

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN**

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Application of Wisconsin Power and Light Company for a Certificate of Authority to Acquire, Construct, Own, and Operate Six Solar Electric Generation Facilities, Known as the North Rock, Grant County, Crawfish River, Onion River, Richland County, and Wood County Projects, to be Located in Rock County, Grant County, Jefferson County, Sheboygan County, Richland County, and Wood County, Wisconsin

Docket No. 6680-CE-182

Application for Approval of Affiliated Interest Agreements Related to Wisconsin Power and Light Company's Ownership and Operation of Solar Projects

Docket No. 6680-AE-120

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**INITIAL POST-HEARING BRIEF OF  
WISCONSIN POWER AND LIGHT COMPANY**

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## INTRODUCTION

Wisconsin Power and Light Company (WPL) is committed to providing customers with safe, reliable, and affordable service and transitioning its generation fleet to more cost-effective and sustainable resources. This Application for a Certificate of Authority (Application) achieves these objectives. In 2019, WPL initiated a holistic and collaborative resource planning process to evaluate, among other things, the continued operation of its remaining coal-fired generating units—Edgewater 5 and the Columbia Generating Station. WPL used advanced tools to develop a broad range of plausible future scenarios for the electric power sector; modeled the performance of potential resource portfolios within those scenarios; and analyzed the results to identify the most optimal set of resources to meet its customers’ future energy and capacity needs.

This analysis demonstrates that, compared to the “Status Quo,” it is more cost-effective and environmentally sustainable for WPL to advance the retirement of its existing coal-fired generation units and replace that retired capacity with new, cost-competitive renewable generation.<sup>1</sup> Based on these results, WPL developed the Clean Energy Blueprint (Blueprint), its preferred resource plan to cost-effectively, reliably, and sustainably meet future customer needs. The Blueprint calls for the retirement of Edgewater 5 by the end of 2022; the retirement of Columbia Unit 1 by the end of 2023 and Unit 2 by the end of 2024; installing 1,025 MW of new, utility-scale solar generation in Wisconsin by the end of 2023; and installing distributed solar and battery storage resources in the communities that WPL serves.<sup>2</sup>

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<sup>1</sup> The “Status Quo” or “base case” essentially reflects a state of affairs in which WPL continues to operate all units in its generation fleet under existing planning assumptions (i.e., until the end of their depreciable lives).

<sup>2</sup> At the time WPL filed the Application, the Blueprint called for the retirement of both Columbia units by 2027 because WPL and the other co-owners of the Columbia units (Wisconsin Public Service Corporation (WPSC) and Madison Gas and Electric Company (MGE)) had not yet finalized a path forward regarding the retirement of those units. (*See Ex.-WPL-Application-r: Application-28, Table 1, N.1*) However, WPL, WPSC, and MGE have since announced the retirement of Columbia Unit 1 by the end of 2023 and Columbia Unit 2 by the end of 2024.

Based on WPL's resource planning analysis, the Blueprint will avoid approximately \$2 billion to \$6.5 billion in nominal costs to customers (\$200 million to \$1.2 billion on a net present value revenue requirement (PVRR) basis) over the next 35 years, and maintain or improve the reliability, flexibility, and sustainability of WPL's generation fleet. Transitioning from coal-fired generation to new, renewable resources will allow WPL to take advantage of steadily declining capital costs and federal tax credits for new solar generating resources, which substantially reduces the cost of these new resources to customers. This transition will also reduce WPL's reliance on traditional fossil fuel-based supply chains. Finally, the Blueprint has significant environmental benefits: by 2030, it will reduce water withdrawals and carbon dioxide emissions from WPL's generation fleet by 99 and 51 percent, respectively, relative to 2005 levels. It is also expected to avoid thousands of tons criteria pollutant emissions (such as particulate matter, sulfur dioxide, and nitrogen oxides) from WPL's generation fleet over the next 20 years.

In this case, WPL is requesting authorization from the Commission to acquire, construct, own, and operate six new solar projects in Wisconsin, which have a collective nameplate capacity of 675 megawatts (MW) (Solar Projects). The Solar Projects represent the first tranche of the new solar generation that WPL intends to add to its generation portfolio pursuant to the Blueprint. WPL is also proposing to own and operate the Solar Projects through a tax equity partnership for a period of ten years or less. This innovative financing structure makes the Solar Projects more cost-effective for customers than traditional utility ownership: the tax equity investor will fund a significant portion (35 to 45 percent) of the capital cost of the Solar Projects in exchange for receiving the lion's share of the projects' tax benefits, which reduces the amount of capital that WPL would otherwise include in rate base. Under this arrangement, WPL projects that customers will avoid approximately \$280 million in nominal costs (\$127 million on a PVRR basis) that would

otherwise be incurred if WPL owned and operated the Solar Projects under a traditional utility ownership structure.

The record in this proceeding leads to one conclusion: the Commission should approve the Application. The robust planning analysis supporting the Blueprint demonstrates that the Solar Projects are needed to meet WPL's future energy and capacity needs and are in the public interest. Commission staff's analysis of the Application corroborates this conclusion. No party to the case contested the findings of WPL's resource planning analysis, objected to WPL's proposal to use tax equity financing to fund the Solar Projects, or opposed the Application.

In addition to these economic benefits, the record also demonstrates that the Solar Projects will be a boon for the environment and the communities in which they will be located. By replacing coal-fired generation with new renewable resources, WPL will substantially reduce the impact of its generating fleet on the state's air and water resources. The Solar Projects have also been sited and designed in a manner that avoids impacts to sensitive environmental resources and the surrounding community. Where complete avoidance is not possible, WPL has agreed to implement measures that will mitigate those impacts to the greatest extent reasonably feasible. Local communities will benefit from the increase in economic activity during construction, from the annual shared revenue payments made to local government during operation, and from the clean, cost-effective power the projects will generate over their 30-year useful life.

For these reasons, and as discussed below, WPL respectfully requests that the Commission approve the Application and issue a Certificate of Authority (CA) for the Solar Projects.

## **FACTUAL BACKGROUND**

### **A. Project Overview**

The six Solar Projects included in the Application are the North Rock, Grant County, Crawfish River, Onion River, Richland County, and Wood County projects, all located in

Wisconsin.<sup>3</sup> (Ex.-WPL-Application-r: Application-5 to 12 & Appendix F; Direct-WPL-Lipari-r-4) The assets for each Solar Project are currently held in single-purpose, limited liability companies owned by independent developers (Developer ProjectCos). (Direct-WPL-Lipari-r-9) The developers have secured more than enough land to construct each project. (*Id.* at 8) Although many of these land contracts are long-term leases or easements, the developers have also secured purchase options to acquire some or all of the land for the Crawfish River, Onion River, Richland County, and Wood County projects. (Ex.-WPL-Application-r: Application-6)

Each project will consist of photovoltaic solar panels on a single-axis tracking system, which allows the panels to track the angle of the sun as it rises and sets. (*Id.* at 7) The projects will also involve the construction of additional equipment, including collector systems, inverters, step-up transformers, access roads, substations, and related interconnection facilities, such as generator tie-lines. (*Id.*; Direct-WPL-Lipari-r-4) WPL intends to use existing facilities to manage storage needs for each Solar Project, although some of the projects may include an operations and maintenance (O&M) building (likely consisting of modular, metal shipping containers) to manage additional storage needs. (*Id.*) The total estimated construction cost for the Solar Projects is approximately \$862 million, or \$1,277/kilowatt (kW), which excludes transmission costs, Allowance for Funds Used During Construction (AFUDC), and land purchase costs. (Ex.-WPL-Application-r: Application-8, 59-60; Direct-WPL-Lipari-r-4) Additional details regarding each project are provided in Table 1. (*See* Ex.-WPL-Application-r: Application-8 to 13)

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<sup>3</sup> Three of those projects—the Grant County, Onion River, and Wood County projects—are larger than 100 MW in size, and the developers of those projects have applied for certificates of public convenience and necessity (CPCNs) from the Commission. *See* Docket Nos. 9696-CE-100 (Grant County), 9805-CE-100 (Onion River), 9803-CE-100 and 9803-CE-101 (Wood County). WPL also intends to rename the Richland County project as the Bear Creek project.

