 28<sup>th</sup> day of June 2011.



Bradley M. Krall  
Notary Public

My commission expires: 01/04/15

**DIRECT TESTIMONY  
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MISSOURI-AMERICAN WATER COMPANY  
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1 **MISSOURI PUBLIC SERVICE COMMISSION**

2 **DIRECT TESTIMONY**

3 **OF**

4 **KARL A. MCDERMOTT**

5 **I. INTRODUCTION**

6 **Q1. Would you please state your name, business address, and current position?**

7 A. My name is Karl A. McDermott. My business address is 875 North Michigan  
8 Avenue, Suite 3650, Chicago, Illinois, 60611. I am currently the Ameren  
9 Distinguished Professor of Business and Government at the University of Illinois,  
10 Springfield (UIS) and Acting Director of the Center for Business and Regulation  
11 housed in the College of Business and Management at UIS. I am also a Special  
12 Consultant to National Economic Research Associates, Inc. (“NERA”).

13 **Q2. What are your qualifications to provide testimony in these dockets?**

14 A. While a more detailed description of my background can be found in my  
15 curriculum vita attached to this testimony as Schedule KAM-1, I will provide a  
16 brief biographical sketch here. I have been working in the field of public utility  
17 regulation for over thirty years with experience in nearly every facet of the  
18 regulation of public utilities. Prior to my current academic appointment, I was a  
19 Vice-President at NERA where I directed projects in the electric, natural gas, and  
20 telecom industries. From April of 1992 until May of 1998, I served as a  
21 Commissioner on the Illinois Commerce Commission (ICC) where I voted on  
22 numerous water utility rate cases and other proceedings that came before the ICC.

23 From 1986 to 1992, I co-founded and served as the President of the Center for  
24 Regulatory Studies (CRS), a not-for-profit regulatory policy institute located on  
25 the campus of Illinois State University. CRS was created to provide the Illinois  
26 regulatory environment with independent third-party research and education on  
27 issues affecting the regulation of public utilities.

28 Before co-founding the CRS, I worked in numerous capacities including positions  
29 on the staff of the ICC, the National Regulatory Research Institute (NRRRI) at the  
30 Ohio State University and Argonne National Laboratory. I currently teach classes  
31 on the regulation of public utilities and I have also taught graduate and  
32 undergraduate level economics courses, including regulatory economics, at  
33 Illinois State University and undergraduate economics courses at the Ohio State  
34 University, the University of Illinois at Urbana-Champaign and Parkland College.  
35 I am also on the faculty of the Institute for Public Utilities at Michigan State  
36 University where I am an invited lecturer at the Institute's annual Regulatory  
37 Studies Program ("Camp NARUC"). I have testified before many state regulatory  
38 commissions, as well as before the Federal Energy Regulatory Commission, the  
39 Federal Communications Commission, and the Iowa and Illinois General  
40 Assemblies on issues concerning public utility regulation.

41 I received a B.A. in Economics from Indiana University of Pennsylvania, an M.A.  
42 in Public Utility Economics from the University of Wyoming, and a Ph.D. in  
43 Economics from the University of Illinois at Urbana-Champaign.

44

45 **II. PURPOSE AND SUMMARY OF TESTIMONY**

46 **Q3. What is the purpose of your direct testimony on rehearing?**

47 A. I have been asked by Missouri-American Water Company (MAWC or Company)  
48 to provide an expert policy opinion on the movement toward Consolidated Tariff  
49 Pricing (CTP). By this, I am referring to the practice of combining previously  
50 separate pricing districts or zones into a single company-wide pricing zone.

51 **Q4. Would you please summarize your direct testimony in this docket?**

52 A. After reviewing the advantages of consolidated tariff pricing for MAWC I have  
53 concluded that CTP provides significant public policy benefits to consumers,  
54 MAWC, and to the Missouri Public Service Commission (MPSC or Commission)  
55 and should be approved.

56 **III. CONSOLIDATED TARIFF PRICING BENEFITS CONSUMERS, THE**  
57 **REGULATORY ENVIRONMENT, AND PROVIDES POSITIVE PUBLIC**  
58 **POLICY INCENTIVES TO PRIVATE WATER COMPANIES**

59 **Q5. Would you please summarize your understanding of the consolidated tariff**  
60 **pricing (“CTP”) proposal in this docket?**

61 A. Consolidated tariff pricing is the most common form of public utility pricing in  
62 public utility regulation today and refers to the combination of the cost to serve an  
63 entire utility’s service territory into a single price for all consumers. Examples of  
64 this approach include natural gas and electric distribution rates that span  
65 significant geographic areas. An alternative to CTP is zonal or district pricing in  
66 which customers are grouped in geographical regions for the purposes of creating  
67 prices that differ between zones or districts. In this docket the Company proposes

68 to consolidate pricing for the entire service territory for water and to consolidate  
69 pricing for wastewater services. (Williams, Dir.,)

70 **Q6. What is your conclusion about CTP?**

71 A. Regulation is a practical response to a market failure; regulators, as a matter of  
72 practice, have generally erred on the side of less complexity in pricing. Indeed,  
73 perhaps the most well-known treatise on public utility rates, Professor  
74 Bonbright's *Principles of Public Utility Rates*, lists simplicity and economy in  
75 collection of payment as two important criteria in a sound rate structure.<sup>1</sup> Where  
76 more complex pricing is employed, such as real-time pricing for electric  
77 commodity, it is employed when a clear consumer and societal benefit is  
78 demonstrated. In the case of pricing largely fixed cost systems such as natural gas  
79 distribution, electricity distribution, or water systems, the societal benefit of more  
80 granular pricing is less obvious and regulators, quite rightly, tend to focus on  
81 other policy concerns such as universal service.<sup>2</sup> One of the primary concerns of  
82 regulators has been the ability to assure that the essential services provided by  
83 public utilities are as widely available at reasonable prices to as many members of  
84 society as possible at rates that compensate the utility for the total costs incurred  
85 inclusive of a fair return. CTP represents one pricing method that promotes simple  
86 and understandable tariffs that meets this regulatory goal.

87 Frankly, the economic benefits of more closely connecting costs with prices are  
88 not likely to be significant in this case. This is because the dominant costs

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<sup>1</sup> J.C. Bonbright et. al *Principles of Public Utility Rates*, PUR Inc., 1988, p. 384.

<sup>2</sup> There may localized factual concerns, such as large historic sunk costs, that can cause regulators to abandon the simplicity principle, but in my opinion those concerns are not present here.

89 incurred by MAWC on a forward going basis are the fixed costs associated with  
90 meeting clean water, and water distribution and collection requirements. The  
91 economic benefits of more granular cost-based prices arise in the cases where  
92 marginal costs vary significantly across services and where setting prices based  
93 on these different marginal costs can influence consumption levels. When prices  
94 influence consumption levels and, in turn, investments, society benefits from  
95 more granular prices as the reallocation of resources that result from granular  
96 pricing ensure that society's scarce resources are efficiently allocated. Promoting  
97 safe drinking water per the Safe Drinking Water Act and service reliability  
98 through the replacement of aging infrastructure, however, requires that substantial  
99 investments will be made and we cannot avoid these costs. In this case the role of  
100 the rate structure becomes one of fairly and efficiently recovering the cost of the  
101 needed investment.

102 Moreover, the total variable costs of chemicals, treatment, and power are not  
103 likely to vary significantly (relative to the fixed costs) from region to region  
104 suggesting that the economic price signal (i.e., marginal cost) is relatively weak.  
105 In sum, if the main economic benefit from more granular cost-based pricing is  
106 largely absent, as it seems to be in this case, it is incumbent on regulators to  
107 address the broader public interest issues such that all consumers can have access  
108 to safe and affordable water supplies.

109 **Q7. You mentioned that CTP is the most common form of public utility pricing,**  
110 **would you please elaborate?**



111 A. The public utility concept was born out of a concern that private companies  
112 providing essential services became “clothed in the public interest” and that these  
113 industries were, in effect, natural monopolies and as a result may charge high  
114 prices causing some customers to be pushed out of the market for public utility  
115 services.<sup>3</sup> The services provided by these public utilities, such as water, gas,  
116 electricity, and even wireline telephone services, were considered a virtual  
117 necessity. As necessities, the public interest dictated that government regulate  
118 these services in order to assure universal service while maintaining prices that  
119 provided incentives for the utility to invest capital in the system.

120 Initially, regulatory pricing was not focused on the traditional economic issue of  
121 providing customers with signals regarding the relative value of substitute  
122 services. Since the natural monopoly implied that there were no substitutes the  
123 regulator could use price largely as a mechanism to recover the total necessary  
124 and prudent revenue to provide a standard quality level while providing services  
125 to all comers. The focal point was to ensure that sufficient revenues were  
126 recovered to enable services to reach as wide a population as possible at a  
127 reasonable price. The fact that costs may vary, in some cases dramatically across  
128 a given utility’s service territory, was, at most, a secondary concern.

