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BEFORE THE

PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Wisconsin Electric Power Company for Authority to Build
and Operate a 50 MW, Biomass-Fired, Cogeneration Facility in the
Village of Rothschild, Marathon County, Wisconsin

6630-CE-305

FINAL DECISION**Introduction**

On March 15, 2010, Wisconsin Electric Power Company (WEPCO) applied to the Commission for authority to construct, install, and place in utility service a 50 megawatt (MW) biomass-fueled cogeneration facility for the production of electricity at the Domtar Paper Company, LLC (Domtar), facility in the village of Rothschild, Wisconsin (Rothschild or the project). WEPCO seeks a Certificate of Authority under Wis. Stat. § 196.49 and Wis. Admin. Code ch. PSC 112 for the project.

The Commission issued a Notice of Proceeding in this docket on April 16, 2010. Public hearings are not required under Wis. Stat. § 196.49, but the Commission held technical and public hearings on November 30, 2010, in Rothschild, Wisconsin, and on December 2, 2010, in Madison, Wisconsin. Persons who appeared and testified are listed in the Commission's files. Public comments were collected at the hearings, as well as by electronic means and mail. All timely public comments have been entered into the record, some directly and others as exhibits. The parties that appeared before the Commission are listed in Appendix A of this Final Decision. Parties submitted initial briefs and reply briefs following the hearing. These include WEPCO, Domtar, LignoTech USA, Inc. (LignoTech), Packaging Corporation of America (PCA),

Thilmany LLC (Thilmany), Clean Wisconsin, Citizens Utility Board (CUB), D.C. Everest Area School District (D.C. Everest), and Saving Our Air Resource (SOAR). The Commission considered this matter at its April 28, 2011, and May 6, 2011, open meetings.

The Certificate of Authority is GRANTED, subject to conditions.

Findings of Fact

1. WEPCO is a public utility, as defined in Wis. Stat. § 196.01(5), engaged in rendering electric service in Wisconsin.
2. The project's estimated cost exceeds the minimum threshold of Wis. Admin. Code § PSC 112.05 for Commission review and approval.
3. WEPCO's project, as modified by this Final Decision, will not substantially impair WEPCO's efficiency of service or provide facilities unreasonably in excess of probable future requirements. In addition, when placed in operation, the project will increase the value or available quantity of WEPCO's service in proportion to its cost of service.
4. WEPCO needs to procure or acquire additional renewable energy in order to satisfy its future Renewable Portfolio Standard (RPS) requirements.
5. WEPCO has an obligation to supply steam to Domtar under the terms of the Steam Supply Agreement.
6. WEPCO's obligation to supply steam to Domtar could result in WEPCO incurring uneconomic dispatch costs which would be in addition to any uneconomic dispatch costs that may result from the intrinsic nature of a generating plant fueled by biomass.
7. It is reasonable for the Commission to retain jurisdiction over the allocation of fuel costs in the Steam Supply Agreement between the electric and steam outputs of the plant so that

the Commission has the authority to protect electric ratepayers from bearing uneconomic dispatch costs that result from WEPCO's obligation to supply steam to Domtar.

8. Energy conservation and efficiency is not a cost-effective alternative to WEPCO's project for purpose of complying with the RPS.

9. The additional cost of the proposed project compared to wind is justified because the project has several advantages over a wind generation alternative, including renewable portfolio diversification, less required transmission and related equipment, a higher capacity factor, provides baseload energy and is non-intermittent. The project also avoids current regulatory uncertainty for wind development in this state.

10. Construction of the project does not affect any historic or archeological properties.

11. Construction of the project does not affect threatened or endangered species.

12. The project is on a brownfield site.

Conclusion of Law

The Commission has jurisdiction under Wis. Stat. §§ 1.11, 1.12, 196.02, 196.025, 196.395, 196.40, and 196.49, and Wis. Admin. Code chs. PSC 4 and 112, to issue a Certificate and Order authorizing WEPCO to construct and place in operation a 50 MW biomass-fired cogeneration facility at the Domtar paper mill to produce electricity and steam, pursuant to WEPCO's application and other evidence in the record, subject to the conditions in this Final Decision.

Opinion

The Project

WEPCO proposes a nominal 50 MW steam/electric woody biomass-fueled cogeneration facility designed to generate electricity and to provide the full process steam requirements of the

Domtar paper mill. As a cogeneration facility, the plant would utilize heat created as a byproduct of electricity generation in order to provide process steam. Therefore, a cogeneration plant can attain a higher level of thermal efficiency than a stand-alone electric generating plant. The proposed facility includes: a circulating fluidized bed (CFB) boiler; an extraction steam turbine generator; cooling towers; auxiliary gas-fired boilers to supply process steam to the mill if the biomass boiler is not in service; a boiler water treatment system; fuel receiving, processing, storage, and conveying systems; generator step-up transformers; and associated control systems and other improvements. The CFB boiler would be fueled with woody biomass, with natural gas provided for start-up and flame stabilization purposes.

WEPCO estimates the total project cost at \$255,000,000, not including allowance for funds used during construction (AFUDC).

WEPCO considered several conventional and renewable resource planning alternatives. The conventional alternatives were 150 MW combustion turbine peaking units, 500 MW advanced coal baseload units, 545 MW combined-cycle intermediate load units, and short-term purchase peaking units of 50 MW. The renewable alternatives analyzed were 50 MW generic biomass energy units and 200 MW generic wind energy units. Because WEPCO intends to use the electric generation from Rothschild to comply with its RPS requirements, its review focused on the renewable energy alternatives, biomass, and wind. Commission staff also discussed the possibility of WEPCO purchasing renewable resource credits (RRC) from other electric providers.