**Table 1: Solar Project Details**

Project	Capacity (MWac)	Location	Approx. Acreage <sup>4</sup>	Developer	Expected Commercial Operation Date (COD)	Estimated Cost <sup>5</sup>	
						(\$/kW)	Total (\$M)
North Rock	50	Town of Fulton, Rock County	500	National Grid Renewables (formerly Geronimo Energy)	2023	\$1,245	\$62
Grant County	200	Town of Potosi, Grant County	1,900	NextEra Energy Resources, LLC	2023	\$1,245	\$249
Crawfish River	75	Town of Jefferson, Jefferson County	500	Ranger Power LLC	2022	\$1,295	\$97
Onion River	150	Town of Holland, Sheboygan County	1,000	Ranger Power LLC	2022	\$1,295	\$194
Richland	50	Town of Buena Vista, Richland County	600	Savion, LLC	2022	\$1,295	\$65
Wood County	150	Town of Saratoga, Wood County	1,300	Savion, LLC	2022	\$1,295	\$194
<b>TOTAL</b>	<b>675</b>					<i>Average: \$1,277</i>	<b>\$862</b>

**B. Project Selection**

As part of its planning analysis, WPL considered a variety of resource alternatives to meet future needs, including natural gas combined cycle units, utility scale solar and wind resources, and distributed solar and storage, among others. The results of this process indicated that advancing the retirement of WPL’s existing coal-fired generation and replacing that capacity with 1,025 MW of utility-scale solar generation by 2023 will avoid approximately \$2 billion to \$6.5 billion in nominal customer costs over the next 35 years. Accordingly, WPL evaluated several potential utility-scale solar projects in Wisconsin, ultimately selecting the six projects described

<sup>4</sup> The acreage provided corresponds to the approximate amount of land expected to be leased or acquired for each project based on preliminary site design. Generally speaking, the acreage impacted by project facilities will be less than the total acreage that is leased or acquired. Final acreage required may vary based on final site design. (Ex.-WPL-Application-r: Application-8)

<sup>5</sup> Values may not sum due to rounding. The cost estimate excludes AFUDC, which is estimated at approximately \$68 million (for all projects), and land purchase costs, which are currently estimated at \$25 million. (Ex.-WPL-Application-r: Application-8, 59-60) The cost estimate also does not account for the capital contribution from the tax equity investor, which is expected to be 35 to 45 percent of total construction costs. (*Id.* at 55)

above for inclusion in this Application. (*See generally* Direct-WPL-Cook-cr-16 to 18; Direct-WPL-Lipari-r-5 to 8; Ex.-WPL-Augustine-1cr-48 to 50, 68–77)

WPL selected the Solar Projects because they are cost-competitive with others in the market, will be located at favorable sites for generation resources in Wisconsin, and are being developed by companies with significant experience developing large-scale solar projects in Wisconsin and elsewhere. WPL’s developer partners have also secured more than enough land to construct each project, which is indicative of local landowner support and important for optimizing site layout and design. The projects have advanced positions in the MISO interconnection queue, meaning they can be constructed on a schedule that will enable them to qualify for the 30 percent federal investment tax credit (ITC). The projects are also located near existing transmission infrastructure with sufficient capacity to support their interconnection to the high-voltage transmission grid. Finally, the projects are being sited in areas where they can avoid impacts to sensitive environmental and community features or, where such avoidance is not possible, to minimize such impacts to the greatest extent reasonably feasible. (*See generally* Ex.-WPL-Application-r: Application 13 to 14; Direct-WPL-Lipari-r-6 to 7; Direct-WPL-Skalitzky-r)

### **C. Useful Life, Capacity Factor, and Accreditation**

WPL assumes that the Solar Projects will have a 30-year depreciable life. The blended average net capacity factor across all Solar Projects is expected to begin at 24 percent and steadily decline over time, due to the panels’ exposure to ultraviolet light and weather. MISO will initially accredit the capacity for these projects at 50 percent of their (alternating current) nameplate capacity. Once more than 30 days of historical summer peak data is available, MISO will accredit capacity for each project based on actual energy output during the hours ending 15, 16, and 17 EST in June, July, and August. (*See generally* Ex.-WPL-Application-r: Application-12 to 13, 17; Direct-WPL-Lipari-r-4 to 5; Direct-WPL-Gresens-cr-26)

#### **D. Project Construction and Operation**

As noted, the assets for each Solar Project are currently held in the Developer ProjectCos. WPL has executed purchase and sale agreements (PSAs) with each developer to acquire 100 percent of the membership interests in each Developer ProjectCo. WPL will pay the developers pursuant to those PSAs after each project achieves various milestones. The PSAs are subject to standard closing conditions, including a requirement that permits necessary for project development have been issued (including this CA and the CPCNs for projects larger than 100 MW). Upon closing of the PSAs, WPL will acquire and dissolve the Developer ProjectCos, take direct ownership of all assets and liabilities of the Developer ProjectCos, and construct each project pursuant to Engineering, Procurement, and Construction (EPC) agreements with third parties. WPL has executed EPC agreements with the developers (or their affiliates) for construction of the Grant County, Onion River, and Crawfish River projects, and with another, independent EPC contractor for construction of the Wood County, North Rock, and Richland County projects.<sup>6</sup> (*See generally* Ex.-WPL-Application-r: Application-14 to 16; Direct-WPL-Lipari-r-8 to 10)

After construction commences, WPL will negotiate and execute term sheets with one or more tax equity investors, which will provide capital to finance 35 to 45 percent of the Solar Projects' construction costs. (*See generally* Direct-WPL-Gresens-cr) WPL estimates that this tax equity financing arrangement will save customers approximately \$280 million in nominal costs (127 million on a 30-year, net PVRR basis), relative to a situation in which WPL were to own and operate the projects through traditional utility ownership. (Direct-WPL-Ashenfelter-c-8 to 9) The tax equity investor is expected to fund approximately 20 percent of its obligation at or around

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<sup>6</sup> Additional details regarding the construction of the Crawfish River, North Rock, and Richland projects (Sub-100 MW Projects) is available in Ex.-WPL-Application-r: Appendices C, D, and E. The CPCN dockets for the remaining projects larger than 100 MW contain additional details regarding the construction practices and environmental/community impacts for those projects. (*See supra*, FN.3)

mechanical completion, and the remaining 80 percent at or around COD. (Direct-WPL-Gresens-cr-13) In exchange, the tax equity investor will receive most of the project’s tax incentives and a portion of its cash distributions. (Ex.-WPL-Gresens-1c) Once the investor obtains its target yield (currently projected at seven to eight years after COD), WPL would have the option to buy out the investor’s ownership stake at fair market value, at which point it would own the Solar Projects through traditional utility ownership. (Direct-WPL-Gresens-cr-13 to 14)