129 This second problem was associated with a natural monopoly’s potential incentive  
130 to unduly discriminate against some customers by exploiting their market power.

131 The desire of regulators to avoid monopoly exploitation, and yet provide effective  
132 incentives for maintaining the system, resulted in utility tariffs being set in

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<sup>3</sup> A natural monopoly refers to firm that can serve the market demand at a lower cost than allowing multiple firms into the market.

133 accordance with costs to the extent reasonable. Regulators generally did not allow  
134 utilities to charge different prices to different consumers except where there are  
135 clear advantages to doing so (e.g., large volume customers generally pay different  
136 prices than low volume customers for obvious and logical reasons). Therefore, in  
137 most areas of the country, and globally as well, a residential customer taking, for  
138 example, electric delivery service from an electric utility will pay the same price  
139 no matter where the customer resides. For example, a customer of a large electric  
140 utility, such as Ameren Missouri, may reside in a rural area that requires  
141 significantly more investment per customer than a customer residing in the city of  
142 St. Louis, yet both customers pay the same base delivery charge for electricity  
143 even if the two electric distribution systems are not physically connected to each  
144 other.

145 The same is true for gas utilities. Many gas utilities, much as in the case of water  
146 utilities, grew in the 1950s and 1960s by purchasing smaller systems to create  
147 larger systems in order to take advantage of the economies of scale associated  
148 with such systems. These gas systems may or may not be physically  
149 interconnected, yet regulators have generally insisted that prices be the same for  
150 all consumers to promote universal service and avoid the appearance of  
151 discrimination. Moreover, there are many cases where gas delivery systems  
152 owned by different companies are interconnected and regulators *require* different  
153 rates. The fact that these systems are interconnected is not determinative of the  
154 policy of utilizing CTP or differentiated pricing system. Regulators clearly are  
155 looking at other factors in making the determination about pricing policy.

156 Consolidated pricing solves these two major public policy questions by making it  
157 easier for the regulatory body to control the utility's prices while promoting  
158 universal service and avoiding discrimination.

159 **Q8. What are the benefits of CTP?**

160 A. Beyond the obvious public policy benefits described above, the following benefits  
161 are important for considering the movement to CTP:

162 1. **Better incentives for standard water quality:** One of the key benefits of CTP is  
163 enabling recovery of government mandated environmental investment as well as  
164 other service quality related water investments. When water utilities have  
165 Balkanized rates structures, the rate impacts of mandated investment may  
166 adversely affect customers in one region, not because such investments are  
167 imprudent or do not serve a useful societal purpose, but solely because consumers  
168 happen to live in an area that was previously served by a utility that could not  
169 continue to cost-effectively serve that community and the service territory was  
170 sold to a larger utility. Maintaining these disparate rates structures can, in effect,  
171 promote discrimination in the quality of water service across the service  
172 territory—an issue as important, or perhaps even more important than price  
173 discrimination. As noted above, typically regulators wish to remove  
174 discrimination from public utility service where such discrimination promotes no  
175 socially advantageous objective. As an aside, it is instructive to note that many  
176 competitive markets price uniformly or nearly uniformly to take advantage of the

177 lower administrative costs and potentially as a strategic tool to signal to customers  
178 that they will be treated equally and, thus, fairly.<sup>4</sup>

179 **2. Better incentives for larger water companies to purchase small under-**  
180 **performing water companies:** In the past few decades, the water industry has  
181 changed dramatically. Many smaller water systems simply cannot attain the  
182 economies of scale needed to support the necessary investment and, as a result,  
183 the quality of water suffers. CTP provides an incentive for investment in these  
184 small water companies as utilities can recover the cost of needed investment over  
185 a larger customer base. This promotes a more ubiquitous water infrastructure  
186 investment in the state and brings cost-effective, higher quality, water services to  
187 a larger number of citizens. It is my understanding that the Missouri legislature  
188 has recently enacted a bill that would make such acquisitions easier by creating a  
189 rule for valuing the assets of a small water company for ratemaking purposes. The  
190 CTP is a continuation of the state's policy toward consolidation of water  
191 companies. Further, the holding company organization promotes more efficient  
192 use of resources. The recent natural disaster in Joplin as well as the flood  
193 preparation planning on the Missouri River and its tributaries illustrate that the  
194 holding company structure promotes more efficient use of resources by sharing  
195 employees, equipment, materials, and other resources across districts. To the  
196 extent that CTP provides a better incentive to consolidate water and wastewater

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<sup>4</sup> *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, September 1999, US Environmental Protection Agency, Office of Water (EPA CTP Report) p. 65, provides a review of discrimination in different market structures.

197 districts these resource efficiencies can be shared with a broader group of  
198 Missouri citizens.

199 3. **Promotes state economic development goals:** In an age of intense regional and  
200 global competition, the advent of new clean water standards has added one more  
201 dimension to the competition for jobs and population among states. A public  
202 policy problem has been created for states wishing to put the best face on the  
203 quality of life in their state. Those states with poor and inconsistent utility services  
204 will often fare poorly in quality of life and general attractiveness dimensions of  
205 this global competition. Non-standardized pricing can create an inconsistent and  
206 Balkanized water system for the state. CTP allows larger companies to spread the  
207 fixed cost of providing quality water service over a larger customer base creating  
208 a higher quality of water for the entire system and state.

209 4. **Improves affordability for all consumers:** It is understandable why people that  
210 live in areas that are currently receiving service at lower cost than the average  
211 would not want to pay for new investments in other regions of the state. CTP,  
212 however, creates benefits for all consumers in the long-run. Typically those  
213 consumers that pay lower than average prices do so because of aging and  
214 therefore depreciated investment. It is my understanding that MAWC's capital  
215 spend, that will be placed in the rate base, is largely made up of pipes and meters  
216 and is not concentrated in one area of its service territory. At some point in the  
217 future the utility will need to invest in all regions of the state, CTP mitigates the  
218 effect of lumpy investment for all consumers while promoting a standard quality  
219 of service for the entire region. Indeed, this is the typical justification for many

220 public infrastructure investments including public universities, roads and  
221 highways, and airports and seaports, and, of course, public utility infrastructure.

222 5. **Lower administrative and regulatory costs:** Simplifying rate structures also  
223 leads to lower administrative costs as utilities can more easily help consumers  
224 who have questions, lower the cost of billing and collections, and reduce the  
225 regulatory cost of filing separate rate proceedings or at least separate filings  
226 within a single rate proceeding. While some may see these costs as trivial, in  
227 today's financial environment lowering the cost of providing service, in any way  
228 feasible, should not be overlooked as a potential benefit, especially when the  
229 economic benefits of the alternative, that is, district specific pricing, are not  
230 obvious. The Missouri Public Service Commission has recognized that there is a  
231 cost and a burden in maintaining separate tariffs.<sup>5</sup> (Presumably the term *burden*  
232 was used by the Commission to distinguish factors other than increases in easily  
233 quantifiable costs that cause separate tariffs to be difficult to maintain. Such  
234 factors might include more complex customer service calls, reduced ability to  
235 forecast revenues, perhaps even more difficulty in planning for capital additions  
236 as a result of inconsistent tariff structures.)

237 6. **Creates a consistent regulatory approach for all public utilities:** Due to the  
238 lumpiness of investment, at any given time using a simple, static cost study will  
239 give a distorted picture of the true long-term differences in costs between different  
240 regions of any large public utility. This is another reason why public utility rates  
241 tend to be standardized across an entire utility service territory. Consider, for

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<sup>5</sup> Order in Case No. WR-2006-0425, p. 35.

242 example, the electric distribution system in a large metropolitan area such as  
243 Chicago. Investment in the city of Chicago may have been completed many years  
244 ago while investment in high growth areas in the outer suburbs was more recently  
245 completed, and often at a much higher cost due to inflation and the lower  
246 population density. Taking a static, cost of service view of this situation would  
247 lead one to the erroneous conclusion that it is significantly more costly to serve  
248 suburban customers and those consumers should pay a higher rate. Yet over time  
249 the investment in the city must be replaced and gentrification in large areas of the  
250 city require more investment thereby rendering the conclusion that cost differs  
251 significantly between regions suspect. (Indeed there are some factors that make it  
252 *more* costly to build infrastructure in a more densely populated area.) A similar  
253 argument can be made for gas distribution companies and water companies. This  
254 is not to argue that one could not find cost differences between areas, certainly  
255 one could always find such differentials, but the more pertinent question is related  
256 to the policy goals of the Commission and the creation of a consistent regulatory  
257 structure that promotes the best service for the largest number of customers.  
258 Moreover, district specific pricing engenders the same cost averaging as CTP,  
259 only over a smaller area. Costs of service differ within a district and sometimes  
260 even within a neighborhood, yet we ignore those cost differentials in setting rates  
261 for many of the same reasons discussed in this testimony.