Although its analysis shows that biomass is more expensive than wind, WEPCO believes it is prudent to have a diverse portfolio of renewable resources. Its studies indicate that early adopters of biomass will be at an advantage in securing fuel and power plant sites. A biomass

plant can also respond to changes in electric load, unlike wind, and can be operated as a baseload plant. WEPCO also believes that a biomass project would produce significantly more economic benefits to the state and community than wind. Transmission benefits may be realized by building in Wisconsin as well. For these reasons, WEPCO selected biomass as an alternative to wind for some of its RPS-required renewable energy.

In 2008, WEPCO entered into an agreement with Clean Wisconsin and Sierra Club to settle litigation pertaining to the Elm Road Generating Station. As part of the settlement, WEPCO agreed that, no later than July 1, 2010, it would apply to the Commission for authorization to build 50 MW of biomass capacity in Wisconsin.

WEPCO investigated what biomass projects might actually be possible in Wisconsin in the time period in which it was interested, particularly those that could also supply steam to one or more manufacturing plants. WEPCO commissioned several studies to evaluate biomass as a generation fuel and, based upon these studies, determined that a paper mill offered the best potential for a biomass project because of synergistic opportunities:

- Institutional experience with obtaining wood for mill operations and the ability to act as the fuel procurement agent for WEPCO.
- Proximity to the fuel source, minimizing the impact on pulp wood price.
- An industrial brownfield site, minimizing the environmental impact of the project.
- An opportunity for cogeneration.

To solicit potential partners, WEPCO approached the Wisconsin Paper Council (WPC) with its plan. In November 2008, WPC sent an e-mail to its members describing what WEPCO envisioned and indicating that interested paper mills should contact WPC. In response to the WPC

e-mail, WEPCO received expressions of interest from three Wisconsin paper mills. Two of the three did not have pulping operations and could not offer the associated fuel supply and economic benefits and were therefore rejected. The third mill was the Domtar paper mill in Rothschild, Wisconsin. The Domtar mill has a pulping operation, so WEPCO and Domtar evaluated the potential for developing a 50 MW biomass-fueled cogeneration facility at the plant site. In May 2009, WEPCO and Domtar entered into a development agreement.

WEPCO had established basic business criteria for any paper mill biomass project it might pursue. Important components of the commercial agreements negotiated between WEPCO and Domtar include the following:

1. WEPCO would construct and own a 50 MW cogeneration facility fueled by woody biomass on property owned by Domtar at the site of the Domtar paper mill in Rothschild.
2. Domtar would lease the land on which the facility is located to WEPCO for a term of 40 years, with the possibility of two ten-year extensions.
3. Domtar would be the initial operator of the facility. WEPCO would pay Domtar an operating fee and would reimburse it for costs incurred.
4. As owner of the facility, WEPCO would take the energy produced by the plant. The facility would also supply all of the steam required by the Domtar mill at a price comprised of components related to capital, fuel, and operations and maintenance, each allocated between costs related to steam generation and those related to electricity generation based on the allocation methodology WEPCO has used at its Valley Power Plant.
5. Domtar, because of its experience and expertise in procuring wood for its mill, would act as WEPCO's agent for purchasing woody biomass to fuel the facility. WEPCO would

pay Domtar a fee for this procurement service based on Domtar's actual costs to provide the service. WEPCO would be the direct counterparty in any supply agreement with suppliers of woody biomass.

WEPCO and Domtar involved the public in project decision-making in several ways. A project website and a toll-free hotline and dedicated e-mail address for public concerns about the project were established. Two open house meetings were held in Rothschild. WEPCO participated in 15 small-group meetings at which the project was discussed. A community advisory board met regularly with WEPCO to discuss issues and concerns. WEPCO also provided site tours to interested individuals. As a result of this public input, WEPCO and Domtar lowered the height of several project structures, altered on-site truck traffic patterns, and added a screening wall.

Other Regulatory Approvals that May Be Needed

Other Wisconsin agencies

Water and air pollution permits are required for this project from the Wisconsin Department of Natural Resources (DNR).

Under Wis. Stat. ch. 30, the project requires a permit to allow WEPCO to construct a permanent wet stormwater detention basin (pond) within 500 feet of the Wisconsin River, a navigable waterway. DNR staff presented testimony that the pond is permissible, subject to compliance with the standards established in Wis. Stat. § 30.025. Pursuant to Wis. Stat. § 30.025(4), DNR shall grant or deny the permit within 30 days of the issuance of this Final Decision. In addition, the biomass plant construction site disturbance of approximately 13 acres requires a permit pursuant to Wis. Admin. Code ch. NR 216, which addresses construction erosion

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and sediment control. This permit is still pending and is expected to be issued after final details are developed and the project itself is approved by the Commission.

Consumptive, or evaporative, water losses from the facility cooling tower and other minor steam losses are projected to average 576,000 gallons per day, meaning that the rate of withdrawal will remain within the limit currently authorized by DNR for the project site.

To control air pollution under Wis. Stat. ch. 285, DNR issued Air Pollution Control Construction Permit No. 10-SDD-058 for the proposed project.

Local Approvals

The site is currently zoned I-2, Heavy Industrial. No zoning change is required for the project. WEPCO asked the village of Rothschild for zoning variances to accommodate the proposed heights of several project buildings and the exhaust chimneys. WEPCO has obtained the necessary variances from the Rothschild Zoning Board of Appeal. WEPCO has also obtained the necessary land use permit, site plan approval, landscape plan approval, stormwater management plan approval, and related approvals from the Rothschild Planning and Zoning Commission.