## ARGUMENT

### **I. WPL’s uncontested planning analysis demonstrates that the Solar Projects are needed, in the public interest, and should be approved.**

#### **A. The Commission should evaluate the Application under the legal criteria set forth in Wis. Stat. § 196.49.**

The appropriate legal standard for the Commission to apply to the Application is set forth in Wis. Stat. § 196.49 (the CA statute), not Wis. Stat. § 196.491(3)(d) (the CPCN statute). The CA statute applies to a *public utility* project involving the “construction of any new plant, equipment, property or facility, or extension, improvement, or addition to its existing plant, equipment, property, apparatus or facilities,” provided the estimated gross cost of the project exceeds \$11.935 million.<sup>7</sup> By contrast, the CPCN statute applies to *any person* seeking to construct (among other things) “electric generating equipment and associated facilities designed for nominal operation at a capacity of 100 megawatts or more.”<sup>8</sup> In *Badger Hollow I*, two public utilities sought to acquire a wholesale merchant plant already subject to permitting under the CPCN statute. The Commission applied the legal criteria under the *CA statute* to the utility’s acquisition, reasoning that it had the

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<sup>7</sup> See Wis. Stat. §§ 196.49(3)(a)–(b), (5g)(ar)1m.c.; *Revised Estimated Gross Project Cost Thresholds for Construction Projects Requiring Commission Review and Approval*, Docket No. 05-GF-154 (Apr. 7, 2020) (PSC REF#: 387134). WPL’s operating revenues in 2020 exceeded \$250 million, so the \$11.935 million threshold applies to this case.

<sup>8</sup> See Wis. Stat. §§ 196.491(1)(e), (g), (3)(a).

opportunity to review environmental and other site-specific factors in the CPCN proceeding, while analyzing issues of need, alternatives, and ratepayer impacts in the utility CA proceeding.<sup>9</sup>

Although the Solar Projects are different from those in *Badger Hollow I*, the rationale of that case applies equally here. Three of the Solar Projects—Grant County, Onion River, and Wood County—are larger than 100 MW and subject to separate CPCN proceedings pending before the Commission.<sup>10</sup> The other three Solar Projects—North Rock, Richland, and Crawfish River (Sub 100-MW Projects)—are less than 100 MW in size, making them exempt from the CPCN statute. The estimated gross cost of all six Solar Projects exceeds the \$11.395 million cost threshold. (See Ex.-WPL-Application-r: Application-8) Given these facts and the precedent set forth in *Badger Hollow I*, the Commission should evaluate the Application under the CA statute.<sup>11</sup>

**B. The Commission should approve the Application because the Solar Projects will improve the efficiency and value of WPL’s service and enable WPL to cost-effectively, reliably, and sustainably meet future customer needs.**

Under the CA statute, the Commission may refuse to certify the Solar Projects if it appears that they will substantially impair the efficiency of WPL’s service, provide facilities unreasonably in excess of probable future requirements, or when placed into operation, add to the cost of service without proportionally increasing the value or available quantity of service.<sup>12</sup>

The uncontested record demonstrates that the Solar Projects will *improve* the efficiency and value of WPL’s service and *are* reasonably needed to meet future needs. The Solar Projects are an integral component of WPL’s Clean Energy Blueprint, which calls for the early retirement of WPL’s existing coal-fired generating units and the replacement of that capacity with 1,025 MW

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<sup>9</sup> See *In Re Joint Application of Wis. Pub. Serv. Co. and Madison Gas and Electric Co.*, Docket No. 05-BS-228, *Final Decision*, at 6-10 (April 18, 2019) (PSC REF: 364436) [hereinafter, “*Badger Hollow I*”].

<sup>10</sup> See *supra*, FN.3.

<sup>11</sup> Even if the Commission were to apply the need-related factors under the CPCN statute, the Application would clearly satisfy those statutory criteria. (See Ex.-WPL-Application-r: Application-44 to 46)

<sup>12</sup> See Wis. Stat. § 196.49(3)(b); Wis. Admin. Code §§ PSC 112.05(1), 112.07(1).

of new, utility-scale solar generation by 2023. The Solar Projects represent the first tranche of new solar generation that WPL seeks to place in-service to fill that need. WPL's undisputed analysis shows that the Blueprint will improve the efficiency and value of WPL's service by avoiding billions of dollars in nominal costs that would otherwise be incurred if it continued to operate its existing coal-fired units until the end of their depreciable lives, provide facilities that are reasonably necessary to meet the future energy and capacity needs of WPL's customers, and maintain or improve the sustainability, reliability, and flexibility of WPL's generation fleet.

**1. WPL's Clean Energy Blueprint will avoid billions of dollars in nominal costs to WPL's customers over the next 35 years and improve the sustainability of WPL's generation fleet, relative to the Status Quo.**

**a. Planning Process Overview**

The electric power sector is undergoing a period of significant change. Technological advancements, cost reductions, and tax incentives for renewable generation have made those resources more prevalent and cost competitive. At the same time, the widespread availability of low-cost renewable power, declining natural gas costs, and other factors have impacted prices paid to generators in the wholesale market. As a result, a significant amount of coal-fired generation has retired over the last decade. Customer and investor expectations have also shifted: customers are more interested in obtaining power from sustainable, renewable resources, and investors in mitigating exposure to the environmental and financial risks associated with coal generation. (*See generally* Ex.-WPL-Application-r: Application-4, 34; Direct-WPL-Cook-cr-7 to 9)

These changes have affected WPL's own generation fleet. Over the last five years, MISO has dispatched Edgewater 5 and the Columbia Generating Station less frequently than it did previously, resulting in less revenues to cover operating costs—which are not insignificant. (Direct-WPL-Cook-cr-9 to 10) Over the next ten years, WPL would need to invest hundreds of millions of dollars on capital and O&M projects to continue operating these units in a safe, reliable,

and effective manner. (*Id.*) And unlike natural gas-fired generation, those units are not agile enough to quickly ramp up or down in response to variable output from the increasing amount of renewable generation coming online. (*Id.* at 11; Ex.-WPL-Application-r: Application-34)

With this context in mind, WPL initiated the resource planning process that led to the Blueprint. Although WPL has always conducted resource planning with analytic rigor, this process differed from prior efforts in several key respects. First, traditional resource planning assumes that existing resources continue to operate consistent with current conditions, identifies a future need (e.g., load growth or regulatory requirements), and selects the least-cost resource addition (if any) to meet that need. In this case, the continued operation of WPL’s existing coal-fired generating units was not taken as a “given.” Instead, WPL evaluated resource portfolios with varying early retirement dates for its existing coal-fired units; the goal was to determine whether it would be more beneficial to continue operating these resources or transition to other alternatives. (Ex.-WPL-Application-r: Application-33 to 35; Direct-WPL-Cook-cr-15 to 16)

Second, WPL used a new planning model that allowed for more advanced modeling methods. Instead of using EGEAS to conduct resource planning, which WPL has historically done, WPL used the Aurora software in this planning process. Aurora has both long-term capacity expansion planning capabilities (like EGEAS) and production cost modeling capabilities (like PROMOD), as well as additional flexibility and functionality. Aurora not only allowed WPL to identify least-cost resource portfolio options, but also to develop long-term planning scenarios, simulate the market dispatch of resource portfolio options within those planning scenarios, and conduct stochastic risk analysis, among other things. (Ex.-WPL-Application-r: Application-30 to 31; Direct-WPL-Cook-cr-13; Direct-WPL-Augustine-cr-5 to 6)