262 **III. NATIONAL POLICY HAS TRENDED TOWARD CONSOLIDATION OF**  
263 **TARIFFS**

264 **Q9. What evidence can you provide on the national policy toward CTP?**

265 A. In 1999 a comprehensive survey of state commissions found that eight states  
266 generally accepted CTP while 14 states found CTP appropriate on a case-by-case  
267 basis. The remaining states had, at the time, never considered the issue, did not  
268 have jurisdiction, or did not have multi-system utilities.<sup>6</sup> I have reproduced the  
269 data tables from this report for the Commission's convenience and attached it to  
270 my testimony as Schedule KAM-2. In this exhibit one can see that several states  
271 considered and rejected CTP for a variety of reasons. Since 1999, however, the  
272 cost and quality pressure on the water industry has become more apparent and  
273 more states are now considering and approving CTP. My updated survey of state  
274 CTP policies appears as Schedule KAM-3 attached to this testimony. It is clear  
275 from a comparison of the two exhibits that state regulators are moving toward  
276 more consolidation of water rates. For example, there are now 10 states that  
277 generally accept CTP and 21 states that review on a case-by-case basis.  
278 Particularly telling is the movement of those states that had not considered the  
279 issue by 1999 (5), to now only one state (Wisconsin) that has not considered the  
280 issue. Of the other four states not to have considered the issue by 1999 (IA, KY,  
281 LA, and ME), two have now generally accepted CTP and the other two have  
282 accepted CTP on a case-by-case basis.

283 **Q10. Could you explain why state regulators are moving toward CTP?**

284 A. One of the key findings of the EPA CTP Report was that in states where  
285 regulators did not approve CTP the most often cited reasons were related to the  
286 differences in cost of service. That is, regulators felt that cost of service

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<sup>6</sup> EPA CTP Report



287 differentials were significant enough that low cost regions were subsidizing high  
288 cost regions. From a static cost of service perspective many perceive that any  
289 price below the fully allocated cost is, in some way, unfair. In the past decade,  
290 however, regulators appear to be recognizing other factors that are important to  
291 the decision and have been more receptive to CTP. These factors include  
292 removing disparate pricing across a state, providing incentives for larger water  
293 companies to consolidate smaller companies, mitigating rate shock, and providing  
294 a standard regulatory approach to pricing.

295 **Q11. What evidence do you have that states are taking other factors into account**  
296 **beyond strict cost of service factors?**

297 A. For example, in a recent Indiana-American case, the Indiana regulators accepted  
298 the movement toward full CTP by recognizing that some static rate subsidies are  
299 going to exist and that other factors must be taken into account.

300 The [Indiana Commission] believes that rates should be cost based, but  
301 we do not pursue this objective blindly and without consideration of other  
302 objectives. While we are sympathetic to...[the]...desire for cost-based  
303 rates, the [Indiana Commission] believes the small subsidies that result  
304 from the movement to STP are outweighed by the benefits that accrue to  
305 customers...The [Indiana Commission] first approved...STP in 1997,  
306 and Indiana American has gradually implemented STP since our approval  
307 granted in the 1997 Rate Order. When originally approving STP, the  
308 [Indiana Commission] stated, "[W]e believe that in the long-term all  
309 areas will benefit by increased rate stability and mitigation of the impact  
310 of construction projects in their communities." [cite omitted] We find this  
311 to still be true; these considerations outweigh the general objection  
312 raised...with respect to the small subsidy provided by residential and  
313 commercial customers.<sup>7</sup>

314 The Iowa Utilities Board (Board) recently concluded that the long term cost is the  
315 key cost to focus on in determining whether CTP is appropriate.

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<sup>7</sup> IRUC Order in Cause No. 43680, April 30, 2010, p. 104.

316 The Board believes now is the time to equalize most of Iowa-American's  
317 rates; the different costs of serving each district do not appear to be  
318 significant enough in the long term to justify the additional effort and  
319 administrative expense necessary to maintain them as separate groups.<sup>8</sup>

320 The Board further explained the value of rate mitigation and simplification in  
321 justifying its CTP decision:

322 It is important to spread the impact of future plant additions over a  
323 broader customer base in order to provide customers with greater rate  
324 stability and lessen the impact of major construction projects on  
325 customers in a particular district....Also, a single rate structure would  
326 be more understandable to customers. (Id.)

327 The New Hampshire Public Utilities Commission, in approving a rate  
328 consolidation in 2005, noted that its policy was to consolidate rates because of the  
329 “wide disparity of rates among customers” that would occur without  
330 consolidation.<sup>9</sup>

331 The Pennsylvania Public Utilities Commission, in a general proceeding,  
332 recognized that “that every system and every ratepayer in the Commonwealth will  
333 eventually be in need of specific service improvements and at that point, the true  
334 benefits of single tariff pricing will be realized by all citizens in the  
335 Commonwealth.”<sup>10</sup>

336 It is certainly true that some state commissions are very concerned with cost  
337 factors (i.e., subsidization). Yet even states, such as California, where differences  
338 in water costs between different regions can be far more dramatic than in  
339 Missouri, never-the-less recognize that there are other factors that may override

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<sup>8</sup> Order in Docket No. RPU-2009-0004, Iowa Utilities Board.

<sup>9</sup> NH PUC Order in Docket No. 05-112.

<sup>10</sup> PENN PUC Docket M-00950686, 1996.

340 cost concerns. California has approved rate consolidation for Southern California  
341 Water Company and recognized other factors, e.g., affordability, are important to  
342 take into account.<sup>11</sup> These are just a few examples of the reasoning used by state  
343 PUCs to implement CTP.

344 **Q12. What do you conclude from this evidence?**

345 A. Rate consolidation is a policy issue. States which have embraced consolidation  
346 have done so for a significant number of pragmatic reasons. Recognizing that the  
347 universal availability of clean drinking water constitutes a major public good that  
348 promotes both economic and social benefits, commissions have enumerated the  
349 following rationales:

- 350 1. The health and safety of smaller water system quality
- 351 2. Larger customer bases ameliorate the impact of larger capital additions
- 352 3. Larger customer bases provide revenue stability and improved financial  
353 capabilities
- 354 4. Helps insulate customers from rate shocks associated with large capital  
355 additions
- 356 5. Helps achieve affordable rates for all customers
- 357 6. Promotes the achievement of economies of scale
- 358 7. Administrative simplicity

359  
360 The consolidated tariff approach takes a long run view of serving the state on a  
361 total company basis. The aggregation of all customers across the total system

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<sup>11</sup> CPUC D. 00-06-075, June 22, 2000.

362 provides an ability of the system to absorb the costs of serving all customers on a  
363 more equitable basis. Cost of service regulation always involves some degree of  
364 cost averaging. The administrative costs of calculating each individual customer's  
365 specific costs far outweigh the benefits of such calculations. Customers of the  
366 same class under consolidated pricing will pay rates that reflect the costs of  
367 providing similar service across the total company. This avoids the wide disparity  
368 in rates that could arise so that customers ultimately pay the same rate for  
369 contemporaneous service provided under substantially similar conditions or  
370 circumstances. This approach avoids the undue discrimination that could arise  
371 from significant rate disparities for this essential public service.

372 While cost of service can provide guidance in setting rates, other factors such as  
373 affordability, standard quality of service, and ease of implementation are  
374 important and need to be considered. CTP has become a more important policy  
375 issue in the past decade as water quality standards have changed making some  
376 small water systems not sustainable. Regulators have recognized that the private  
377 sector can play a role in solving these public infrastructure problems by providing  
378 incentives to expand service into some of these areas. CTP is just such a policy  
379 and many regulators have recognized the positive role that uniform rates can play  
380 in preventing rate shock, increasing investment, and providing standard water  
381 quality to as many citizens as feasible.

382 **Q13. Does this complete your direct testimony?**

383 A. Yes.

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## **KARL A. MCDERMOTT, PH. D.** **SPECIAL CONSULTANT**

Karl McDermott is the Ameren Distinguished Professor of Business and Government at the University of Illinois, Springfield and a Special Consultant to National Economic Research Associates, Inc. (NERA). Professor McDermott specializes in public utility regulation and public policies toward the regulation of business. Prior to taking the Ameren Professorship, Dr. McDermott was a Vice-President at NERA where he directed and participated in numerous projects in both the energy and telecommunications areas. His main focus has been the development of performance-based regulation mechanisms and advising clients on strategic regulatory options. Recent projects include evaluating and developing performance-based regulation plans and strategic regulatory options for Commonwealth Edison Company, Wisconsin Electric Power Company, Xcel Energy, Otter Tail Power, Peoples Energy, Louisville Gas and Electric, PowerGen, and PacifiCorp. In addition, Dr. McDermott advises clients on competitive electric and gas markets including regulatory policy, generation location decisions, unbundling, tariff design, and corporate reorganization. Representative projects include an examination of essential facilities in the electric industry for the Edison Electric Institute, tariff design and competitive electric generation siting for Southern California Gas Company, and unbundling of metering and billing, competitive declarations of tariffs and procurement options for Commonwealth Edison Company. He has testified before numerous state regulatory commissions and legislatures, as well as before the FCC and FERC and Missouri state court. Dr. McDermott lectures extensively on regulatory reform and restructuring and currently serves as an instructor for National Association of Regulatory Utility Commissioners summer seminars and advanced seminars.