Other State Approvals

WEPCO applied to the Wisconsin Department of Transportation (DOT), on March 15, 2010, for permission to alter existing driveway connections from the Domtar property onto Business U.S. Highway (USH) 51. The purpose is to redesign a driveway near the south end of the property to accommodate trucks serving the proposed biomass plant. The permit application is pending decision from the DOT.

Other Federal Approvals

At the federal level, notices may need to be given to the Federal Aviation Administration (FAA) to make it aware of the taller structures for the proposed plant in compliance with air safety laws. FAA may require appropriate lighting of the taller structures.

Renewable Portfolio Standard

WEPCO proposed to use the electric generation from Rothschild to comply with its RPS requirements; the project is not needed to satisfy WEPCO's energy or capacity load-serving needs. Other RPS compliance options discussed in the record include a wind alternative and purchasing RRCs from other electric providers. It is difficult to determine whether WEPCO could procure from other electric providers RRCs in an amount equivalent to the amount of renewable energy the project would provide for RPS compliance purposes.

Wisconsin's RPS, Wis. Stat. § 196.378, requires that electric providers produce a minimum level of electric energy from renewable resources. The RPS sets a statewide goal that 10 percent of the energy consumed in the state will be generated from renewable resources by 2015. To achieve this goal, each Wisconsin electric provider, including WEPCO, must increase its production of renewable energy in 2010 and again in 2015. The mandated levels differ among electric providers; by 2015 WEPCO must raise its production of renewable energy from current levels by approximately 4 percent, so that at least 8.27 percent of its electricity is from renewable resources in 2015 and thereafter.

WEPCO's current portfolio of renewable energy resources and banked RRCs is likely sufficient to satisfy its RPS obligation through 2014. However, without procuring additional renewable resources, WEPCO will not be able to meet its increased RPS obligation in 2015 and

thereafter. WEPCO projects that without procuring additional renewable energy, it will fall short of its RPS requirement in 2015 by approximately 700,000 megawatt hours (MWh), and in 2016 it will fall short by approximately 1,150,000 MWh.

Electric generation from Rothschild can be used to comply with WEPCO's RPS requirements. The RPS defines "biomass" as a renewable resource in Wis. Stat.

§ 196.378(1)(h)1.g. The primary fuel proposed for Rothschild meets the definition of biomass in Wis. Stat. § 196.378(1)(ar).

Energy Priority Laws

Wisconsin Stat. §§ 1.12 and 196.025 are known as the Energy Priority Laws. Relevant parts of these statutes provide:

1.12(3) GOALS. (b) *Renewable energy resources.* It is the goal of the state that, to the extent that it is cost-effective and technically feasible, all new installed capacity for electric generation in the state be based on renewable energy resources, including hydroelectric, wood, wind, solar, refuse, agricultural and biomass energy resources.

(4) PRIORITIES. In meeting energy demands, the policy of the state is that, to the extent cost-effective and technically feasible, options be considered based on the following priorities, in the order listed:

- (a) Energy conservation and efficiency.
- (b) Noncombustible renewable energy resources.
- (c) Combustible renewable energy resources.
- (d) Nonrenewable combustible energy resources, in the order listed:
 - 1. Natural gas.
 - 2. Oil or coal with a sulphur content of less than 1%.
 - 3. All other carbon-based fuels.

196.025(1) STATE ENERGY POLICY. (ar) *Consideration of energy priorities.* Except as provided in pars. (b) to (d), to the extent cost-effective, technically feasible and environmentally sound, the commission shall implement the priorities under s. 1.12 (4) in making all energy-related decisions and orders, including strategic energy assessment, rate setting and rule-making orders.

Energy Conservation and Efficiency Alternative

Energy conservation and efficiency is the highest priority listed in the Energy Priority Laws, but these statutes only require an energy priority be considered if it is cost-effective, technically feasible, and environmentally sound. Commission staff conducted an analysis to determine if additional energy conservation and efficiency could alleviate the need for this project. Because the primary purpose of the proposed project is to comply with Wisconsin's RPS, this analysis consisted of determining the ability of additional conservation and energy efficiency to reduce WEPCO's load by a sufficient amount to delay or eliminate the need to add new renewable resources for RPS compliance.

Commission staff's analysis shows that in order for energy conservation and efficiency to displace the renewable output of the proposed project, WEPCO's load forecast, which already reflects a substantial amount of energy conservation and efficiency, would need to be reduced by about 15 percent by 2015. To offset the entire amount of renewable energy WEPCO would need in 2015 to meet the RPS, forecasted load would need to be reduced by about 35 percent by 2015. This is substantially greater than the 1.6 percent annual decrease identified in the Energy Center of Wisconsin's August 2009 energy efficiency potential study. Cost-effective energy conservation and efficiency, above that included in WEPCO's forecast, is not available in sufficient quantity to reduce load by this amount. The Commission finds, based on the record, that energy conservation and efficiency is not a cost-effective alternative to the project.

Non-Combustible Renewable Resource Generation Alternative

Non-combustible renewable resources, such as wind, is the second highest priority listed in the Energy Priority Laws. Using the Electric Generation Expansion Analysis System (EGEAS),

WEPCO and Commission staff analyzed wind alternatives.¹ WEPCO's analyses show on a Net Present Value (NPV) basis that the proposed project costs between \$87 million and \$232 million more than the wind alternatives, based on carbon monetization assumptions. Commission staff's analyses produced similar results. WEPCO states that the proposed project has several advantages over wind, including renewable portfolio diversification, less required transmission, and a higher capacity factor. In addition, there is currently a lack of regulatory certainty regarding the development of wind resources in Wisconsin. The Commission finds that the additional cost of the proposed project is justified, given its advantages over wind resources.

