

**BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN**

Application of Wisconsin Power and Light Company
for a Certificate of Public Convenience and
Necessity to Build an Approximately 650 Megawatt
Natural Gas-Fueled Power Plant at its Riverside
Energy Center Facility in the Town of Beloit, Rock
County, Wisconsin

Docket No. 6680-CE-176

DIRECT TESTIMONY OF LANE KOLLEN

1 **Q. Please state your name and business address.**

2 A. My name is Lane Kollen. My business address is J. Kennedy and Associates, Inc.
3 ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia
4 30075.

5 **Q. What is your occupation and by whom are you employed?**

6 A. I am a utility rate and planning consultant holding the position of Vice President and
7 Principal with Kennedy and Associates.

8 **Q. Please describe your education and professional experience.**

9 A. I earned a Bachelor of Business Administration in Accounting degree and a Master of
10 Business Administration degree, both from the University of Toledo. I also earned a
11 Master of Arts degree from Luther Rice University. I am a Certified Public Accountant,
12 with a practice license, a Certified Management Accountant, and a Chartered Global
13 Management Accountant. I am a member of numerous professional organizations.

14 I have been an active participant in the utility industry for more than thirty years,
15 both as a consultant and as an employee. Since 1986, I have been a consultant with

1 Kennedy and Associates, providing services to consumers of utility services and state and
2 local government agencies in the areas of utility planning, ratemaking, accounting, taxes,
3 financial reporting, financing and management decision-making. From 1983 to 1986, I
4 was a consultant with Energy Management Associates, providing services to investor-
5 and consumer-owned utility companies in the areas of planning, financial reporting,
6 financing, ratemaking and management decision-making. From 1976 to 1983, I was
7 employed by The Toledo Edison Company in a series of positions providing services in
8 the areas of planning, accounting, financial and statistical reporting, and taxes.

9 I have appeared as an expert witness on utility planning, ratemaking, accounting,
10 reporting, financing, and tax issues before state and federal regulatory commissions and
11 courts on nearly two hundred occasions. In many of those proceedings, I have
12 represented state and local ratemaking agencies or their Staffs, including the Louisiana
13 Public Service Commission, Georgia Public Service Commission and various groups of
14 Cities with original rate jurisdiction in Texas. I have appeared before the Public Service
15 Commission of Wisconsin (“Commission”) in various proceedings, including the
16 Wisconsin Power and Light Company (“WPL” or “Company”) request for a certificate of
17 public convenience and necessity (“CPCN”) for Nelson Dewey 3 in Docket No. 6680-
18 CE-170, the Wisconsin Energy Corporation request for approval to acquire Integrys
19 Group, Inc. in Docket No. 9400-YO-100, and numerous base rate proceedings involving
20 WPL, Wisconsin Electric Power Company (“WEPCO”), and Wisconsin Public Service
21 Corporation. I have developed and presented papers at various industry conferences on
22 ratemaking, accounting, and tax issues. My qualifications and regulatory appearances are
23 further detailed in my Ex.-WIEG-Kollen-1.

1 **Q. On whose behalf are you testifying in this proceeding?**

2 A. I am testifying on behalf of the Wisconsin Industrial Energy Group, Inc. (“WIEG”), an
3 association of large industrial and manufacturing businesses, many of which take electric
4 service from WPL.

5 **Q. What is the purpose of your testimony?**

6 A. The purpose of my testimony is to address and make recommendations regarding the
7 ratemaking recovery of the Riverside Energy Center Expansion project (“RECE,”
8 “Riverside,” or “project”) costs, if, in fact, the Commission finds that the project is
9 needed and that it is the least-cost economic alternative. These ratemaking recovery
10 issues include: 1) a “hard cap” on recoverable costs, 2) capitalization and recovery of
11 financing costs over the life of the plant (through allowance for funds used during
12 construction, or “AFUDC”) versus recovery of financing costs during construction
13 (through construction work in progress, or “CWIP,” in rate base), 3) use of the Federal
14 Energy Regulatory Commission, or “FERC,” methodology for calculating AFUDC, 4)
15 use of short-term debt during construction, 5) use of a “mirror CWIP” ratemaking
16 methodology if the Commission is inclined to allow CWIP in rate base during
17 construction for a portion of the project costs, and 6) service life for the depreciation rates
18 and resulting depreciation expense.