Third, while WPL has always valued input and feedback, in this case, WPL actively engaged and regularly collaborated with stakeholders as part of the Blueprint planning process. From the beginning, WPL shared the results of its planning analysis with stakeholders, sought and received input regarding those results, and incorporated that input into its analysis. In total, WPL held five meetings with stakeholders *before* filing its Application to discuss key issues, concerns, and perspectives regarding the Blueprint planning analysis. (Ex.-WPL-Application-r: Application-31; Direct-WPL-Cook-cr-13; Direct-CUB-Singleton-2 to 3, 5)

#### **b. Description of Modeling and Analysis**

The Blueprint was the product of an iterative, multi-faceted resource planning process.<sup>13</sup> (Ex.-WPL-Application-r: Application-29 to 40; Direct-WPL-Cook-cr-12; Direct-WPL-Augustine-cr-4 to 5) First, WPL defined objectives and metrics against which it would evaluate potential options for its generation fleet. Although customer affordability was a primary objective, WPL considered other metrics to identify tradeoffs between portfolio options. (Direct-WPL-Cook-cr-13 to 14) Second, WPL developed five different planning scenarios that reflected distinct but plausible futures of the electric power sector over the next 20 years, which is an industry standard practice in long-term resource planning. The idea is that, since the future is inherently uncertain, resource portfolios that perform well across a range of plausible futures are more likely to deliver customer benefits. (Ex.-WPL-Application-r: Application-31 to 33; Direct-WPL-Cook-cr-14; Direct-WPL-Augustine-cr-8 to 10; Direct-PSC-Grant-cr-5)

After establishing these objectives and planning scenarios, WPL conducted multiple phases of modeling in Aurora to analyze different resource portfolio options for the future of its generation fleet. Each portfolio option assumed different retirement dates for WPL's existing coal

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<sup>13</sup> A detailed discussion of WPL's resource planning process and model inputs and results is available in Ex.-WPL-Augustine-1cr and Ex.-WPL-Augustine-2cr.

units and modeled different resource alternatives to replace the retiring capacity. (*See generally* Ex.-WPL-Application-r: Application-33 to 37; Direct-WPL-Cook-cr-15 to 19; Direct-WPL-Augustine-cr-11 to 14) WPL considered several alternatives in this analysis, including solar and wind generation, battery storage, natural gas combined cycle units, and power purchase agreements, among others. (Ex.-WPL-Application-r: Application-37; Direct-WPL-Cook-cr-16)

WPL also conducted a stochastic risk analysis to evaluate the impact of short-term market volatility on the performance of certain resource portfolio options. (*See generally* Ex.-WPL-Augustine-1cr: Section 7) The planning scenarios that WPL developed do not capture the impact that random, short-term “shocks” to the system can have on a portfolio (e.g., due to an extreme weather event). (*Id.*) The stochastic analysis did not modify the basic assumptions in each scenario, but rather, incorporated an additional layer of volatility to three major variables: daily natural gas prices, hourly MISO power prices, and hourly solar generation output. The analysis consisted of over 10,000 model runs across the five planning scenarios to “stress test” certain portfolio options in the face of such volatility. (Direct-WPL-Cook-cr-18 to 19; Direct-WPL-Augustine-cr-10 to 11)

Several key findings emerged from these modeling exercises. First, in the initial modeling phase, Aurora’s portfolio optimization tool consistently identified solar generation as the least-cost replacement resource for any capacity need. Second, subsequent modeling showed that retiring WPL’s coal units early produced significant long-term customer cost savings and emission reductions. Moreover, replacement portfolios dominated by utility-scale solar generation generated some of the largest cost savings, relative to the Status Quo. Both findings held up across all planning scenarios—even those with high levels of energy conservation, demand reductions, or changes in load. Third, the stochastic risk analysis largely affirmed these conclusions: portfolios with early coal retirement, significant solar capacity additions by 2023, and distributed energy

resources had the lowest expected costs and offered the lowest risk outcomes. (*See generally* Direct-WPL-Cook-cr-19; Direct-WPL-Augustine-cr-14 to 16)

### **c. The Clean Energy Blueprint and the Solar Projects**

Based on these findings, WPL developed and modeled the Blueprint—its preferred resource plan for serving customers—based on the best performing portfolios from prior modeling phases and feedback from stakeholders. WPL also incorporated updated assumptions regarding costs for its coal-fired units, MISO planning reserve margin (PRM) requirements, revised expectations regarding solar capacity accreditation, tax equity financing, and operational and cost characteristics associated with the Solar Projects.<sup>14</sup> (Ex.-WPL-Application-r: Application-38 to 39; Direct-WPL-Augustine-cr-17 to 18; Direct-WPL-Cook-cr-20) As modeled, the Blueprint calls for the retirement of Edgewater 5 by the end of 2022 and both Columbia units by 2027; the addition of 1,025 MW of new solar capacity by the end of 2023; 100 MW of new wind by the end of 2022; and approximately 170 MW of combined distributed solar and storage capacity by 2032.<sup>15</sup> (*Id.*)

The modeling analysis of the Blueprint indicates that it is projected to avoid approximately \$2 billion to \$6.5 billion in nominal costs over a 35-year period, relative to the Status Quo, or approximately \$200 million to \$1.2 billion on a net PVRR basis. (Direct-WPL-Augustine-cr-19) The Blueprint will also maintain resource flexibility and system reliability, relative to the Status Quo. (Direct-WPL-Cook-cr-20 to 22) Finally, the Blueprint will improve the sustainability of WPL’s generation fleet: on average across all planning scenarios, the Blueprint reduces carbon emissions and water withdrawals from WPL’s generation fleet by 51 percent and 99 percent,

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<sup>14</sup> A detailed discussion of WPL’s modeling of the Blueprint is available in Ex.-WPL-Augustine-2cr.

<sup>15</sup> After WPL filed its Application, it, WPSC, and MGE announced their intent to retire Columbia Unit 1 in 2023 and Columbia Unit 2 in 2024. (*See supra* FN.2) WPL did not model a portfolio in Aurora with these retirement dates for Columbia. But based on the modeling it *has* performed, these earlier retirement dates would not materially impact the key conclusions from the Blueprint analysis or the overall need for the Solar Projects. If anything, earlier retirement of the Columbia units reinforces the need for the Solar Projects to replace that retired capacity sooner in time. (*See* Rebuttal-WPL-Cook-cr-4 to 6; Rebuttal-WPL-Augustine-r-2 to 4) This conclusion is undisputed in the record.

respectively, by 2030, relative to 2005 levels. (*Id.*) The modeling further shows that, on average across all planning scenarios, the Blueprint will avoid thousands of tons of criteria air pollutant emissions from WPL's generation fleet over the next 20 years. (*Id.*)

**2. WPL's Clean Energy Blueprint will maintain the reliability of its electric service to customers.**

In addition to delivering these economic benefits, replacing WPL's existing coal units with new solar resources will maintain the reliability of WPL's service. Both MISO and the Commission have established a PRM requirement with which load-serving entities like WPL must comply by maintaining a specific amount of generation capacity in excess of expected system demand. (Ex.-WPL-Application-r: Application-42; Rebuttal-WPL-Cook-cr-2 to 3) MISO's PRM requirement is more stringent than the Commission's PRM requirement. (*Id.*; Rebuttal-WPL-Augustine-r-2) The Blueprint was designed to meet the MISO PRM requirement, and thus, also the state-level PRM, even with conservative assumptions regarding solar capacity accreditation rates. (Ex.-WPL-Application-r: Application-42)