Certificate of Authority Standards

The Commission reviews this application under the standards in Wis. Stat. § 196.49(3)(b).

That statute provides:

196.49 (3)(b) Except as provided in par. (d), the commission may require by rule or special order under par. (a) that no project may proceed until the commission has certified that public convenience and necessity require the project. The commission may refuse to certify a project if it appears that the completion of the project will do any of the following:

1. Substantially impair the efficiency of the service of the public utility.
2. Provide facilities unreasonably in excess of the probable future requirements.
3. When placed in operation, add to the cost of service without proportionately increasing the value or available quantity of service unless the public utility waives consideration by the commission, in the fixation of rates, of such consequent increase of cost of service.

Additionally, the Commission may include conditions in its decision under Wis. Stat. §§ 196.395 and 196.49(3)(c). Those provisions state:

¹ In *Clean Wisconsin v. Public Service Commission*, 2005 WI 93, n. 33, 282 Wis. 2d 250, 700 N.W.2d 768, the state Supreme Court described EGEAS as follows: "EGEAS is 'a modular production-costing, generation-expansion software tool that is used to find least-cost generation system expansion plans by comparing all combinations of multiple generation options to meet forecasted system load.' The inputs used included 'forecasted energy and demand, the economic and engineering characteristics of existing and possible new generation units, fuel price forecasts, known or expected energy purchases or sales, desired reserve margin, and the forecasted cost of emission allowances.' The complexity of this tool is readily apparent."

196.395 Test, conditional, emergency and supplemental orders; waiver of conditions in orders. The commission may issue an order calling for a test of actual results under requirements prescribed by the order, during which test period the commission may retain jurisdiction of the subject matter. The commission may issue conditional, temporary, emergency and supplemental orders. If an order is issued upon certain stated conditions, any party acting upon any part of the order shall be deemed to have accepted and waived all objections to any condition contained in the order.

196.49(3)(c) The commission may issue a certificate for the project or for any part of the project which complies with the requirements of this section, or the commission may attach to the issuance of its certificate such terms and conditions as will ensure that the project meets the requirements of this section. The issuance of a certificate under this section shall not be a condition precedent to the exercise of eminent domain under ch. 32.

The criteria in Wis. Stat. § 196.49(3)(b)1. to 3. are discretionary and provide a basis for rejecting an application. No party suggests that the project will substantially impair the efficiency of WEPCO's service. Likewise, although the project is not required to meet energy needs, it does provide facilities to help WEPCO to meet its RPS requirements in 2015. Because of this, no party suggests the facilities are unreasonably in excess of probable future requirements. The first two criteria are satisfied.

However, as originally proposed, the project does not satisfy the third condition, Wis. Stat. § 196.49(3)(b)3. The costs of the proposed project are disproportionately borne by WEPCO ratepayers. Therefore the project as proposed will add to the cost of service without proportionately increasing the value or available quantity of service.

As discussed below, this Final Decision imposes conditions that reduce both the cost to ratepayers and the risk borne by ratepayers. These conditions allow the project to satisfy Wis. Stat. § 196.49(3)(b)3.

Generating Alternatives and Total Cost

WEPCO used the EGEAS computer model to calculate the overall cost of running the WEPCO electric generating system with either Rothschild or a project alternative installed. For each alternative, the EGEAS model calculated the NPV revenue requirements for the total WEPCO system over a 30-year planning period, which is approximately the useful life of Rothschild, plus a 30-year extension period. The generation alternatives available to the EGEAS model were 50 MW generic biomass units, 200 MW generic wind farms, 500 MW advanced coal units, 545 MW combined-cycle natural gas units, 150 MW natural gas-fired combustion turbines, and one-year 50 MW power purchases. Solar, hydro, fuel cells, and conservation were considered, but were deemed by WEPCO to not be feasible alternatives at this time and were not included as alternatives in the EGEAS model. However, in selected sensitivities, 5 MW of solar generation was forced into the model in 2012 and another 7.5 MW was forced in 2015 as a way to help meet WEPCO's RPS requirement.

While any of the alternatives would allow the EGEAS model to meet WEPCO's projected load and reserve margin requirement, only biomass and wind would allow WEPCO to meet the requirements of Wisconsin's RPS.

Using these planning alternatives, WEPCO modeled a carbon-constrained base case in which Rothschild is forced into service at the end of 2013 as proposed. It then ran a number of EGEAS sensitivities, including sensitivities that assign no "monetized" cost to carbon emissions. WEPCO's scenarios are Rothschild (with and without carbon monetization), a low (with and without carbon monetization), medium, and high-priced wind alternative, a low and high-cost biomass fuel alternative, no steam host alternative (with carbon monetization), Rothschild plus full

RPS compliance alternative, low-priced wind plus full RPS compliance, Midwest ISO with Rothschild, and Midwest ISO with low-priced wind alternative.²

Commission staff also evaluated alternatives to Rothschild using the EGEAS model and the dataset supplied by WEPCO. The EGEAS modeling performed by Commission staff included an optimal alternative that allows EGEAS to select the next generating plant addition to the WEPCO system without forcing it to accept the proposed project or a low-priced wind alternative. The modeling also examined other alternatives: optimal with wind regulation removed; Rothschild delayed with a five-year wind purchased power agreement (PPA); Rothschild delayed with a five-year wind PPA and no federal Production Tax Credit (PTC); biomass not carbon neutral; and Rothschild at a lower capacity factor.