Prior to joining NERA, Dr. McDermott served as Commissioner on the Illinois Commerce Commission during the negotiation of the Illinois restructuring law. He has also assisted the country of Poland since 1994 with their efforts to privatize and restructure their electric supply industry. As a Commissioner, Dr. McDermott also lectured extensively in Eastern Europe and South America on regulatory reform and restructuring.

Dr. McDermott received his Ph.D. in Economics from the University of Illinois at Urbana-Champaign, his M.A. in Public Utility Economics from the University of Wyoming, and his B.A. in Economics from Indiana University of Pennsylvania.

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## Education

### **University of Illinois at Urbana-Champaign**

Ph.D., Economics, 1990

Major Fields: Monetary theory and Policy, Macroeconomic Theory, and History of Economic Thought

### **University of Wyoming**

M.A., Public Utility Economics, 1978

Major Fields: Public Utility Economics and Industrial Organization Theory

### **Indiana University of Pennsylvania**

B.A., Economics, 1976

## Professional Experience

- 2008- **University of Illinois at Springfield**  
Ameren Distinguished Professor of Business and Government
- 2008- **NERA Economic Consulting**  
Special Consultant
- 1999-2008 **Vice President**  
Directs projects in the energy and telecommunications fields. Conducts research in the design and review of performance-based regulation mechanisms. Provides strategic regulatory advice to international and domestic clients. Advises on competitive issues facing regulated firms, including regulatory policy, unbundling, corporate structure, and tariff design.
- 1998-1999 **McDermott Associates**  
President  
Directed projects in the energy and telecommunications fields focusing on performance-base regulation, electric industry restructuring, and competition policy issues.
- 1992-1998 **Illinois Commerce Commission**  
Commissioner  
*Domestic:* Served as Chairman of both the Telecommunications Policy Committee and Electricity Policy Committee. Served on the National Association of Regulatory Utility Commissioners (NARUC) Energy Resources and Environment Committee as the Chairman of its environmental subcommittee. Reviewed and voted on Illinois Bell Price-Cap plan, Peoples Gas PBR and MidAmerican Electric PBR. While a commissioner, made over one-hundred presentations and speeches on telecommunications, electricity, and natural gas industry topics. Also served as NARUC representative on the President's Global

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Climate Change Task Force, the Federal Energy Regulatory Commission's Pipeline Competition Task Force, the National Coal Research council, and as a member of the Harvard Electric Policy Group.

*International:* In addition to regular Commission duties, served as part of the United States Energy Association and USAID educational effort in Eastern Europe. Lectured in Argentina, the Czech Republic, Latvia, Poland, Romania, Russia, and Slovakia and participated in two joint USEA/USAID and World Bank seminars in Vienna providing advanced regulatory training. While a commissioner, hosted visits with the above-listed countries, as well as Bulgaria, Lithuania, and Estonia.

## Additional Professional Experience

- 2001- **Michigan State University, Institute for Public Utilities**  
Faculty  
Invited lecturer at Regulatory Studies Program ("Camp NARUC") held in East Lansing, Michigan. Lecture topics include performance-based regulation, rate-of-return regulation, infrastructure regulation for developing countries, and gas wholesale markets.
- 1985-1998 **Center for Regulatory Studies, Inc.**  
Chairman of the Board
- 1985-1992 **President**  
As a cofounder, involved in all aspects of operations, including fundraising, organization, and program development. Focused on the development of statewide energy planning options for the State of Illinois, the introduction of competition into the natural gas market, environmental issues in Illinois, and competition in the Illinois telecommunications market. Conducted research on the use of competitive bidding and avoided-cost pricing mechanisms to acquire electricity supplies, the role of demand-side management in electricity supply planning, and the use of incentive mechanisms and the role of incentive regulation in our current regulatory environment.
- 1988-1992 **Argonne National Laboratory**  
Research Scientist  
Served as an economic advisor to the office of Fossil Energy at DOE. Helped investigate possible ways to promote development of innovative emission control technologies and Clean Coal Technologies in the electric utility industry, as part of the Presidential Task Force on Regulatory Relief. Assignments also involved the writing of a chapter in the State of Science and Technology Report No. 25 of the National Acid Precipitation Assessment Program (NAPAP) concerning the use of tradable emission permits to control acid rain. In addition, worked on incentive mechanisms to promote clean coal technology and the trading of greenhouse gas emissions. Also performed research on the nature of individual's

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risk perception regarding nuclear waste deposits on behalf of the office of Radioactive Civilian Waste Management at the Department of Energy.

**NARUC Introductory Regulatory Training Program**

1989-2006 Instructed new public utility commission employees from various state commissions on the basic economic issues confronting regulators.

**Illinois State University, Department of Economics**

1986-1992 Lecturer in Economics  
Taught both graduate and undergraduate public utility courses, Money and Banking, as well as introductory courses.

**Parkland Community College, Champaign, Illinois**

1984-1991 Instructor in Economics  
Taught both Principles of Economics I and II.

**University of Illinois, Urbana-Champaign**

1984-1986 Teaching Assistant  
Taught both Principles of Economics and Introduction to Econometrics. Served as supervisory assistant in charge of coordinating Economics 101 assistants for Professor Fred Gotthiel.

**Illinois Legislature, Select Joint Subcommittee on Regulatory Reform**

1983-1985 Consultant  
Investigated the effects of the AT&T divestiture and FCC decisions upon Illinois telephone utilities and assisted in identifying issues that require legislative action. Presented issue reports to the telecommunications subcommittee and served on the local exchange subgroup in developing recommendations for a new Illinois Public Utilities Act.

**Department of Energy and Natural Resources, Governor's Sunset Task Force on Utility Regulatory Reform**

1980-1982 Consultant  
Delivered written and oral reports on the issues of power plant certification, monitoring of construction costs, and allocation of power plant cancellation costs.

**Illinois Commerce Commission, Policy Analysis and Research Division**

1980-1983 Economic Analyst III  
Conducted research investigating the development and use of incentive mechanisms in utility regulation. Prepared and presented testimony on the use of incentive mechanisms in power plant construction. Conducted research and assisted in developing testimony on the cost of service for electric generation to meet PURPA requirements. Assisted in the development of proposals for PURPA innovative rates projects on productivity and time-of-use pricing; cost-benefit analysis. Assisted in the management of consultants conducting the TOD cost-benefit study. Prepared and presented testimony on the time-of-day pricing



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standards to meet the PURPA requirements. Prepared and presented testimony regarding the use of q-ratios in determining rates-of-return for Illinois Bell Telephone Company and testimony regarding appropriate cost and pricing methodology and philosophy for Illinois Bell Telephone Company. Assisted in the investigation of capacity expansion, lifeline rates, efficiency measurement, and impact of deregulation in electric generation, water rate design, and investigated the impact of investment tax credit changes on utilities.

- Ohio State University, National Regulatory Research Institute**  
1978-1979 Senior Research Associate  
Conducted research in the areas of telecommunication licensee contract fees and cost of service, the effects of budget billing plans on utilities and consumers, as well as methods of monitoring fuel adjustment clauses. Assisted in research regarding marginal and average cost pricing, time-of-use pricing, power plant productivity, and the examination of cost and price differences of Ohio municipal gas rates. Assisted in the management of consultant subcontractors, as well as supervising the presentation of cost and load research seminars.
- Ohio State University, Department of Economics**  
Fall 1979 Lecturer in Economics  
Taught Macroeconomic Principles.
- Action Computing, Laramie, Wyoming**  
1977-1978 Cost Analyst  
Developed cost data for competitive pricing of bids for the provision of computer services provided by Action Computing.
- University of Wyoming, Laramie**  
1976-1977 Graduate Research Assistant  
Assisted professors in conducting research and teaching of Principles of Economics.

## Honors and Professional Activities

- Distinguished Alumni Award Indiana University of Pennsylvania 2001
- Alpha Lambda Delta Outstanding Freshman Teacher Award, University of Illinois, 1986
- Thrift Prize, University of Illinois, for paper entitled "The Allocation of Savings: An Investigation of Portfolio Composition of Chicago Households," 1983
- President Elect and President, Illinois Economic Association, 1988-1990
- Member, Alpha Lambda Delta Honorary Society
- Member, American Economic Association

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Member, Transportation Public Utilities Group of American Economic Association

Member, Illinois Economic Association

## Representative Projects

Evaluation and design of performance based regulation for clients, including Detroit Edison Company (bundled electricity service), Michigan Consolidated Gas (gas distribution), Otter Tail Power (bundled electricity service), and Xcel Energy (bundled electricity service), among others.

Evaluation of damages from coal-fired power plant explosion for Kansas City Power and Light (Hawthorn 5 unit).