19 **Q. Do you address whether the project is needed and, if so, whether RECE is a**
20 **least-cost alternative?**

21 A. Not at this time, although I reserve the right to address those issues in subsequent
22 testimony after reviewing the direct testimonies of other parties and the rebuttal

1 testimonies of WPL [REDACTED].

2 **Q. Why do you not address these issues at this time?**

3 A. It would be premature for me to address these issues given the unusual and dynamic
4 nature of this CPCN proceeding. [REDACTED]

[REDACTED]
[REDACTED]. In the “typical” case, a utility applies to the
7 Commission for a CPCN. Staff and intervening parties test the strength of the utility’s
8 analyses and conclusions that the utility’s proposed generating resource is needed and
9 that it represents the least-cost alternative to meet that need. The utility presents its case
10 and then staff and intervenors respond to that case. [REDACTED]

[REDACTED]
[REDACTED]. WIEG is interested
13 in the least-cost solution to WPL’s need for additional generation. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
18 In addition, I do not have confidence that we have seen the [REDACTED]
19 “best” proposal [REDACTED] and believe it likely that between now and [REDACTED]
20 rebuttal testimony in December, the [REDACTED] proposal [REDACTED] will change from those [REDACTED]
21 initially filed. Indeed, just last week WPL’s original proposal cost of \$750 million was
22 reduced to \$700 million, [REDACTED]

1 [REDACTED]. I think that until the [REDACTED] proposals are
2 firm and certain not to change, an opinion as to whether the WPL proposal is least-cost is
3 premature.

4 [REDACTED]
5 [REDACTED] It appears that the net present value of the competing alternatives are relatively
6 close, but depend highly upon the assumptions that [REDACTED] utility has used, [REDACTED]
7 [REDACTED]. I have reviewed
8 the [REDACTED] testimony, [REDACTED] analyses, and [REDACTED] responses to discovery requests. Given
9 the fact that this process and the assumptions remain dynamic, I think it is premature to
10 take a position to accept or reject WPL's proposal and grant its request for a CPCN.

11 **Q. Please summarize your testimony.**

12 A. If the Commission determines that there is a need for the capacity and that Riverside is
13 the least-cost alternative in meeting that need, then it should ensure that costs to
14 customers are minimized during construction before the project provides service, as well
15 as after the project is completed and provides service to customers. If it approves the
16 project, the Commission should impose the following conditions.

17 First, the Commission should limit future recovery to the lesser of the Company's
18 \$700 million cost estimate or actual construction costs, plus reasonable financing costs.

19 Second, the Commission should reject the Company's proposal to recover 50% of
20 the project's financing costs from customers during the construction period rather than
21 accruing AFUDC and recovering these costs from customers over the service life of the
22 project.

1 Third, if the Commission is inclined to allow the Company to recover any of the
2 project's financing costs from customers during the construction period, then I
3 recommend that the Commission utilize a "mirror CWIP" ratemaking approach that
4 returns the financing costs recovered during the three-year construction period over a
5 similar three-year period after the project is completed and in service. The mirror CWIP
6 ratemaking approach mitigates the increase in rates after the project is completed and in
7 service until the mirror three-year amortization period is completed.

8 Fourth, the Commission should direct the Company to accrue AFUDC using the
9 FERC methodology, which requires that all short-term debt financing first be assigned to
10 construction costs and then the weighted cost of long-term debt and common equity be
11 used for the remaining construction costs.

12 Fifth, the Commission should direct the Company to maximize the use of short-
13 term debt. It is substantially lower cost than any other form of financing and will reduce
14 the cost to customers regardless of whether financing costs are recovered in whole or in
15 part through CWIP in rate base or through AFUDC.

16 Sixth, the Commission should direct the Company to use no less than a 40-year
17 service life for the project to determine the depreciation rate and the resulting
18 depreciation expense once it is completed and in-service. The depreciation rate should be
19 no greater than 2.5%.

20 I address each of these issues sequentially in the subsequent sections of my
21 testimony.

1 **Q. Why should the Commission limit future recovery to the lesser of the Company's**
2 **\$700 million cost estimate or actual construction costs, plus reasonable financing**
3 **costs?**

4 A. A "hard cap" that limits future recovery ensures that the Company remains accountable
5 for the project cost estimate as well as the actual construction cost and ensures that the
6 Riverside project remains economic compared to the other alternatives. If the cost is
7 more than the Company's cost estimate, then the excess should not be recoverable. If the
8 cost is less than the Company's cost estimate, then only the actual costs should be
9 recoverable.