Commission staff analyses showed that the project is not required to satisfy WEPCO's energy or capacity load-serving needs and Rothschild is never optimally chosen by the EGEAS model. The NPV difference between the Commission staff optimal scenario, where the RPS requirement is ignored and generating alternatives are chosen when needed by the EGEAS model, and WEPCO's modeling scenario, in which the model is forced to choose Rothschild, is approximately \$387 million. This NPV difference ignores the RPS and assumes no carbon dioxide (CO₂) legislation or monetization would be enacted. WEPCO, however, has an RPS compliance obligation so a wind alternative to the proposed facility, in which the model is forced to choose a wind alternative, was analyzed using EGEAS.

To achieve the next increment of renewable energy needed for RPS compliance, the wind alternative was less costly on a NPV basis than Rothschild. However, carbon monetization

² Typically in EGEAS, only the utility's (in this case WEPCO) service territory is modeled. In the two Midwest ISO sensitivities performed by WEPCO, a second, larger system was added to the model in an effort to take into account the effect of the Midwest ISO market, assuming no carbon constraints.

assumptions change the NPV significantly and influence the economics of the proposed project when compared to a wind alternative. WEPCO's analyses indicate that the proposed project costs between \$87 million and \$232 million more on a NPV basis than the wind alternative depending on carbon monetization assumptions. Commission staff's analyses indicate the wind alternative when CO₂ is monetized is slightly less costly than shown in WEPCO's analyses and has a NPV of \$111.3 million less than Rothschild.

The EGEAS modeling demonstrates that WEPCO's project as initially proposed is an expensive alternative as both a source of energy and as a means of meeting its RPS requirements. The overall production cost of the project is approximately \$123/MWh compared to the cost of approximately \$98/MWh of a generic wind alternative. Although the project has advantages to justify the selection of biomass generation, the total cost of the project borne by ratepayers is too high.

To address this concern, the Commission issued a Supplemental Scheduling Order on April 29, 2011, requesting that WEPCO and Domtar consider modifications to the project's cost allocations to reduce the costs to and the risks borne by ratepayers. WEPCO and Domtar submitted a revised proposal on May 3, 2011, and other parties submitted responses on May 5, 2011.

In its response dated May 3, 2011, Domtar offered to increase its capital cost allocation by \$22 million, to a total of \$47 million. This will increase Domtar's steam payment by approximately 20 percent. The increased capital cost allocation to Domtar will lower the estimated cost of the project to WEPCO's ratepayers to approximately \$115/MWh. This offer eliminates some of the financial imbalance in the project. The Commission finds it reasonable to require that,

as a condition of this Final Decision, WEPCO and Domtar shall modify their commercial agreements to incorporate Domtar's increased capital cost allocation.

Allocation of Costs between WEPCO and Domtar

The Steam Supply Agreement between WEPCO and Domtar allocates the capital costs and fuel costs of the proposed plant between the electric and steam outputs of the plant. The costs allocated to the electric output will ultimately be borne by WEPCO's electric ratepayers and the costs allocated to the steam output will be borne by Domtar. In its evaluation of the proposed project, the Commission considered the absolute magnitude of the costs which were proposed to be allocated to electric ratepayers, the timing of the recovery of the costs allocated to Domtar, the proposed accounting treatment of the steam assets, and the potential for ratepayers to bear uneconomic dispatch costs.

Under the terms of the Steam Supply Agreement as proposed by WEPCO, only the incremental cost of the capital assets necessary for the plant to provide steam to Domtar was allocated to Domtar. WEPCO argued that this is the same electric/steam capital cost allocation approved by the Commission for WEPCO's Valley Power Plant, a coal-fired electric generating unit in Milwaukee that also produces steam for WEPCO's regulated steam utility. WEPCO asserted that the same cost allocation is appropriate for the project because the primary purpose of the project is the production of electricity to meet the RPS, not steam.

CUB argued that the proposed allocation of capital costs would result in WEPCO's ratepayers paying \$113 million more than they should over the life of the project. CUB proposed an alternative allocation based on the capital cost per pound of steam from a steam-only facility.

CUB contends that this allocation would allow Domtar to take advantage of the economies of scale of the proposed plant and still provide a 10 percent capital cost saving for Domtar.

Commission staff asserted that the Valley Power Plant allocation model was not comparable to the Rothschild allocation because the steam output of the Valley Power Plant is under the Commission's jurisdiction and, therefore, the Commission could change the allocation at any time if it becomes unreasonable for electric ratepayers. Commission staff suggested that the Rothschild cost allocation is different because, as proposed, the Commission would not be able to change the allocation in the future if it is approved in this case. Because it could not be changed in the future, Commission staff stated that the fixed capital cost allocation imposes risks on electric ratepayer,s and ratepayers should be compensated for this risk through a lower cost allocation than ratepayers would bear if an electric-only biomass plant were built.

Domtar argued that it would be making capital investments as part of the project and that Domtar's contribution of existing infrastructure would reduce the cost of the project, making it comparable to an electric-only biomass plant.

A second issue concerning the capital costs is the recovery of these costs over time. If the entire plant, both electric and steam, is included in electric rate base, both the electric and steam portions will be earning a return at the retail authorized rate of return. The rate base associated with the plant will decrease over time as depreciation is subtracted from the balance. However, the proposed agreement between WEPCO and Domtar levelizes the capital component of the steam price, and Domtar will not be paying for the full cost of steam assets during the early years of the plant's operation. WEPCO's electric ratepayers would be making up this difference during this period. If Domtar were to close the mill or terminate the agreements, ratepayers would not see the

benefit of levelization during later years when Domtar's payment would exceed the costs of the steam assets in the electric rate base. Therefore, levelization of the capital recovery of the steam assets places risk on electric ratepayers.