Evaluation of prudence of certain distribution investments and O&M costs for Commonwealth Edison Company.

Evaluation of POLR responsibility in state of Illinois for Commonwealth Edison.

Evaluation of market structure options and development of tariff model for Macedonian electric sector.

Evaluation of future options for the reform of the Albanian electric sector.

Evaluation of electric industry structure and proper public policy toward utilities building power plants.

Estimation of potential energy efficiency gains for Wisconsin Electric Power Company (WEPCO) and Wisconsin Public Service Corporation in support of power plant construction.

Evaluation of tariff options for Otter Tail Power Company.

Evaluation of options for unbundled distribution rates and policies toward small-use customer choice for Illinois Power.

Review of gas rate design for peaking service and evaluated electric generation site decisions in California for Southern California Gas Company.

## Publications

“Rethinking the Implementation of the Prudent Cost Standard,” in *The Line in the Sand: The Shifting Boundary Between Markets and Regulation in Network Industries*, S. Voll and M. King (eds), 2007. (with C. Peterson and R. Hemphill).

“Mergers and Acquisitions in the US Electric Industry: State Regulatory Policies for Reviewing Today’s Deals,” *The Electricity Journal*, 20(1), pp. 8-25, 2007 reprinted in *The Line in the Sand: The Shifting Boundary Between Markets and Regulation in Network Industries*, S. Voll and M. King (eds), 2007 (with C. Peterson).

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“Critical Issues in the Regulation of Electric Utilities in Wisconsin,” *Wisconsin Policy Research Institute Report*, 19(3), pp. 1-69, 2006 (with C. Peterson and R. Hemphill).

“The Anatomy of Institutional and Organizational Failure,” in *Obtaining the Best from Regulation and Competition*, M. Crew and M. Spiegel (eds.), Kluwer Academic Publishers, London, UK, 2005, pp. 65-92 (with C. Peterson).

“Performance-Based-Rates Upward Trend to Continue,” in *Natural Gas and Electricity*, 20(6), 2004 (with C. Peterson).

“Is There a Rational Path to Salvaging Competition?” *The Electricity Journal*, 15(2), 2002, pp. 15-30 (with C. Peterson).

“Further State Electric Deregulation can be Guided by Gas Experience,” in *Natural Gas and Electric Power Industries Analysis*, R.E. Willett (ed.), Financial Communications Company, Houston, TX, 2002, pp. 343-372 (with C. Peterson).

“The Essential Role of Earnings Sharing in the Design of Successful Performance-base Regulation Programs,” in *Electricity Pricing in Transition*, A. Faruqui and K. Eakin (eds.), Kluwer Academic Publishers, London, UK, 2002, pp. 315-328 (with C. Peterson).

“Critical Issues in Consumer States Include Unbundling and Performance-based Regulation,” in *Natural Gas Industry Analysis*, R.E. Willett (ed.), Financial Communications Company, Houston, 2000, 321-343.

“Are Residential Local Exchange Rates Too Low? Drivers to Competition in the Local Exchange Market and the Impact of Inefficient Prices,” in *Expanding Competition in Regulated Industries*, M. Crew (ed.), Kluwer Academic Publishers, Boston/Dordrecht/London, 2000, 149-168 (with A. Ros).

*Essential Facilities, Economic Efficiency, and a Mandate to Share: A Policy Premier*, Edison Electric Institute, January 2000 (with K. Gordon, W. Taylor, and A. Ros).

“Pipeline Regulation Must go to One Extreme or Another,” in *Natural Gas*, 15(9), April, 1999.

“Is There a Rational Path to Implementing Competition?” in *The Electricity Journal*, 9(1), Jan-Feb 1996.

“Changing Regulatory Incentives,” in *Reinventing Electric Utility Regulation*, G. Enholm and J. Robert Malko (Eds.), Public Utility Reports, Inc. Vienna, VA 1995.

“The Evolution of the “Investment Systems:” Keynes’ Theory of Employment and Money Revisited,” in *Review of Social Economy*, 51(1), Spring 1993.

Discussant. “The Urban Ozone Abatement Problem,” in *Cost Effective Control of Urban Smog*. R. Kosobud, W. Testa, and D. Hansan (Eds.) Federal Reserve Bank of Chicago. November 1993.

“Strategic Use of Incentive Mechanisms as a Regulatory Policy Tool,” in *The Electricity Journal*. 5(10), December 1992.

“Electric Utilities: Control Cost Reducing Methods,” Chapter 7 in *Technologies and Other Measures for Controlling Emissions: Performance, Costs and Applicability*, David South (ed.). National Acid Precipitation Assessment Program, State-of-Science/Technology Report, 25 January 1990.

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“The Quantity Theory of Money of J. M. Keynes: From the Indian Currency to the General Theory” in *Perspectives on the History of Economics Thought*. D., Walker (ed.), Edward Edgar Publishing Co., Brookfield, VT, 1989 (with C. Marme).

*Computer Assisted Regulatory Analysis and Its Potential Application to the Colorado Public Utilities Commission*. The National Regulatory Research Institute, 1979 (with M. S. Gerber).

*Towards an Analysis of Telephone License Contracts and Measured Rates*. The National Regulatory Research Institute, 1979 (with A. G. Buckalew, and D. Z. Czamanski).

*Budget Billing Plans for Electric and Gas Utilities: An Analysis and Some Recommendations for Change*. The National Regulatory Research Institute, 1979 (with J-M Goldman and C. Odle).

## Conference Papers and Presentations

*The Determinants of Electric Utility Capital Structure: Re-Examining the Turbulent 1980s*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Western Advanced Regulatory Conference, Monterey, CA, June 2011. (with C. Peterson)

*The Determinants of Commission Total Revenue Decisions: A Case Study of Illinois Energy Utilities*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Western Advanced Regulatory Conference, Monterey, CA, June 2011. (with C. Peterson and A. Everette)

*Tale of Two Policies: A Re-examination of State Telecommunications Policy on The Protection of Universal Service & the Advancement of Competition in the Post- Divestiture Period* presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May 2011. (with C. Peterson and A. Ros)

*Regulatory Risk: A More Comprehensive Examination and Empirical Test* (keynote) presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May 2010. (with C. Peterson)

*Regulatory Policy on Local Telephony Competition: The Effects of State Policies on Re-Balancing*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Western Advanced Regulatory Conference, Monterey, CA, June 2009. (with C. Peterson)

*W(h)ither the Public Utility Concept: Obsolete, Passing or Timeless*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May 2009.

*Balancing Effective Regulation and Utility Control- Is Managerial Discretion (Prerogative) a Myth?*, (keynote), presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May 2008

*The Uncertain Role of Profit in Regulation-A Love-Hate Affair*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Western Advanced Regulatory Conference, Monterey, CA, June 2008

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*The Essential Facilities Doctrine-Core Concept or Mere Epitaph* (Keynote), presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May 2007.

*The Role of market processes in the design of dynamic incentives*, presented at Center for Research in Regulated Industries, Rutgers University, Annual Eastern Advanced Regulatory Conference, Sky Top, PA, May (2006)(with C. Peterson)

*Competition as the Foundation of Regulation- An Exploration in the History of Ideas*, (keynote), presented at Center for Research in Regulated Industries, Rutgers University, Annual Western Advanced Regulatory Conference, Monterey, CA, June 22, 2006

*Prudence: The Regulators Strike Back: A Prequel to the Revenge of the Regulator*, presented at Center for Research in Regulated Industries, Rutgers University, conference held in San Diego, CA, June 2005.

*Mergers and Acquisitions in the Electric Industry: A Review of State Regulatory Policies*, presented at Center for Research in Regulated Industries, Rutgers University, conference held in Sky Top, PA, May 2005 (with C. Peterson).

*The Anatomy of Institutional and Organizational Failure: Economic Reform and the Search for Institutional Equilibrium in Regulated Network Industries*, preliminary draft presented at Research Seminar on Public Utilities, Center for Research in Regulated Industries, Rutgers University, October 2003 (with C. Peterson).

*The Efficiency of the Inefficient Firm Standard in Setting Network Access Charges*, prepared for 20th Annual Advanced Workshop in Regulation and Competition, Rutgers University, May 25, 2001 (with C. Peterson).

*Designing the New Regulatory Compact: The Role of Market Processes in the Design of Dynamic Incentives*, presented at *Incentive Regulation: Making it Work*, Advanced Workshop in Regulation and Competition, Rutgers University, January 19, 2001 (with C. Peterson).

*The Use of Nontraditional Universal Service Programs in a Competitive Local Exchange Market*, presented at the National Association of Regulatory Commissioners Biennial Conference, 1996 (with C. Schieber).

*Incentive Mechanisms as a Strategic Option for Acid Rain Compliance*, presented to the Future of Incentive Regulation in the Electric Utility Industry, November 1991 (with D. W. South and K.A. Bailey).