WPL also evaluated whether it would have sufficient capacity to serve load in extreme weather events, when variable resources like solar and wind may be less available. Specifically, WPL examined its ability to meet winter peak demand, conservatively assuming that its wind resources could not provide power at more than 10 percent of installed capacity and that solar resources could not provide *any* power. Even under these extreme conditions, WPL would still have a winter capability equal to 118 percent of expected load. (*See, e.g.*, Ex.-WPL-Application-r: Application-42 to 43; Direct-PSC-Grant-cr-7; Rebuttal-WPL-Cook-cr-2 to 3)

**3. The Commission should approve the Solar Projects because they are a critical first step toward achieving the economic, environmental, and reliability benefits of the Clean Energy Blueprint.**

The Solar Projects are an integral component of the overall Blueprint plan. These projects reflect the first tranche of new, utility-scale solar generation that WPL intends to install by 2023 to meet its customers' energy and capacity needs, pursuant to the Blueprint. (Direct-WPL-Cook-cr-20 to 24; Direct-WPL-Augustine-cr-19 to 20) They reflect the first step in realizing billions of dollars in avoided costs for customers. Importantly, no party to this proceeding disputed the findings of WPL's resource planning analysis or otherwise opposed the Application. Commission staff verified the outputs of certain Aurora modeling runs and identified no material deficiencies in the objectives of, or assumptions underlying, WPL's analysis. (Direct-PSC-Grant-cr-12 to 13; Ex.-PSC-FEA-r-14) In fact, when Commission staff requested that WPL modify certain assumptions and re-run the modeling for the Blueprint, customer benefits *increased* in four of five scenarios by \$49 million to \$426 million. (*Id.* at 10 to 11) The Citizens Utility Board (CUB), the only other party to offer testimony, stated that it was "generally satisfied with the analysis performed by WP&L" and that WPL's planning process "represents a baseline for how resource planning should be performed by all utilities in the future." (Direct-CUB-Singetary-5 to 6)

Based on this record, it is undisputed that the Solar Projects are needed, in the public interest, and will cost-effectively and reliably meet the future needs of WPL's customers. The Commission should approve the Application.

**C. The Solar Projects satisfy the requirements of the Energy Priorities Law.**

The Energy Priorities Law prioritizes the following resources, in the order listed, for meeting the states' energy demands, to the extent cost-effective and technically feasible: energy conservation and efficiency; noncombustible renewable energy; combustible renewable energy; advanced nuclear energy; natural gas; oil or coal with a sulfur content of less than one percent; and

all other carbon-based fuels.<sup>16</sup> Approval of the Solar Projects clearly satisfies the Energy Priorities Law. As noncombustible renewable energy resources, these projects are prioritized above all other electric generating resources for meeting state energy demands. Moreover, WPL's Aurora modeling demonstrates that these projects are the least-cost resource for meeting those demands. (*See, e.g.*, Ex.-WPL-Augustine-1cr-54) No other technically feasible noncombustible renewable resource is as cost-effective as solar generation at meeting customer needs.

Energy efficiency and conservation are the only higher priority resources in the Energy Priorities Law, which WPL also considered in the development of the Blueprint. The planning scenarios in which WPL modeled the Blueprint assumed different levels of load growth over time, due in part to energy efficiency, energy conservation, and distributed generation. Two of those scenarios (Market and Economic Stagnation and Advanced Customer-side Technology) assume an annual load growth rate of zero and -0.7 percent, respectively. WPL's modeling demonstrates that, even under those scenarios, resource portfolios with solar generation still generate substantial avoided costs for customers relative to the Status Quo. (Direct-WPL-Cook-cr-17 to 18; Ex.-WPL-Augustine-1cr-27 to 29, 65) Moreover, since WPL has spent 1.2 percent of its annual operating revenues to fund statewide energy efficiency and renewable resource programs for calendar year 2019, the Commission cannot "order or otherwise impose energy conservation or efficiency requirements" on WPL as part of this proceeding.<sup>17</sup>

For these reasons, the Commission should find that the Solar Projects comply with the Energy Priorities Law.

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<sup>16</sup> Wis. Stat. §§ 1.12, 196.025(1).

<sup>17</sup> *See* Wis. Stat. § 196.025(1)(b)1.

## **II. WPL's proposal to finance a portion of the cost of the Solar Projects using tax equity financing is reasonable and in the public interest.**

WPL intends to own and operate the Solar Projects with a tax equity investor. Although a traditional utility ownership structure would be more straightforward, WPL is focused on managing long-term customer costs. (Direct-WPL-Gresens-cr-10) Owning and operating the Solar Projects through a tax equity partnership for a period of less than ten years will bring significant value to WPL's customers and is clearly in the public interest. Therefore, WPL requests that the Commission authorize it to own and operate the Solar Projects through the tax equity financing arrangement described in its Application, as described in further detail below.

The unique financing arrangement WPL has proposed is a product of its current federal income tax position and IRS normalization requirements. (*See generally* Direct-WPL-Gresens-cr-9 to 14; Ex.-WPL-Application-r: Application-46 to 52) WPL expects that the Solar Projects will qualify for the full value of the federal ITC and accelerated depreciation. (Direct-WPL-Lipari-r-5; Direct-WPL-Gresens-cr-4 to 9) Under current tax law, if WPL were to own the Solar Projects through traditional means, it would not be able to immediately receive the cash benefit of these tax incentives, which would reduce their value to customers. (Direct-WPL-Gresens-cr-10 to 11) By contrast, a tax equity investor can take immediate advantage of these tax incentives, and in exchange, provide a significant portion of the capital needed to construct the projects, reducing their overall cost. (Ex.-WPL-Application-r: Application-52) WPL estimates that owning and operating the Solar Projects through tax equity financing will avoid approximately \$280 million in nominal costs to customers (or approximately \$127 million on a net PVRB basis), relative to traditional utility ownership. (*See generally* Direct-WPL-Ashenfelter-c)

At this time, WPL has not selected a tax equity partner for the Solar Projects. Investors typically do not make such a commitment until six to twelve months before a project's commercial

operation date (COD) due to the need to conduct due diligence, the complexities associated with forming the partnership, and the cost of making a financing commitment. WPL has, however, identified the basic commercial structure and key terms of the agreements associated with any such partnership, which are outlined below. (*See generally* Ex.-WPL-Application-r: Application-53 to 58 & Appendix B; Direct-WPL-Gresens-cr-13 to 14; Ex.-WPL-Gresens-1c)

- Upon closing of the PSAs, WPL will dissolve the Developer ProjectCos, take direct ownership of all their assets and liabilities, and commence construction activities. (Direct-WPL-Gresens-cr-16 to 17)
- After executing a term sheet with a tax equity partner, WPL will establish a new set of project companies to hold the Solar Project assets (ProjectCos) and a separate set of holding companies (Project HoldCos) to hold one or more ProjectCos. The Project HoldCos will be the entity that becomes the tax equity partnership. (*Id.* at 13)
- Once each Solar Project is mechanically complete, WPL will sell the assets of each to the respective ProjectCos for their fair market value and deed any purchased land to the ProjectCos. Pursuant to an Equity Capital Contribution Agreement (ECCA), the tax equity investor is expected to fund 20 percent of its obligation at or around mechanical completion and the remaining 80 percent at or around COD. (*Id.* at 13–14, 17–22)
- The tax equity partnership (i.e., the Project HoldCo) will be governed by a Limited Liability Company (LLC) agreement. In exchange for its capital contribution, the LLC Agreement will assign the tax equity investor 100 percent of the Class A membership interests in the Project HoldCo, while WPL will (indirectly) own 100 percent of the Class B membership interests. The LLC agreement will further allocate each Solar Project’s cash distributions, tax benefits, and other attributes between the investor and WPL. The investor will receive the lion’s share of the project’s tax benefits as “payback” for its capital investment. (*Id.* at 20–21)
- The LLC agreement will also establish the investor’s target yield (i.e., return on investment). WPL anticipates that the investor will achieve the target yield seven to eight years after COD. WPL will then have the option (subject to the Commission’s approval, if required) to buy out the investor’s stake in the partnership. At that point, WPL would own the Solar Projects under a traditional utility ownership model for the remainder of the projects’ useful lives. (*Id.* at 14)