Commission staff proposed that this risk could be reduced if Domtar paid for the steam facilities up-front, or if the steam facility assets were accounted for below-the-line for ratemaking purposes. WEPCO asserted that the levelized cost recovery is not a risk to ratepayers because in the event of a mill closure, Domtar must turn over to WEPCO the site, the water intake system, and the waste water treatment facility, and that the value of these assets would offset the costs of the stranded steam assets.

The condition that Domtar turn over the site and certain physical assets to WEPCO if the mill closes or if Domtar cancels the commercial agreements³ appears to partially address the risk to ratepayers. However, by itself, this is not adequate to ensure the risk is reduced. First, the value of the Domtar assets used as collateral is not established in the record. Second, the site is contaminated. Transferring the site to WEPCO may also transfer potential environmental liabilities.

To address the first issue, WEPCO and Domtar may address the value of the assets pledged as described in the following paragraph. If the value of the assets pledged does not equal or exceed the capital cost owed, WEPCO ratepayers shall not be responsible for Domtar's unpaid portion of the capital costs. The intent is to ensure that WEPCO and its ratepayers receive the full value of the capital cost contributions agreed to by Domtar.

³ Transfer of asset language appears in the Ground Lease and in the Steam Supply Agreement. To the extent this Final Decision requires any modifications to a commercial agreement between WEPCO and Domtar, WEPCO shall make the revisions to all relevant agreements and submit revised agreements to the Commission for approval, consistent with the terms of this Final Decision.

No later than 45 days after the effective date of this Final Decision, WEPCO and Domtar may file information sufficient to prove that the assets pledged by Domtar are equal to or greater in value than the capital cost owed by Domtar, which at the beginning of the commercial agreements is between \$47 million and \$57 million. If the assets pledged in the record are less than the capital cost owed, then Domtar may pledge any other assets or collateral to increase the value up to the capital cost owed. Domtar's collateral may decrease to correspond with its payments of the capital over time. If a compliance filing is not made or is deficient, and Domtar cancels the commercial agreements prior to paying its full allocation of capital costs owed, WEPCO's ratepayers shall not be responsible for any of Domtar's unpaid capital costs that are not compensated through the conveyance of collateral. The value of collateral conveyed by Domtar to WEPCO shall be based on an independent appraisal at the time of the conveyance to WEPCO.

To address the second issue, the Commission takes official notice of Remediation Activity Details at the Domtar-Proposed Biomass Cogeneration Location as shown on the DNR webpage for the Bureau for Remediation and Redevelopment Tracking System. This information indicates the proposed site of the facility is contaminated and that DNR sent out a "responsible party" letter on January 12, 2011. Because of this information, WEPCO shall do both of the following no later than 45 days after the effective date of this Final Decision:

1. Submit evidence to the Commission of the ongoing site investigation and environmental due diligence as it relates to the proposed cogeneration facility.
2. Modify the agreements so that WEPCO has the option, but not the obligation, to accept the real estate for the facility site if Domtar cancels the agreements. WEPCO shall file the modifications with the Commission.

WEPCO also proposed to allocate the fuel costs for the facility in the same manner that fuel costs are allocated between the steam and electric outputs of the Valley Power Plant. CUB argued that the proposed fuel cost allocation formula would be unfair to electric ratepayers and that it would provide significant fuel cost savings to Domtar, compared to the costs Domtar would incur if it produced steam on its own. CUB proposed a fuel allocation which split the fuel cost savings according to the fuel usage from an electric-only plant and a steam-only plant. CUB presented evidence that its proposed fuel allocation would reduce fuel costs to ratepayers by \$76 million over the life of the project.

Even with the additional \$22 million of capital costs agreed to by Domtar in its filing of May 3, 2011, the Commission finds that the costs of the electric output of the plant would still be too expensive for ratepayers in comparison to the generic wind alternative. The Commission finds that either of the following two alternatives would reduce the cost to electric ratepayers and would result in the cost of the electric output of the project being sufficiently comparable to the wind alternative. The first alternative would be a \$10 million reduction in the capital costs of the project which are allocated to the electric output of the plant. This reduces the cost of the project borne by the ratepayers. The second alternative would be a fuel cost allocation which would be one-half of the difference between the fuel cost allocation proposed by WEPCO and the fuel cost allocation proposed by CUB. These two options are roughly equivalent in reducing costs to ratepayers. WEPCO shall inform the Commission within 45 days of the effective date of this Final Decision which of these alternatives it has selected.

Commission staff also testified that WEPCO's obligation to supply steam to Domtar results in the possibility that electric ratepayers would be forced to bear uneconomic dispatch costs. Such

uneconomic dispatch costs would be incurred when the fuel and maintenance costs allocated to electric production exceed the combined value of the electricity on the Midwest Independent Transmission System Operator, Inc. (Midwest ISO), market and the value of RRCs that are associated with that electric production. Commission staff took the position that the obligation to supply steam to Domtar imposed risks on ratepayers because it is not possible to predict the existence of or the level of uneconomic dispatch costs in the future.

WEPCO responded that any uneconomic dispatch costs that may arise from the operation of the plant would be the result of the nature of the technology used to burn biomass. WEPCO's witness testified that a CFB boiler plant cannot be turned on and off easily which makes daily cycling in response to Locational Market Prices impossible and that this would also be the case with a stand-alone biomass electric plant. WEPCO also argued that the fuel supply chain for a biomass plant is dependent upon a constant supply of fuel and that this supply chain cannot easily be turned on and off in response to the market price of electric energy.