*Role of Emission Allowances in Utility Compliance Decisions*, presented at the Eighth Annual International Pittsburgh Coal Conference, October 1991 (with D. W. South and K. A. Bailey).

*Clean Coal Technology and Emissions Trading: Is There a Future for High Sulfur Coal Under the Clean Air Act Amendments of 1990?* P. R. Dugan, D. R. Quigley, Y. A. Attia (eds.), Processing and Utilization of High Sulfur Coals IV, proceedings of the Fourth International Conference on Processing and Utilization of High Sulfur Coals, Idaho Falls, ID, sponsored by the U.S. Department of Energy, et al., Elsevier Science Publishing Co. Inc., New York, NY (with K. A. Bailey and D.W. South).

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*Incentive Mechanisms as a Strategic Option in the Design of Regulatory Policies*, presented at National Association of Regulatory Utility Commissioners, Committee on Electricity, Subcommittee on Strategic Issues, San Francisco, July 1991 (with D. W. South).

*Achieving Efficiency Through Emissions Trading: Paradoxes, Misconceptions and Market Performance*, presented at National Association of Regulatory Utility Commissioners, Committee on Electricity, Subcommittee on Environment and Efficiency, San Francisco, July 1991 (with D. W. South).

*To Mitigate or Not To Mitigate: Regulatory Treatment of Emissions Trading Decisions and Its Effect on Marketplace Incentives*, presented at 84th Annual Meeting and Exhibition, Air and Waste Management Association, Vancouver, British Columbia, June 1991 (with D. W. South).

*Regulatory Incentives: A Means to Accelerate Clean Coal Technology Adoption for Acid Rain Compliance*, presented at Compliance and Emissions Trading Strategies: Facing Acid Rain Tradeoffs, Center for Regulatory Studies, Chicago, IL, June 1991 (with D. W. South).

*Implementing Emissions Trading: Regulatory and Compliance Planning Issues*, presented at the Workshop on Implementing the Electric Utility Provisions of the Clean Air Act Amendments of 1990: Midwestern State Public Utility Commission Issues, National Regulatory Research Institute, Chicago, IL, May 1991 (with D. W. South).

*Clean Coal Technology and Acid Rain Compliance: An Examination of Alternative Incentive Proposals*, presented at the American Power Conference, Chicago, IL, April 1991 (with D. W. South).

*Emissions Trading: Implications for Regulatory Policy*, presented at the 20th Annual Meeting of the Illinois Economic Association, Chicago, IL, October 1990 (with D. W. South).

*The Future of Clean Coal Technology: An Evaluation of the Proposed CCT Incentives in S. 1630*, presented at the 20th Annual Meeting of the Illinois Economic Association, Chicago, IL, October 1990 (with D. W. South).

*The Future of Clean Coal Technology: An Evaluation of the Proposed Incentives in S. 1630*, presented at the Seventh Annual International Pittsburgh Coal Conference, Pittsburgh, PA, September 1990 (with D. W. South).

*The Future of Clean Coal Technology: An Evaluation of the Proposed Incentives in S. 1630*, presented at the Seventh NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1990 (with D. W. South).

*Emissions Trading: Implications for Regulatory Policy*, presented at the Seventh NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1990 (with D. W. South).

*Alternatives to Rate of Return Regulation in the Telephone Industry: A Survey of the New Incentive Mechanism Proposals*. Illinois Economic Association, October 1988.

*Market Structures in the Local Communication Market: Fact and Fiction*, presented at the Intra-MSA Telecommunication Conference, September 1988.

*The Quantity Theory of Money of J. M. Keynes: From the Tract to the General Theory*. Proceedings of the 14th Annual Meeting of the History of Economics Society, June 1987 (with C. Marme).

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*Competitive Pricing and the Local Telephone Service Market: Some Problems of Balancing Equity and Efficiency.* Illinois Economic Association, October 1986.

*The Impact of Self-Selective Tariffs in Telecommunications Markets: The Design of an Experiment.* Proceedings of the Fifth NARUC Biennial Regulatory Conference, September 1986 (with M. J. Morey and K. Costello).

*An Incentive Plan to Control Power Plant Construction Costs.* Third NARUC Biennial Information Conference, September 1982.

*The Measurement of Efficiency and the Application of Incentives to Regulated Industries.* Proceedings of the Second NARUC Biennial Regulatory Information Conference, September 1980 (with K. Costello).

## Reports

*Summary of Finding and User Guide: Tariff Model for the Macedonian Electric Sector,* prepared for the Ministry of Economy, Republic of Macedonia, under contract with United States Agency for International Development, November 2003 (with Carl Peterson and Ralph Zarumba; report is currently being reviewed and is proprietary).

*Distributed Resource Investment in Albania: Regulatory Options for Introducing Commercial Incentives and Promoting Solutions to Meeting Electricity Demand,* white paper prepared for the law firm of Pierce Atwood under contract with United States Agency for International Development, January 2003 (with Carl Peterson).

*Restructuring Options for the Electric Sector in Macedonia,* Report 1 and 2; prepared for the law firm of Pierce Atwood under contract with United States Agency for International Development, 2002 (with Carl Peterson and Ralph Zarumba; report is proprietary).

*Introducing Competition into the Albanian Electric Sector,* white paper prepared for the law firm of Pierce Atwood under contract with United States Agency for International Development, 2001 (with Carl Peterson).

*Examination of Incentive Mechanisms for Innovative Technologies Applicable to Utility and Nonutility Power Generators,* Environmental Assessment and Information Sciences Division, Argonne National Laboratory, publication ANL/EAIS/TM-2, August 1993.

*Avoided Cost Pricing: Theoretical Issues and Problems in Estimation.* Prepared for the Illinois Department of Energy and Natural Resources, June 1990.

*Least-Cost Planning in the Natural Gas Industry: An Overview of the Issues.* Prepared for the Illinois Department of Energy and Natural Resources, December 1989.

*Equity Issues in a Least-Cost Planning Environment.* Prepared for the Illinois Department of Energy and Natural Resources, October 1989.

*An Analysis of Prudence Evaluation Within a Least-Cost Planning Framework: The Case of Natural Gas Planning.* Prepared for the Illinois Department of Energy and Natural Resources, October 1989.

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*Consumer Choice Under Risk and Uncertainty: The Role of Risk Perceptions as a Causal Factor in Consumer Decisionmaking.* Prepared for the Energy and Environmental Systems Division, Argonne National Laboratory for U.S. DOE Office of Civilian Radioactive Waste Management, April 1989.

*The Effects of Alternative Definitions of the Obligation to Serve on the Least-Cost Plans of Local Gas Distribution Companies.* A Report for the Northern Illinois Alliance to Support Least-Cost Utility Planning, February 1989.

*A Complete and Economic Study on Proposed IPCB Regulation R89-9: Waste Prohibitions.* Prepared for the Illinois Department of Energy and Natural Resources (with J. L. Carlson, M. J. Morey, R. C. Hemphill, and W. Mikucki).

*The Role of Prices and the Pricing System Within the Regulatory Process.* Prepared for the Illinois Department of Energy and Natural Resources, October 1986.

*An Evaluation of the Minimization of Total Regional Requirements as an Objective in State-Wide Utility Planning Process.* For the Illinois Department of Energy and Natural Resources, November 1986.

*The Economic Incentives Provided by Section 9-215, Excess Capacity Rule of Proposed Illinois Public Utility Act.* A Memorandum to the Joint Committee, June 1985.

*An Analysis of the Issue of Cross-Subsidization in the Local Telephone Market.* Prepared for the Joint Committee on Public Utility Regulation, May 1985.

*A Survey of State Regulatory Actions and Legislative Developments Resulting from the Divestiture of AT&T.* Prepared for the Joint Committee on Public Utility Regulations, Illinois State Legislature, March 1985.

*A Memorandum to the Telecommunications Policy Working Group on the Concepts of Competing, Competition and Market Structure,* September 1984.

*The Evolution of Competition in the Telephone Industry and the Critical Issues Facing the Illinois Legislature on the Deregulation of Telephone Service.* Prepared for the Select Joint Subcommittee on Regulatory Reform, July 1984.

*The Review of Existing Power Plant Certificates, Monitoring of Power Plant Costs and the Allocation of Power Plant Cancellation Costs.* Presented to the Sunset Task Force on Utility Regulatory Reform, January 1984.

*Utility Efficiency Report Subtask IX - Final Report in Incentive Mechanisms.* Prepared for the Illinois Commerce Commission, May 1981.

*Utility Efficiency Report Subtask IV - Evaluation and Choice of Incentive Mechanisms.* Illinois Commerce Commission for the U.S. Department of Energy, July 1980.

*Utility Efficiency Report Subtask II - Review of Existing Incentive Mechanisms.* Illinois Commerce Commission for the U.S. Department of Energy, March 1980.

*Estimating Fuel Prices, a Memorandum to the Virginia State Corporation Commission* with K. Kelly, National Regulatory Research Institute, 1979.