While the Solar Projects are held within the tax equity partnership, WPL will operate them like its other assets. WPL will enter into an O&M agreement and asset management agreement (AMA) with the ProjectCo and Project HoldCos, respectively, to operate and maintain and provide

certain administrative services (e.g., legal, accounting, supply chain, etc.) to the projects. (Direct-WPL-Gresens-cr-22 to 23) WPL will take title to all zonal resource credits (ZRCs) and renewable energy credits (RECs) generated from the projects, either through the LLC agreement or a separate ZRC/REC agreement. (*Id.* at 26–28) The Solar Projects will sell their output into the MISO wholesale market, much like a traditionally owned utility resource. (*Id.* at 24) The difference here is that WPL would enter into a Contract for Differences (CfD) with the ProjectCos, which is similar to a PPA. (*Id.* at 24–25) Under the CfD, WPL would pay to or receive from the ProjectCo the difference between a fixed price and a market price (e.g., MISO Indiana hub day-ahead prices) for the expected energy production from the Solar Projects. This contractual structure is intended to offset volatility in the regional electric market and provide greater certainty as to when the investor will achieve its target yield. (*Id.*; Ex.-WPL-Application-r: Application-57)

Although some tax equity agreements are *pro forma* in nature and substantially complete, (*see* Ex.-WPL-Gresens-2, 3, 4, 5), others have yet to be finalized because they are subject to further negotiation with the tax equity investor(s), who typically do not make financing commitments until six to 12 months prior to COD. (Rebuttal-WPL-Gresens-2) For the latter, WPL has outlined a range of key commercial terms for Commission approval and is committed to executing final agreements that are consistent with those terms. (Ex.-WPL-Gresens-1c: Attachment A–F)

Given the significant savings the tax equity financing structure is expected to deliver to customers, relative to traditional utility ownership, these agreements are reasonable and in the public interest.<sup>18</sup> Moreover, WPL will transfer the assets for each Solar Project to the tax equity partnership at fair market value, and partnership-related entities will compensate WPL at fair market value for any operational or administrative services that WPL provides.<sup>19</sup> (Ex.-WPL-

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<sup>18</sup> *See* Wis. Stat. § 196.52.

<sup>19</sup> *See* Wis. Stat. §§ 196.795(s), (r).

Application-r: Application-57; Direct-WPL-Gresens-cr-17 to 18; Ex.-PSC-Staff Data Request-Response-r: Responses FIN 2.105, FIN 2.107, FIN 3.25) Given the significant market for tax equity investment in the United States, (*see* Ex.-WPL-Application-r: Application-47), approval of this financing structure will not have any discriminatory or anti-competitive effects.<sup>20</sup>

It is important that WPL receive timely review and (if the Commission deems appropriate) approval of the key commercial terms it has presented in this proceeding related to the tax equity partnership. (Rebuttal-WPL-Gresens-2 to 3) This will provide WPL and prospective tax equity partners with assurances that the Commission supports the tax equity financing mechanism WPL has proposed and will not alter the final agreements if they fall within the range of key terms provided. (*Id.*) For these reasons, WPL requests that the Commission find that it is reasonable and in the public interest for WPL to acquire, finance, own, and operate the Solar Projects through the tax equity partnership described in its Application, with the understanding and on the condition that the material commercial terms governing the partnership fall within the range of terms WPL has presented herein. WPL will re-submit the final version of these agreements to the Commission for final approval, so that the Commission can verify the final terms are consistent with what was presented here. (*See* Ex.-WPL-Application-r: Application-21 to 22)

### **III. WPL's acquisition of the Solar Projects complies with the Brownfields law.**

Before issuing a CA for the construction of an electric generating facility, the Commission must determine that "brownfields" are used to the extent practicable.<sup>21</sup> Because this statute speaks only to the "construction" of a facility, the Commission has previously expressed doubt about whether the Brownfields law applies to the purchase of electric generating equipment.<sup>22</sup> In this

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<sup>20</sup> *Id.*

<sup>21</sup> Wis. Stat. § 196.49(4).

<sup>22</sup> *In Re Joint Application of Madison Gas and Electric Co. and Wis. Electric Power Co.*, Docket No. 05-BS-234, *Final Decision*, at 20 (Mar. 6, 2020) (PSC REF#: 385279).

case, WPL is seeking authorization to acquire three Solar Projects for which a developer has submitted a CPCN application (Grant County, Wood County, Onion River), rendering the Brownfields law potentially inapplicable to those projects. On the other hand, WPL is seeking authorization to construct the other three Solar Projects (Crawfish River, Richland County, and North Rock), meaning that the Brownfields law would likely apply to those projects.

In any event, utility-scale solar generators, such as those proposed as part of this Application, inherently require a large amount of undeveloped land and are therefore often sited in rural areas across several hundred acres of real estate. WPL is not aware of any brownfield in the state of Wisconsin that could accommodate the construction of these Solar Projects. (Ex.-WPL-Application-r: Application-61 to 62; Ex.-PSC-FEA-r-15 to 16) Since a brownfield site is not practicable for the Solar Projects, WPL requests that the Commission find that the Application complies with Wis. Stat. § 196.49(4), to the extent it applies.

**IV. Commission staff complied with the Wisconsin Environmental Policy Act (WEPA) in concluding that the Solar Projects are unlikely to significantly impact the environment.**

WEPA requires state agencies to prepare “a detailed statement, substantially following the guidelines issued [in the National Environmental Policy Act]” for every “major action” that could “significantly affect the quality of the human environment.”<sup>23</sup> Under the Commission’s implementing regulations, the construction of a solar-powered electric generation facility is considered a “Type III” action for which an Environmental Assessment (EA) or Environmental Impact Statement (EIS) is not normally required because the action does not “normally have the potential to significantly affect the quality of the human environment.”<sup>24</sup> However, evaluation of a specific Type III proposal may indicate that preparation of an EA or EIS is warranted.<sup>25</sup>

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<sup>23</sup> Wis. Stat. § 1.11.

<sup>24</sup> See Wis. Admin. Code § PSC 4.10(3), Table 3(cr).

<sup>25</sup> Wis. Admin. Code § PSC 4.10.