10 The Commission must have some certainty regarding the cost of the project and
11 the effect on customers. The net present values of the Riverside project and certain other
12 alternatives were closely clustered, at least prior to WPL's recent revision in its cost
13 estimate.¹ The construction cost is critical to the selection of the Riverside project over
14 other alternatives [REDACTED]
15 [REDACTED]. A modest increase in the construction cost of the project could change
16 the economic ranking of the Riverside project compared to other alternatives and could
17 result in the selection of other projects. The Commission should ensure that customers
18 receive the value of the Riverside project based on the Company's cost estimate used to
19 evaluate the project against the other alternatives.

20 In addition, the Company's construction cost estimate already includes a
21 significant contingency, which covers not only differences in actual contractor and

¹ Refer to WPL's response to JK-03.01, which provides a comparison of updated EGEAS modeling results, including net present value of revenue requirements of alternatives. I have attached a copy of this response as my Ex.-WIEG-Kollen-2.

1 owner's costs compared to the estimated costs, but also differences in actual contractor
2 and owner performance and actual costs compared to the estimated costs, which reflect
3 construction milestones and completion dates.

4 Further, the Company's construction cost estimate also includes expected
5 increases in materials, labor, and other costs during the construction period in addition to
6 the contingency. The cost estimate is already stated in nominal, or escalated dollars,
7 which is the same manner in which the actual costs will be recorded. The Company used
8 the escalation rates shown in Table 7.3.3 in its 2014 IRP filing for this purpose. The
9 escalation rates are 1.2%, 1.1%, 0.9%, and 0.8% for 2016, 2017, 2018, and 2019,
10 respectively. If the actual escalation rates are greater than these assumptions, then the
11 actual construction cost will be greater than the estimated cost, all else equal. The
12 Commission should ensure that customers do not bear the risk of greater escalation,
13 particularly if that escalation would have affected the selection of the Riverside project
14 over other alternatives.

15 The Commission should ensure that customers get the benefit of the bargain if the
16 Commission approves the Company's request in this proceeding.

17 **Q. Why should the Commission reject the Company's proposal to recover 50% of the**
18 **project's financing costs from customers through CWIP in rate base during the**
19 **construction period?**

20 A. There are two approaches to recovering financing costs incurred during construction:
21 AFUDC or CWIP in rate base, either one of which ensures that the utility is provided full
22 recovery of its construction costs; recovery is only a matter of timing. The AFUDC

1 approach adds the financing costs of construction to the materials, labor, and other costs
2 of construction and provides recovery of all construction costs over the life of the project
3 when it is used and useful. In this manner, the AFUDC approach promotes
4 intergenerational equity and matches the recovery of the costs to the service provided.

5 In contrast, the CWIP in rate base approach does not add the financing costs to the
6 other costs of construction, but rather requires today's customers to provide accelerated
7 recovery of these construction costs as they are incurred and before the project is
8 completed and used and useful. The CWIP in rate base approach violates both the
9 objective of intergenerational equity and the matching principle. The CWIP in rate base
10 approach relieves future customers of a significant portion of the cost of the project. The
11 effect is no different than if the Commission segregated the cost of the heat exchanger
12 and allowed the Company to recover that cost during the construction period.

13 In addition, the AFUDC approach results in a lower net present value cost to
14 customers than the CWIP in rate base approach, according to the Company's own studies
15 comparing the two approaches in the Nelson Dewey 3 CPCN proceeding, Docket No.
16 6680-CE-170.²

² *Application of Wisconsin Power and Light Company, d/b/a Alliant Energy, for Authority to Construct a New Coal-Fired Electric Generating Unit Known as the Nelson Dewey Generating Station in Cassville, Grant County, Wisconsin.*

1 **Q. Please describe the Company's studies comparing the net present value of the**
2 **AFUDC and CWIP in rate base approaches for Nelson Dewey 3 and an alternative**
3 **facility in Docket No. 6680-CE-170.**

4 A. In that proceeding, the Company performed a comparison of the net present value of
5 revenue requirements over the life of Nelson Dewey 3 and an alternative facility
6 comparing the AFUDC and CWIP in rate base approaches using a range of discount
7 rates.³ In that proceeding, Company witness Mr. Seitz described the studies as follows:

8 The first scenario is that each project will accrue AFUDC at the current
9 authorized rate through 2009 and then assumes 100% of Construction Work in
10 Progress (CWIP) is included in net investment rate base from January 1, 2010
11 until the in-service date. The second scenario is that each project will accrue
12 AFUDC at the current authorized rate through the end of 2009 and then accrue
13 AFUDC at the pre-tax weighted cost of capital from January 1, 2010, until the in-
14 service date. The third set of scenarios assumes that the projects accrue AFUDC
15 at the current authorized rates until the in-service date.⁴

16 **Q. What did the Company's studies demonstrate?**

17 A. The Company's studies demonstrated conclusively that the 100% AFUDC alternative
18 using the weighted average cost of capital as the AFUDC rate resulted in the lowest net
19 present value for the entire range of discount rates in excess of 5.0% for both Nelson
20 Dewey 3 and the alternative facility. The 100% AFUDC alternative was the least-cost to
21 ratepayers and the Company's proposal for 100% CWIP in rate base was the highest cost
22 to ratepayers. More specifically, at a 5% discount rate, the AFUDC approach for Nelson

³ The studies were described in Nelson Dewey 3 by WPL witness Mr. Martin Seitz in his Additional Direct Testimony (PSC REF#: 95853) and were detailed in Exhibit 128, Part 2 of 2, (MWS-2), Schedule 5 (PSC REF#: 96118). The net present value of the revenue requirements for the studies over the range of discount rates is provided in Mr. Seitz's Exhibit 128, Part 2 of 2, (MWS-2), Schedule 6. (PSC REF#: 96118) I have attached a copy of the relevant pages of Mr. Seitz's testimony and Exhibit 128, Part 2 of 2, (MWS-2), Schedules 5 and 6 as my Ex.-WIEG-Kollen-3 for reference purposes in this proceeding.

⁴ Additional Direct Testimony of Mr. Seitz at 2-3 (PSC REF#: 95853), included in Ex.-WIEG-Kollen-3.

1 Dewey 3 was \$35.037 million lower cost to ratepayers than the Company's proposed
2 100% CWIP approach on a net present value basis. At a 10% discount rate, the AFUDC
3 approach for Nelson Dewey 3 was \$120.545 million lower cost to ratepayers than the
4 Company's proposed 100% CWIP approach on a net present value basis. The differences
5 for the alternative facility were similar to those for Nelson Dewey 3, although slightly
6 less.

7 **Q. Would the same conclusions result for the Riverside project?**

8 A. Yes, although the quantifications would be different due to the differences in construction
9 costs and the timing of the expenditures.

10 **Q. Why is this true?**

11 A. Under the AFUDC approach, the Company collects and pays federal and state income
12 taxes on the equity return only after the project is placed in service and then over the life
13 of the project. However, under the CWIP in rate base approach, the Company must
14 collect and pay federal and state income taxes on the equity return during construction.
15 Under the AFUDC approach, customers obtain a net present value benefit from this delay
16 compared to the CWIP in rate base approach. Under the CWIP in rate base approach, the
17 Company does not benefit, even though customers are harmed; the Company merely acts
18 as a tax collector and remitter.

19

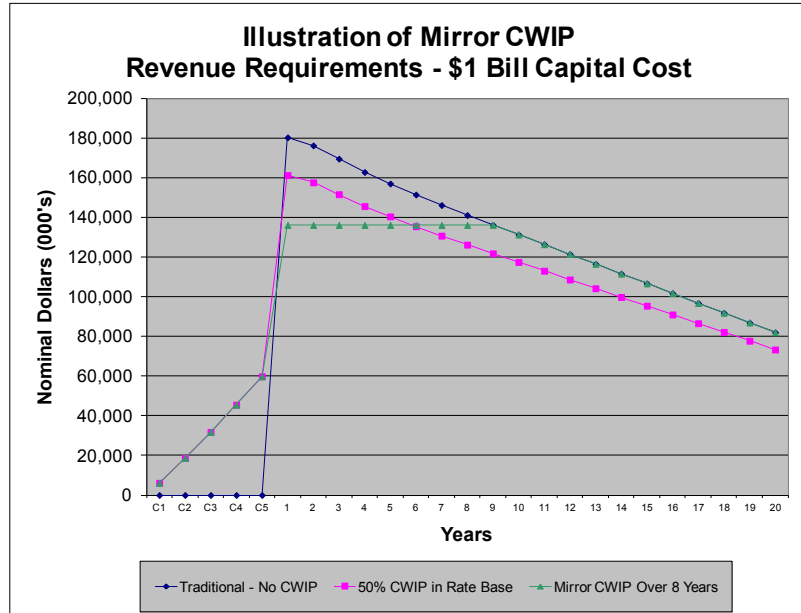
1 **Q. Please describe the “mirror CWIP” ratemaking approach that you recommend if**
2 **the Commission is inclined to allow any amount of CWIP in rate base during the**
3 **construction period.**