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*Summary of Regulatory Commission Activities on Power Plant Productivity.* The National Regulatory Research Institute draft report for the U.S. Department of Energy, 1979.

## Unpublished Papers

*Electric Industry Evolution in Eastern Europe After 1990*, Working Paper, NERA Economic Consulting, Chicago, IL, November 2002 (with C. Peterson).

*Designing the New Regulatory Contract: Using the Market Process to Design Regulatory Mechanisms*, Draft Paper, NERA Economic Consulting, Chicago, IL, November 2000.

*Decentralization vs. Coordination: An Examination of the Options for Deregulating the Electric Supply Industry*, June 1985.

*Applied Fairness Theory: The Case of Allocating Canceled Power Plant Costs*, October 1983.

*Towards Developing a Framework for Evaluating Incentive Mechanisms, Performance Measures and Institutional Choice in Deregulation*, August 1981.

*An Overview of the Theories of Regulation and Pricing Policies for Regulated Industries.* The National Regulatory Institute, 1979.

*A Critique of the Averch-Johnson Bias and a Test of Some Alternative Hypotheses.* Master Thesis submitted to the Graduate School of the University of Wyoming, July 1978.

## Presentations

*Performance-Based Regulation and the Stand-Alone Distribution System*, Distribution System Planning, Maintenance and Reliability Conference, Denver, November 2000.

*The Moral Obligation to Regulate Intelligently.* Presented to the NARUC Telecommunications Staff Sub-Committee at the 112<sup>th</sup> Annual NARUC Convention, San Diego, November 2000.

*Concepts of Utility Regulation for Developing Countries*, 42<sup>nd</sup> Annual Regulatory Studies Program, Institute for Public Utilities, Michigan State University, August 2000.

*The Essential Role of Earnings Sharing in the Design of Successful Performance-Based Regulation*, Presented at EPRI's International Energy Pricing Conference, Washington, D.C. July 2000.

*Transmission Pricing: Distance-sensitive, but not Pancaked.* Presented at the EEI Transmission Pricing Conference, Washington, D.C., July 2000.

*Telecommunications Rate Rebalancing.* Presented to the NARUC Telecommunications Staff Sub-Committee at the NARUC Convention, Los Angeles, July 2000.

*Coal, Energy and Clean Air: Challenges and Opportunities*, facilitator, Illinois Department of Economic Development and Community Affairs and the Illinois Environmental Agency, Decatur, Illinois, July 2000.

*PBR Strategy Seminar*, Illinois Power Company, April 2000.

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*Strategic Application of Distributed Resources*, Illinois Power Company, April 2000.

*PBR Strategy Seminar*, with Jeff Makhholm, Georgia Power Company, April 2000.

*Codes of Conduct for The Electric Industry*, presented on behalf of the Edison Electric Institute at the Commissioner Liaison Committee meeting, NARUC Winter Meeting, Washington, D.C., March 2000.

*Mergers and Acquisitions: Assessing the Trends in the Electric and Gas Industries*, Presentation to the Midwest Energy Bar Association, Kansas City, March 2000.

*Telecommunications Industry in the Aftermath of TA96: Creating a Consistent Regulatory Framework amidst the Complexities of the Contemporary Marketplace*, Presented to the NARUC Telecommunications Staff Sub-Committee at the NARUC Annual Convention, San Antonio, November 1999.

*Cost Allocation for Affiliate Transactions*, presented on behalf of the Edison Electric Institute at the Joint Meeting of the Finance and Technology, Gas and Electric Committees, NARUC Summer Meeting, San Francisco, July 1999.

*Avoided Cost Calculation Methodologies*, presentation to Energy Sector Representatives of Romania and Bulgaria, Bucharest, Romania, Fall 1999.

*RTO and ISOs: Restructuring Options*, presentation to Energy Sector Representatives of Romania and Bulgaria, Sinaia, Romania, Summer 1999.

*Convergence: The Utility of the Future*, Presented to Wisconsin Electric Company and Wisconsin Gas merger transition team, 1999.

*A Conflict of Paradigms: The Future Role of State Regulation of the Natural Gas Industry*. Presented to the Midwest Gas Association, November 6, 1991.

*Exit and Entry: Who Will Bear the Risk in a Competitive Natural Gas Industry*. Presented at the conference "At the Crossroads: Restructuring the Natural Gas Industry," held by the Center for Regulatory Studies, October 1991.

*"To Serve Man" - The Golden Rule or a Visit to the Twilight Zone: How to Reconcile the Obligation to Serve with Competitive Market Forces*. Presented to the Gas Policy Committee of the Illinois Commerce Commission, April 16, 1991.

*Regulatory Treatment of Emissions Trading Decisions and Their Effect on Marketplace Incentives* with D. W. South Presented at the Notice of Inquiry Public Hearing, Illinois Commerce Commission, March 1991.

*The National Energy Strategy: Impacts on the Farm Sector*. Presented to the Illinois Farm Bureau Leadership Conference, February 1991.

*Emissions Trading in the CAAA of 1990: Regulatory, Compliance Planning and Implementation Issues* with D. W. South. Presented to the Illinois Commerce Commission, January 1991.

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*Obligations to Serve and Competition in the Natural Gas Industry.* Luncheon presentation at the conference “Assessing the Competitiveness of the Natural Gas Industry,” held by the Center for Regulatory Studies, October 1990.

*Pricing in an Age of Opportunism: The Cost of Being a Provider of Last Resort.* Presented at the conference “Natural Gas Supply Planning: The Implications for Planning Pricing and Competition,” held by the Center for Regulatory Studies, March 1990.

*Public Utility Issues: Long and Short-Term Impacts.* Presented to the Illinois Farm Bureau Leadership Conference, February 1990.

*Uncertainty in the Least-Cost Planning Process: The Case of Natural Gas.* Presented at the conference “Issues in Least Cost Planning in the Natural Gas Industry,” held by the Center for Regulatory Studies, December 21, 1989.

While at the Illinois Commerce Commission, Dr. McDermott gave over one-hundred presentations on a variety of topics in the telecommunications, electricity and natural gas industries.

## Testimony

Illinois Commerce Commission, *Proposed General Increase in Rates*, Commonwealth Edison Company, Docket No. 10-0527, Expert testimony on behalf of the National Resources Defense Council regarding electric decoupling. November 2010.

Utah Public Service Commission, *In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism*, Docket No. 09-035-15, *Phase II*. Expert testimony on fuel adjustment mechanism, September 2010.

Illinois Commerce Commission, *Proposed General Increase in Rates*, Ameren Illinois Utilities, Docket Nos. 09-0306 through 09-0311 (Consol.), Summer 2010. Expert testimony on policy toward rulemaking.

Indiana Utility Regulatory Commission, Rate case, Vectren Energy Delivery of Indiana, Cause No. 43839. Expert testimony on electric decoupling mechanisms. 2010.

Wyoming Public Service Commission, *In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism*, Docket No. 20000-368-EA-10, Expert testimony on public interest standard for fuel adjustment mechanism, 2010.

Regulatory Commission of Alaska, *In the Matter of the Petition filed by Chugach Electric Association, Inc. for Advance Determination of Prudence for Southcentral Power Project*, U-10-41, June 2010. Expert testimony regarding preapproval of generation investment by state public utility commissions in the United States.

Utah Public Service Commission, *In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism*, Docket No. 09-035-15, *Phase I*. Expert testimony on public interest standard for fuel adjustment mechanism, 2009.

Illinois Commerce Commission, *In Re: Enbridge Pipeline (Illinois) L.L.C.* Expert testimony on the proper test for issuing a certificate of public convenience and necessity for an oil common carrier by pipeline. January 2008.

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United States District Court for the Western District of Missouri, Western Division, *Travelers Property Casualty Co. v. National Union Insurance Co*, Case No. 4:06-CV-00946-REL. Expert report and testimony on behalf of Kansas City Power and Light Company calculating the damages from the explosion of its Hawthorn 5 coal-fired generation unit, October 2007.

Wyoming Public Service Commission, Docket No. 20000-277-ER-07, Direct Testimony on behalf of Rocky Mountain Power on merits of utilizing marginal cost for pricing electric service to new large load customers, June 2007.

North Dakota Public Service Commission, Case No. PU-06-525, Direct and Rebuttal Testimony on behalf of Northern States Power d/b/a Xcel Energy Inc. on reasonable cost of equity for North Dakota natural gas operations, 2006-7.

Oregon Public Utility Commission, UM 1121, Direct, Rebuttal and Surrebuttal Testimony on Behalf of Oregon Electric concerning public policy treatment of proposed purchase of Portland General Electric, 2004.

North Dakota Public Service Commission, Case No. PU-04-578, Testimony on behalf of Northern States Power d/b/a Xcel Energy Inc. on reasonable cost of equity for North Dakota natural gas operations, 2004.

Michigan Public Service Commission, Case No. U-13898, Direct Testimony on behalf of Michigan Consolidated Gas Company concerning the application of performance-based regulation, Fall 2003.