Whether uneconomic dispatch costs result from the operation of the plant will depend on the relationship of the cost of the biomass fuel, the value of the electricity produced by the plant, the value of the RRCs that result from the production of electric energy at the plant and the heat rate of the plant at various levels of output. The Commission agrees with WEPCO that a certain amount of uneconomic dispatch costs would be associated with the operation of the Rothschild plant simply due to the technology and the likely nature of the biomass fuel supply contracts, which may be structured to provide a steady supply of fuel. This type of uneconomic dispatch cost would also be incurred with a stand-alone electric biomass plant. However, uneconomic dispatch costs could also result from the need to operate the plant to meet WEPCO's obligation under the

Steam Supply Agreement to provide steam to Domtar. This type of uneconomic dispatch cost presents a risk to WEPCO's electric ratepayers that would not exist with a stand-alone electric biomass plant. In addition, because of its control over the fuel supply for the plant under the Fuel Supply Agreement, Domtar has some ability to influence the need to operate the plant simply to consume fuel that is under contract.

Commission staff stated the plant is not economically competitive with WEPCO's other existing alternatives unless the cost of CO₂ emissions is considered because it will not be dispatched as often without carbon constraints. Commission staff's analyses indicate the anticipated annual capacity factor is 70 percent in all of the carbon constrained EGEAS runs and less than 35 percent in the non-carbon constrained EGEAS runs. Operation at a capacity factor of 70 percent is required to obtain the estimated energy and RRCs the facility is expected to produce, approximately 300,000 MWh annually. If the capacity factor of the facility is reduced from 70 percent to 35 percent, the average cost of energy would increase from \$123/MWh to \$220/MWh.

The Commission is concerned that electric ratepayers could be forced to bear uneconomic dispatch costs in the future as a result of WEPCO's obligation to supply steam to Domtar. Therefore, the Commission will retain jurisdiction over the allocation of the fuel costs of the plant in order to protect ratepayers from bearing this type of uneconomic dispatch costs. The Commission retained jurisdiction over the fuel cost allocation between the electric and steam outputs when it approved the construction of the West Campus Cogeneration Facility by Madison

Gas and Electric Company in 2003,⁴ and it is reasonable to do so in this case. The Commission will examine this issue in future rate proceedings.

The Commission is only retaining jurisdiction over its ability to change the allocation of fuel costs in order to protect ratepayers from uneconomic dispatch costs resulting from WEPCO's obligation to supply steam to Domtar and not from any uneconomic dispatch costs that would be incurred by a stand-alone biomass plant. The Commission understands that it may be difficult to draw a bright line between any uneconomic dispatch costs arising due to the intrinsic nature of a biomass plant and uneconomic dispatch costs that could result from WEPCO's obligation to supply steam to Domtar. However, it would not be reasonable for the Commission to fail to protect electric ratepayers from this risk simply based on the difficulty of conducting such an analysis. The Commission often deals with these types of indistinct costs, and it is possible that future analyses will show results which are some distance from either side of a debatable middle.

Environmental Review

Compliance with Wisconsin Environmental Policy Act

Wisconsin Stat. § 1.11 requires all state agencies to consider the environmental impacts of "major actions" that could significantly affect the quality of the human environment. In Wis. Admin. Code ch. PSC 4, the Commission has categorized the types of environmental reviews it undertakes for purposes of complying with this statute. As provided by this rule, the Commission produced a draft Environmental Assessment (EA) and took comments on the August 26, 2010, preliminary determination that an Environmental Impact Statement (EIS) was not warranted.

⁴ Final Decision, dockets 5-CE-121/3270-AE-102, October 9, 2003.

Public involvement during the staff project review was substantial. Between February 2010 and the issuance of the preliminary determination, over 220 comments about the proposed project were received at the Commission from at least 150 individuals. These were considered during the preparation of the draft EA. After issuance of the preliminary determination, an additional 50 comments were received from members of the public and intervenors, with some addressing the need to prepare an EIS for the project.

The final EA concluded that construction and operation of WEPCO's proposed biomass cogeneration facility, while likely to have certain specific local environmental effects and some potential broader environmental implications that the Commission might consider, would not result in a significant impact on the human environment if the mitigative measures proposed by WEPCO in its application and others contained in DNR's air permit were implemented. The final EA, issued on October 22, 2010, concluded that environmental factors were adequately considered in the project review and preparation of an EIS was not warranted.⁵

Many of the impacts identified in the EA, such as air pollutant emissions, noise, and increased truck traffic, are similar to those associated with other industries present in the area and appear to be either permissible or capable of being lessened to a substantial extent through mitigation reduction practices that WEPCO agreed to implement. Because these potential impacts and major concerns can be substantially addressed through construction and operational mitigation measures and strategies either committed to by WEPCO or expected to be regulated according to

⁵ The air permit required DNR to issue its own EA under Wis. Admin. Code ch. NR 150. After consultation, the agencies decided that DNR would cooperate in the development of the Commission's EA and then, as needed, DNR would adopt the Commission's EA and prepare an EA Amendment with updated air impact and other information obtained from in-house DNR analyses that were to be finished too late to be included in the Commission EA. DNR staff worked cooperatively in the development of the Commission's EA, particularly in regard to the Commission staff analysis of issues and impacts related to DNR permit jurisdiction. This arrangement helped ensure that both the Commission's and DNR's EAs were comprehensive in scope and met each agency's standards under their respective rules.

federally-established air quality standards designed to protect public health, no significant impacts on the human environment are expected to occur as result of this project.

Consequently, the EA complies with the requirements of Wis. Stat. § 1.11 and Wis. Admin. Code ch. PSC 4.