4 A. The mirror CWIP ratemaking approach allows the Commission to use the recoveries
5 from customers during the construction period to reduce the revenue requirements in the
6 early years after the project is completed and placed in-service. Under this approach, the
7 Commission would direct the Company to record the amounts recovered from ratepayers
8 in a regulatory liability, or contra-AFUDC account, and direct the Company to accrue a
9 carrying charge on this regulatory liability amount at the same return as the AFUDC rate.
10 The Commission then would use this regulatory liability to reduce and levelize the
11 revenue requirements of the project once it is placed in-service by amortizing the
12 regulatory liability in amounts that will achieve this objective. The amortization would
13 be structured so that it occurs over approximately the same or a greater number of years
14 as the recoveries from ratepayers during the construction period, hence the term “mirror”
15 CWIP.

16 **Q. Please provide an illustration of the mirror CWIP approach and the effects on**
17 **revenue requirements.**

18 A. The following chart illustrates three scenarios showing: 1) the revenue requirements
19 under the AFUDC approach, 2) the revenue requirements with 50% CWIP in rate base
20 during the construction period, and 3) the revenue requirements using the mirror CWIP
21 approach. For this illustration, I used generic assumptions rather than the Company’s
22 confidential information in this proceeding. The mirror CWIP approach reduces and

1 levelizes the peak revenue requirements during the early years after it is placed in
2 service and then returns to the revenue requirements under the AFUDC approach.



3

4 **Q. Please describe the FERC AFUDC methodology.**

5 A. The FERC AFUDC methodology is set forth in the FERC Uniform System of Accounts
6 in Electric Plant Instruction 17 Allowance for Funds Used During Construction. The
7 FERC methodology first assigns all short term debt to the CWIP balance in the
8 calculation of the AFUDC rate. If there is any remaining CWIP balance, then the FERC
9 methodology requires that it be allocated between long-term debt, common equity, and
10 any other form of long-term financing, such as preferred equity, based on the per books
11 capital structure and costs in the calculation of the rate. The cost of common equity is
12 based on the most recent authorized return on common equity.⁵ The AFUDC rate is then
13 applied to the CWIP amount, including prior month accruals of AFUDC, for the project.

⁵I have replicated the entirety of Electric Plant Instruction 17 *Allowance for Funds Used During Construction* as Ex.-WIEG-Kollen-4.

1 **Q. How does the FERC AFUDC methodology compare to the Commission's historic**
2 **AFUDC methodology?**

3 A. It is different in two important respects, although there also are other less important
4 differences. First, the FERC methodology first assigns all short term debt to the CWIP
5 balance in the calculation of the AFUDC rate. The Commission's historic AFUDC
6 methodology uses a cost of capital that reflects the short-term debt projected for
7 ratemaking purposes. It does not distinguish between construction and plant in service or
8 other rate base components and it does not account for differences during construction
9 based on actual financing compared to the projections reflected in the forecast test year
10 used for ratemaking purposes.

11 Second, the FERC methodology makes no adjustment to reconcile rate base,
12 including CWIP, to capitalization and deferred investment tax credits. In contrast, the
13 Commission's historic AFUDC methodology includes such an adjustment, which tends
14 to increase the AFUDC rate.

15 **Q. Why should the Commission use the FERC AFUDC methodology for the AFUDC**
16 **on the Riverside project?**

17 A. First, and most importantly, the FERC AFUDC methodology more closely parallels the
18 actual financing costs of the construction while the Commission's historic AFUDC
19 methodology tends to exceed the actual financing costs of the construction. The FERC
20 methodology will result in a lower net present value cost to customers than the
21 Commission's historic AFUDC methodology. The Company's practice is to first finance
22 construction with short-term debt until it reaches a threshold level and then to issue long-

1 term debt or common equity when it is economical and least cost to do so. The FERC
2 methodology is consistent with the Company's actual practice and more closely reflects
3 its actual cost to finance the construction.