Michigan Public Service Commission, Case No. U-13808, Direct Testimony on behalf of Detroit Edison Company concerning the application of performance-based regulation. Fall 2003.

Circuit court of Jackson County Missouri, *Kansas City Power and Light Company v. Bibb Associates, et al.* Case No. 01CV207987. Expert report and testimony on behalf of Kansas City Power and Light Company calculating the damages from the explosion of its Hawthorn 5 coal-fired generation unit, 2003-2004.

Public Service Commission of Wisconsin, Docket No. 05-CE-130, Direct, Rebuttal and Surrebuttal Testimony on behalf of Wisconsin Electric Power Company regarding energy efficiency and power plant construction, 2003.

Illinois Commerce Commission, Docket No. 01-0423, Phase II, Direct, Rebuttal and Surrebuttal Testimony on behalf of Commonwealth Edison Company concerning the prudence of certain distribution related investments and operating costs, Spring 2003.

Illinois Commerce Commission, Docket Nos. 02-0656, 71 and 72, (cons.) Rebuttal Testimony on behalf of Commonwealth Edison Company concerning the appropriate market value calculation, January 2003.

Illinois Commerce Commission, Docket No. 02-0479, Direct and Rebuttal Testimony on behalf of Commonwealth Edison Company concerning the appropriate policy toward provider of last resort service for large (greater than 3MW) usage customers, Summer/Fall 2002.

Illinois Commerce Commission, Docket No. 02-0067, Direct, Rebuttal and Surrebuttal Testimony on behalf of Nicor Gas concerning renewal of gas purchasing performance-based regulation program.

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Public Service Commission of Wisconsin, Docket Nos.05-AE-109, 05-CE-117, 05-CE-130, 6650-CG-211, 137-CE-104, Direct Testimony on behalf of Wisconsin Electric Power Company regarding transactions cost economics and vertical integration with implications for power plant construction by local public utilities, June 2002.

Public Service Commission of Wisconsin, Docket Nos.05-AE-109, 05-CE-117, 05-CE-130, 6650-CG-211, 137-CE-104, Direct and Rebuttal Testimony on behalf of Wisconsin Electric Power Company regarding energy efficiency and power plant construction, June 2002.

New York Public Service Commission, Case No. 01-E-0359, Direct Testimony on behalf of New York State Electric and Gas Corporation regarding the appropriateness of the Company's proposed Electric Price Protection Plan, August 3, 2001.

Kansas Corporation Commission, Docket No. 01-WSRE-436-RTS, Cross-Answering Testimony on behalf of the City of Topeka, Kansas, regarding cost causation issues and rate parity, April 17, 2001.

North Dakota Public Service Commission, Case No. PU-400-00-195, Direct and Rebuttal testimony on behalf of Otter Tail Power Company regarding application to operate under a performance-based regulation plan, Fall 2000.

North Dakota Public Service Commission, Case No. PU-401-00-36, Direct and Rebuttal testimony on behalf of Xcel Energy regarding application to operate under a performance-based regulation plan, Fall 2000.

Federal Energy Regulatory Commission, Docket No. EL99-90-000, *City of Wichita, Kansas v. Western Resources, Inc.* Direct testimony on behalf of the City of Topeka, Kansas focusing on cost causation issues and rate parity, September 2000.

Indiana Utility Regulatory Commission, Cause No. 41753, Direct testimony on behalf of Southern Energy regarding approval of certification of power plant under reduced regulation, August 2000.

California Public Utilities Commission, Application A.00-06-032, Direct and rebuttal testimony on behalf of Southern California Gas Company regarding the appropriateness of peaking rate for gas services, Fall 2000.

Illinois Commerce Commission, Docket No. 99-0013, Rebuttal testimony on behalf of Commonwealth Edison regarding appropriate treatment of unbundled rates for meter service, June 5, 2000.

Indiana Utility Regulatory Commission, Cause No. 41590, Rebuttal testimony on behalf of Southern Energy, n/k/a Mirant regarding approval of certification of power plant under reduced regulation, June 2, 2000.

Iowa General Assembly concerning electricity deregulation, Spring 2000.

Kentucky Public Service Commission, Case No. 2000-095, Testimony on behalf of LG&E Corp. regarding approval of a merger, March 15, 2000.

Environmental and Energy Committee of the Illinois Senate, "Telecommunications Act of 1996: An Assessment and Policy Prescriptions," February 16, 2000.

Illinois Commerce Commission, Docket No. 98-0195, Testimony on behalf of GTE North Inc. and GTE South Inc. regarding investigation into certain payphone issues as directed in Docket 97-0225, December 21, 1999.

## Karl A. McDermott

Public Service Commission of Wisconsin, Docket No. 6630-UR-111, Testimony on behalf of Wisconsin Electric Power Company regarding performance-based regulation, September 1999.

South Dakota Public Utilities Commission, Docket No. NG98-010, Testimony on behalf of MidAmerican Energy Company for continuation of its incentive gas supply procurement program, June 1999.

Iowa Utilities Board, Docket No. RPU-94-3, Request for Confidential Treatment on behalf of MidAmerican Energy Company, April 7, 1999.

Federal Communications Commission, CC Docket No. 99-24, Affidavit and Reply Affidavit of Karl McDermott and William E. Taylor on behalf of Bell Atlantic Telephone Companies for forbearance from regulation as dominant carriers in Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Washington, DC, Vermont, and Virginia, January 20, 1999 and April 8, 1999.

Illinois General Assembly joint committee on electricity deregulation, Summer 1997.

Illinois Public Utilities Committee Telecommunications Subcommittee, Alternative Methods of Telecommunications Regulation, March 27, 1991.

Illinois Commerce Commission, Docket No. 80-0167, on the use of incentive mechanisms at Clinton Power Plant construction site.

Illinois Commerce Commission, Docket No. 80-0544, on the use of the variable return to CWIP incentive model in the Illinois Power rate case.

Illinois Commerce Commission, Docket No. 80-0167, rebuttal testimony to Dr. Pappas on the use of incentive mechanisms at the Clinton Power Plant site.

Illinois Commerce Commission, Docket No. 80-0367, on the treatment of the time of use pricing standards of the Public Utilities Regulatory Policy Act, (PURPA) for Iowa-Illinois Gas and Electric Company.

Illinois Commerce Commission, Docket No. 81-0478, on the use of q-ratios determining the appropriate rate of return for Illinois Bell Telephone Company.

Illinois Commerce Commission, Docket No. 81-0478, on the appropriate cost of service method for pricing telecommunication service under the transition to competition.

## Summary of State Public Utility Commission Policies on Single-Tariff Pricing for Water Utilities (as of 1999)

Commission Policy	State Commissions	
Generally Accepted (8)	Connecticut Missouri North Carolina Oregon	Pennsylvania South Carolina Texas Washington
Case-By-Case (17)	Single-Tariff Pricing Has Been Approved (14)	
	Arizona Delaware Florida Idaho (not an issue) Illinois Indiana Massachusetts	New Hampshire New York New Jersey Ohio Vermont Virginia West Virginia
	Single Tariff Pricing Has Not Been Approved (3)	
	California Maryland (not an issue) Mississippi (not an issue)	
Never Considered (5)	Iowa Kentucky Louisiana	Maine Wisconsin
Not Applicable -- No Multi-System Water Utilities (15)	Alabama Alaska Arkansas Colorado Hawaii Kansas Montana Nebraska	Nevada New Mexico Oklahoma Rhode Island Tennessee Utah Wyoming
No Jurisdiction for Water Utilities (6)	Georgia Michigan Minnesota	North Dakota South Dakota Washington, D.C.

## Summary of Selected State Public Utility Commission Policies on Single-Tariff Pricing for Water Utilities (as of 2009)

Commission Policy	State Commissions	
Generally Accepted (10)	Connecticut Illinois Iowa Maine Massachusetts	New Hampshire Oregon Pennsylvania South Carolina Washington
Case-By-Case (21)	Single-Tariff Pricing Has Been Approved (18)	
	Arizona California Delaware Florida Idaho Indiana Kentucky Louisiana Missouri	Montana New York New Jersey North Carolina Ohio Texas Vermont Virginia West Virginia
	Single Tariff Pricing Has Not Been Approved (3)	
	Maryland (not an issue) Mississippi (not an issue) Rhode Island*	
Never Considered (1)	Wisconsin	
Not Applicable -- No Multi-System Water Utilities (14)	Alabama Alaska Arkansas Colorado Hawaii Kansas Nebraska	Nevada New Mexico Oklahoma Rhode Island Tennessee Utah Wyoming
No Jurisdiction for Water Utilities (6)	Georgia Michigan Minnesota	North Dakota South Dakota Washington, D.C.

\* PUC Recognized the value of consolidating rate structures (Re Narragansett Bay Water Quality Management District, Docket No. 2216, Order No. 14677 (Mar. 24, 1995).

Source: Author's Research