In this case, three of the six Solar Projects (Grant County, Onion River, and Wood County) WPL is seeking to acquire have nominal operating capacities greater than 100 MW and are subject to permitting in separate CPCN proceedings before the Commission. (*See supra*, FN.3) The Commission is considering the environmental and community impacts of each of those projects in those CPCN proceedings. To that end, Commission staff has prepared an EA for each of those projects in their respective CPCN dockets, concluding that each project is unlikely to have a significant impact on the human environment. (*See Ex.-PSC-FEA-r-9*, 170–71)

In short, the Commission has already examined the environmental and community impacts related to *construction and operation* of the Grant County, Onion River, and Wood County solar projects in their respective CPCN dockets. Authorizing WPL *to acquire* these projects will not create impacts beyond those described in the EAs, especially because WPL has agreed to be bound by any conditions the Commission imposes on those projects, if and when it approves them. (Ex.-WPL-Application-r: Application-25 to 26) For these reasons, and consistent with past precedent,<sup>26</sup> the Commission should find that WPL’s proposed acquisition of the Grant County, Onion River, and Wood County projects is a Type III action under Wis. Admin. Code § PSC 4.10(2) and is unlikely to have a significant impact on the human environment and that WPL’s proposed acquisition of these projects complies with Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.

The other three Solar Projects (North Rock, Crawfish River, and Richland County) (Sub-100 MW Projects) will have nominal operating capacities of less than 100 MW and are not subject to CPCN permitting. Therefore, WPL has provided the Commission with environmental screening information regarding the construction, operation, and decommissioning of these projects in this docket. (*See generally* Ex.-WPL-Application-r: Appendices C through E; Direct-WPL-Skalitzky-

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<sup>26</sup> *See, e.g., Badger Hollow I*, at 4, 19-20.

r) Although solar electric generating facilities are classified as “Type III” actions under the Commission’s regulations,<sup>27</sup> Commission staff prepared an EA in this docket, describing the environmental and community impacts of these projects and concluding that they are unlikely to have a significant impact on the human environment. (*See generally* Ex.-PSC-FEA-r)

Commission staff’s determination was supported by substantial evidence in the record. When evaluating opportunities to site and/or acquire renewable generation projects, WPL carefully considers the environmental and community impacts of the project in question. (Direct-WPL-Skalkitzky-r-4) The Sub-100 MW Projects have been designed to avoid such impacts entirely, or where complete avoidance is not feasible, to mitigate impacts to the greatest extent reasonably feasible. (*Id.*) The Sub-100 MW Projects are being sited primarily on agricultural land that has already been disturbed; collectively, they are expected to impact less 0.20 acres of grasslands, less than five acres of forested lands, and approximately one acre of wetlands. (Ex.-PSC-FEA-r-172) Although construction and operation of the projects will take agricultural land out of production, the projects are in the long-run expected to benefit agricultural lands. Disturbed areas will be revegetated with native plant species, including some pollinator friendly species, which will promote soil microbial health, nutrient availability, overall soil water holding capacity, overall soil tilth, and groundwater quality; limit soil erosion due to water and wind; and decrease potential sediment and nutrient loading in nearby waterways. (Direct-WPL-Skalkitzky-r-13 to 14, 18 to 19) And as mentioned, since the Solar Projects are effectively replacing WPL’s retiring coal units, they play an integral role in reducing water withdrawals and emissions of carbon dioxide and other criteria pollutants from WPL’s generation fleet. (*Id.* at 4 to 5; Direct-WPL-Cook-cr-22)

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<sup>27</sup> *See supra*, FN.25.

The Sub-100 MW Projects are not expected to impact any historic properties or any threatened or endangered species. (Direct-WPL-Skalitzky-r-14–16, 20–21) WPL has agreed to implement all required and recommended mitigation measures in the Environmental Reviews that the Wisconsin Department of Natural Resources (WDNR) prepared for the projects, (*Id.* at 15), and to consult with the Wisconsin Historical Society, as necessary, to avoid impacting any nearby historic, archaeological, or cultural resources. (*Id.* at 20–21) With respect to wetlands and waterways, the WDNR testified that each project is permissible under the legal requirements of Wis. Stat. ch. 30. (*See generally* Direct-WDNR-Radermacher-r; Surrebuttal-WDNR-Radermacher). For these reasons, the Commission should find that WPL’s proposed acquisition and construction of the Crawfish River, Richland County, and North Rock projects is a Type III actions under Wis. Admin. Code § PSC 4.10(2) and is unlikely to have a significant impact on the human environment, and that WPL’s proposed acquisition and construction of these projects complies with Wis. Admin. Code ch. PSC 4.

**V. If it approves the Solar Projects, the Commission should modify or reject certain order points proposed by CUB and Commission staff.**

**A. Construction or environmental-related order points should only apply to the Sub-100 MW Projects.**

Commission Staff proposed several order points related to the construction of the Solar Projects, many of which are intended to mitigate project impacts on the environment and surrounding landowners. (*See* Direct-PSC-Burtley-r-9 to 11, 19–21 (minor siting adjustments, vegetation management, ER reviews, line-of-sight communications, and pre-construction meetings); Direct-PSC-Chee-4 to 5, 7–8 (noise testing, stray voltage testing, electrical code compliance, and general order points); Direct-PSC-Craft-5, Direct-PSC-Schumacher-r-14 (tree-clearing and mowing). To the extent the Commission imposes the suggested order points, WPL requests that they only apply to the Sub-100 MW Projects. If and when the Commission issues a

CPCN for the larger Solar Projects, the Commission will impose specific conditions in the respective CPCN orders and WPL has agreed to be bound by those conditions. It is not necessary to impose potentially duplicative and/or conflicting conditions on the construction of the Solar Projects that are larger than 100 MW in size in both this proceeding and those projects' respective CPCN proceedings. (Rebuttal-WPL-Lipari-2; Rebuttal-WPL-Skalitzky-2)

**B. The Commission should not require WPL to obtain all project-related permits prior to commencing construction.**

Commission staff recommended that the Commission impose a condition “requiring that all necessary permits be obtained prior starting construction.” (Direct-PSC-Chee-8) Although this is a common order condition in construction dockets, a modification is warranted here. Whereas traditional generation projects can be constructed in relatively compact areas on one or two parcels of land, the Sub-100 MW Projects will be constructed across multiple parcels spanning several hundred acres. (See Ex.-WPL-Application-r: Application-8 to 12) Given the scope of construction activities, WPL may not need *all* permits (e.g., ministerial permits such as heavy/oversized load permits, driveway permits, or building permits) prior to commencing construction. (Rebuttal-WPL-Lipari-2 to 3) Therefore, WPL proposes that the Commission require it to have obtained whatever permits may be necessary for the specific construction activity in which it is engaged, but not for the entire project. Further, WPL should be permitted to start construction activities at one Sub-100 MW Project, even if it has not obtained permits for all Sub-100 MW Projects. (*Id.*)

**C. The Commission should consider issues related to setback distances, avian impacts, or photovoltaic heat island effect (PVHI) in a generic docket—not in this proceeding.**

Commission staff testified that the Commission could consider requiring WPL to conduct a third-party analysis of PHVI and/or post-construction avian impact studies at the Sub-100 MW Projects. (See Direct-PSC-Burtley-r-12, 15–18; Direct-PSC-Schumacher-r-14 to 15) However, it would not be appropriate for the Commission to impose any such requirements on the Sub-100

MW Projects. Commission staff did not provide any clarity regarding the nature, scope, or duration of these suggested studies. Moreover, these are issues that affect solar development across Wisconsin. If the Commission is inclined to address them further, it should do so through a generic docket, so that one developer or utility's ratepayers do not shoulder research costs that affect solar projects throughout the state. (*See* Rebuttal-WPL-Skalitzky-3)

Commission staff also testified that the Commission could consider imposing a standardized setback distance of 300 feet for the Richland County solar project. (Direct-PSC-Burtley-r-7 to 9) Again, if the Commission is interested in considering imposing standardized setback distances for solar projects, it should do so in a generic docket. There is no need to do so for this project because the issue has been dealt with through project design and local permitting. (*See* Direct-WPL-Skalitzky-r-25; Rebuttal-WPL-Lipari-3 to 4)