4 In contrast, the Commission's historic methodology provides an incentive for the
5 utility to understate the short-term debt in the forecast test year in order to maximize the
6 cost of capital reflected in the base revenue requirement and to maximize the AFUDC
7 rate. If the utility issues more short term debt to finance a large construction project than
8 it reflected in its forecast test year, then it is able to accrue AFUDC at a rate that may
9 significantly exceed its actual cost and retain the difference as an increase to income
10 without any reconciliation or true-up.

11 In addition, the FERC AFUDC methodology reflects the actual cost of other
12 financing after first assigning all short term debt to construction. There is no need for
13 any adjustments to reconcile rate base and capitalization for rate base and/or
14 capitalization that is unrelated to the construction project. These adjustments are
15 necessary only for rate base and/or capitalization related to the base revenue requirement,
16 and certainly are not necessary if there is no CWIP included in rate base or the
17 reconciliation.

18 **Q. Why should the Commission direct the Company to maximize the use of short-term**
19 **debt?**

20 A. Short-term debt is unequivocally and substantially the lowest cost form of financing.
21 Consequently, short term debt should be the first and primary source of financing before
22 issuing long-term debt and common equity. If the Company maximizes the use of short-

1 term debt, it will result in a lower net present value cost to customers than if only a
2 minimal amount of short-term debt is used or if long-term debt and common equity are
3 the first and primary sources of financing.

4 **Q. What is the current cost of short-term debt and how does that compare to the cost of**
5 **long-term debt and common equity?**

6 A. The cost of 90-day commercial paper is approximately 0.25%. The present cost is even
7 less than the cost of short term debt reflected in the ratepayer cost of capital and the
8 AFUDC rate shown at a cost of 0.60% on Attachment E to the Commission's Order in
9 Docket No. 6680-UR-119. Short-term rates have remained extremely low since the great
10 recession and are projected to remain extremely low for the next several years.

11 The cost of short-term debt is a fraction of the cost of long-term debt. The cost of
12 long-term debt shown on the same Attachment E was 5.42%.

13 The cost of short-term debt is even less of a fraction of the cost of common
14 equity. The authorized return on common equity is 10.40%. However, the actual
15 authorized return on common equity included in the revenue requirement is 17.3% when
16 the income tax gross-up is added.

17 **Q. What is the difference in AFUDC using the FERC methodology compared to the**
18 **Commission's methodology if the Company uses short-term debt to finance \$100**
19 **million in construction costs?**

20 A. It is significant. The difference is \$7.9 million each year compounded. Over a three-year
21 construction period, this will reduce the AFUDC by \$25.6 million for each \$100 million
22 financed with short-term debt. This will reduce the net present value of revenue

1 requirements by at least \$36.9 million over the life of the project, which reflects the
2 income tax gross-up in the return on the AFUDC that is avoided by using short-term debt.

3 **Q. In its Application at 1.1.10 and at 4.3.5, the Company proposes “recovery” or**
4 **depreciation life of 35 years and an operating or “service” life of 40 years. Should**
5 **the Commission ensure that the service life is reflected for depreciation purposes?**

6 A. Yes. The Commission should use the service life for depreciation purposes, not some
7 shorter life. The FERC USOA defines depreciation as the “systematic and rational”
8 allocation of the cost over the service life of the asset. The use of the service life also
9 ensures intergenerational equity and an appropriate matching of cost recovery from the
10 customers who are served. The Commission should ensure that the depreciation rate does
11 not exceed 2.5%, all else equal.

12 **Q. Does the Company agree that a 40-year life should be used to calculate depreciation**
13 **for ratemaking purposes?**

14 A. Apparently so. Despite the assumptions reflected in the Application, Company witness
15 Mr. Neil Michek uses a 40-year life for depreciation purposes in his calculations of the
16 annual capital-related revenue requirement, which he claims is consistent with the
17 authorized depreciation rates presently in effect for the Riverside Energy Center.⁶

⁶ Direct-WPL-Michek-8.

1 **Q. Why should the Commission set the depreciation life as a condition in this**
2 **proceeding?**

3 A. Although the depreciation life should not affect the net present value of the revenue
4 requirements, it does affect the magnitude of the actual annual revenue requirements after
5 the Riverside project is completed and placed in service and it affects the
6 intergenerational allocation of the completed cost of the project. The Commission should
7 attempt to match the recovery of the cost of the project to the period over which it will
8 provide service.

9 **Q. Does this complete your testimony at this time?**

10 A. Yes.