**D. The Commission should not impose a cost cap on the Solar Projects.**

CUB and Commission staff testified that the Commission should consider imposing a cost cap on the Solar Projects. (Rebuttal-CUB-Singleton-r-2 to 4; Surrebuttal-PSC-Probst-2) Staff initially proposed “capping the recoverability of costs” to approximately \$168 million, (Surrebuttal-PSC-Probst-2), which is the Solar Projects’ estimated 30-year net PVRR, assuming a tax equity investor makes a capital contribution equivalent to approximately 40 percent of the total estimated construction cost (\$862 million). (*See* Ex.-WPL-Ashenfelter-1c: Sched. 1, lines 1, 5; Rebuttal-WPL-Ashenfelter-2) After WPL noted several practical issues with this approach (which staff acknowledged), staff suggested a cost cap of \$575 million, which is the Solar Projects’ estimated fair market value, less a 40 percent tax equity contribution. (Probst Hearing Tr. 43:3–44:4) Although not entirely clear, it appears that staff intended for this figure to cap the costs WPL could recover in rate base for the Solar Projects. (*Id.* 46:6–16)

The Commission should reject CUB and staff's proposed cost cap. This recommendation is premised on the assumption that WPL is requesting authorization from the Commission to acquire the Solar Projects at up to 110 percent of the estimated acquisition cost. (Rebuttal-CUB-Singletary-r-2; Surrebuttal-PSC-Probst-1 to 2). But this is assumption is incorrect, because WPL has made no such request. (*See* Surrebuttal-WPL-Lipari-r-2) To the contrary, WPL has agreed to promptly *notify* the Commission if the cost of the Solar Projects, including *force majeure* costs, exceed the total estimated construction cost (\$862 million) by more than ten percent. (Ex.-WPL-Application-r: Application-59; Surrebuttal-WPL-Lipari-r-2) And since WPL intends to finance approximately 35 to 45 percent of those costs with tax equity financing, WPL is requesting authorization to recover in rate base \$585 million, plus AFUDC, subject to Commission review and audit in a future rate case. If WPL discovers that the cost of the Solar Projects to be included in rate base, including *force majeure* costs, may increase by more than 10 percent, it will promptly notify the Commission.<sup>28</sup> (*See generally* Ex.-WPL-Application-r: Application-59 to 60)

In other words, WPL *is not* requesting authorization to acquire the Solar Projects at up to 110 percent of their expected cost. Rather, WPL is agreeing *to notify* the Commission if construction costs exceed the current estimate (\$862 million) by more than 10 percent. And given the important role of tax equity financing, WPL has also agreed to notify the Commission if the amount it seeks to include in rate base, net of the investor's minimum 35 percent contribution, exceeds the current estimated rate base amount (\$585 million) by more than 10 percent.

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<sup>28</sup> WPL arrived at a rate base amount of \$585 million by assuming that it finances 65 percent of the construction cost for the Solar Projects (\$560 million) and the tax equity investor finances the other 35 percent (i.e., the minimum investor contribution under WPL's proposal). The requested rate base amount (\$585 million) reflects WPL's assumed 65 percent share of the construction costs (\$560 million) and all land purchase costs (\$25 million).

The Commission has imposed similar notification requirements in WPL’s major construction dockets going back more than a decade,<sup>29</sup> and there is no reason to deviate from that precedent here. Indeed, in the *West Riverside* proceeding, the Commission explicitly rejected an attempt to impose exactly the kind of cost cap that has been recommended here. The Commission noted that it “has not historically included a ‘hard cap’ on ratepayer recovery of construction costs in construction cases because a ‘hard cap’ may improperly presume the prudence of utility expenditures.”<sup>30</sup> Instead, the Commission has “traditionally required the utility to notify the Commission of construction cost overruns in construction dockets, and then, if necessary, the Commission has evaluated those overruns in a subsequent rate proceeding.”<sup>31</sup>

That is exactly what WPL has proposed to do here. The Commission should adhere to the precedent set forth in *West Riverside* and reject CUB and staff’s recommendation to impose a cost cap on the Solar Projects. If there are cost overruns or concerns that WPL did not deliver the ratepayer benefits consistent with the tax equity financing structure represented in this proceeding, the Commission can address and rule on those issues in a subsequent rate case. There is no need to predetermine in *this docket* the prudence of expenditures or costs that have yet to even occur.

**E. The Commission should not condition approval of the Application on WPL obtaining tax equity financing.**

CUB recommended that the Commission explicitly condition approval of the Application on WPL entering into a tax equity partnership, consistent with the terms presented in this

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<sup>29</sup> See *In Re Application of Wis. Power and Light Co.*, Docket No. 6680-CE-182, *Final Decision*, at 14 (Jan. 7, 2019) (PSC REF#: 356813) (Kossuth wind project); *In Re Wis. Power and Light Co.*, Docket No. 6680-CE-176, *Final Decision*, at 30 (May 6, 2016) (PSC REF#: 285783) [“*West Riverside CPCN*”] (West Riverside project); *In Re Wis. Power and Light Co.*, Docket No. 6680-CE-173, *Final Decision*, at 13 (Jul. 30, 2009) (Bent Tree wind project).

<sup>30</sup> *West Riverside CPCN*, at 25–26; see also *Waukesha Gas & Elec. Co. v. Railroad Comm’n of Wis.*, 194 N.W. 846, 854–55 (Wis. 1923) (“Both the Commission and the court in Wisconsin have adhered with reasonable fidelity to what is now termed the prudent investment theory, that is, that the utility is entitled to earn a reasonable return upon the amount which has been prudently invested in the enterprise . . . . In the absence of satisfactory proof to the contrary, it must be presumed that the investment was prudently made.”).

<sup>31</sup> *Id.*

proceeding. (Direct-CUB-Singletary-8) While WPL is confident that it will be able to secure tax equity financing on commercially reasonable, market-based terms, there are several practical issues that make CUB's order condition inappropriate. First, the obvious benefit of tax equity financing is that it reduces the cost of the Solar Projects to ratepayers. However, there may be changes in market conditions or federal tax laws that simplify possible financing mechanisms for the Solar Projects, while generating comparable or greater benefits. CUB's proposed order condition would prohibit WPL from pursuing these alternatives, should they arise. (*See Ex.-WPL-Application-r: Application-48; Rebuttal-WPL-Gresens-4*)

Second, and as mentioned, tax equity investors generally do not commit financing for a project until six to 12 months prior to COD. However, construction on the Solar Projects must begin well in advance of that financing commitment to ensure the projects are constructed on a schedule that enables them to qualify for the full value of the ITC. And of course, the projects' tax benefits are the primary incentive for the investor to participate in the first place. So practically speaking, conditioning CA approval on the execution of tax equity agreements is not feasible because WPL must begin construction activities well in advance of when an investor agrees to commit capital to those projects. (*See Rebuttal-WPL-Gresens-3 to 4*)

For these reasons, the Commission should not adopt CUB's proposed order condition. Again, if there are concerns WPL delivering the customer benefits associated with tax equity financing, as represented in this proceeding, those issues can be addressed in a future rate case.

### **CONCLUSION**

For the foregoing reasons, WPL respectfully requests that the Commission issue an order approving the Application.

Respectfully submitted this 8th day of March, 2021,

*/s/ Lissa R. Koop*

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