Significant and Contested Environmental, Agricultural, and Sociological Elements of the Project

The project does create local environmental concerns related to the actual delivery of fuel to the plant via trucks, the potential air and noise impacts of the biomass combustion process, potential impacts of a proposed stormwater detention pond, and the visual impacts of the new buildings themselves. In terms of air quality impacts, intervenor SOAR and many local residents expressed the concern that sulfur dioxide, fine particulate emissions, and CO₂ would be increased with the new plant. They also expressed concern about the emissions from the expected diesel-fueled biomass delivery trucks on Grand Avenue. They join D.C. Everest in its concern about the health of students and other school users and in requesting that WEPCO be required to provide and operate certain air conditioning, filtering, and monitoring equipment for Rothschild Elementary and D.C. Everest Junior High Schools. WEPCO maintains that overall air pollution levels from the paper mill property would decrease. The final arbiter of whether the air would be adversely affected by the plant is DNR. DNR has issued Air Pollution Control Construction Permit No. 10-SDD-058, which permits construction of the plant subject to air pollution control conditions, including conditions related to greenhouse gas (GHG) emissions. The background pollutant levels used in DNR's air pollution modeling analyses include pollution from truck traffic in the area. Because DNR is Wisconsin's regulatory agency on air pollution issues, it is not

appropriate for the Commission to require WEPCO to provide or operate additional air conditioning, filtering, or monitoring equipment for the schools.

DNR will also permit the proposed stormwater detention pond on the south end of the property. It is the appropriate agency to address the concerns of the neighbors across the fence from the detention pond.

In terms of noise, SOAR and numerous local residents expressed concern about potential noise from steam blows and the noise from trucks operating on the other side of a proposed 20-foot wall at the plant. Some residents have proposed that WEPCO purchase nearby residences to relieve these and other impacts. WEPCO has stated its intention to comply with the noise limit in the village zoning ordinance, designing the project to keep sound levels from exceeding 85 dBA (A-weighted decibels) at the mill property boundary. This sound level, equivalent to the noise from a bulldozer or grader operating about 50 feet away, is still noticeable. According to its application, WEPCO's noise consultant has established design goals that would limit noise increases at five test locations to between 0.5 and 2.8 dBA, increases that would be noticeable but would not interfere with normal activities at each of the five locations. The proposed sound barrier wall would help reduce sound levels in some locations. WEPCO's noise consultant recommends noise silencers for the steam blows and other alternative methods of reducing noise. When required to make steam blows during project testing and maintenance, WEPCO proposed to notify the appropriate authorities in advance and to limit steam blows to daylight hours. The Commission agrees with these goals and with the noise consultant's recommendations. With these noise mitigation methods in use, WEPCO will not be required to purchase nearby residential properties.

In terms of truck traffic impacts, concerns have been expressed by SOAR and local residents that truck traffic increases at the south entrance to the mill property would create unsafe air quality conditions for pedestrians and for neighbors. An additional 75 trucks per day would deliver biomass to the plant mixing with an existing 385 trucks per day and an overall vehicle count of about 9,350 vehicles per day in the plant entrance intersection. WEPCO has applied to DOT to determine whether a traffic signal or other street improvements might be installed to improve safety and efficiency of truck entry and exit, considering that there is an active rail line crossing the entrance as well. The extra trucks in the queue to unload biomass would also emit air pollutants from the diesel engines. DNR has stated that the situation would be improved by requiring WEPCO to adopt a strict anti-idling restriction at the facility to limit truck emissions. The Commission agrees and requires WEPCO to adopt a strict anti-idling restriction.

In terms of visual impacts, local residents across Business USH 51 from the mill have pointed out that the new plant buildings would screen current neighborhood views of the Wisconsin River and Mosinee Hill, and residents south of the mill property have expressed concerns about the truck traffic and headlights along the route inside the property between the south mill entrance and the biomass unloading area. SOAR asked that WEPCO be required to purchase residential properties across the streets adjacent to the mill property. In response to these concerns, WEPCO proposed a 20-foot wall to separate immediate neighbors to the south from the internal truck traffic. WEPCO also has sought and received approvals from the village and from the city of Wausau for the proposed heights and appearances of the plant buildings and wall. Compliance with these local requirements is sufficient to reasonably mitigate the project's visual impacts.

In terms of local job impacts, WEPCO estimated that about 400 workers would be needed during peak construction of the project and about 250 workers for construction on average.

WEPCO states the project will help to keep the steam host Domtar competitive, protecting about 460 jobs at the mill and at the associated LignoTech plant, and will positively affect about 800 jobs in the community that support the mill operations. Domtar and many of the members of the public who testified at the public hearing were associated with the mill and spoke of the ability of the project to protect jobs. On the other hand, PCA stated it has 460 employees of its own and large numbers of local supporting jobs in the Tomahawk area that could be jeopardized if the biomass facility threatens the competitiveness of the PCA Tomahawk plant. Similarly, Thilmany indicated that there could be a negative impact on its business and employees as well. CUB and SOAR emphasize that the support of mill jobs is not a good reason to approve a project like this one because there are other, stronger concerns to address. While the Commission agrees that impacts on local jobs may be taken into account, they are not a driving reason for approving or denying the project.⁶

Similarly, the effect of the project on other paper product manufacturers is not a significant consideration in the review of this application.⁷ Every project by a utility has economic impacts, both positive and negative. For example, a gas-fired generation project could impact the cost of natural gas, depending on available pipeline capacity. Here, the project may increase the risk that the price of biomass will increase, at least in the short term. The risk of a price increase is minimal and acceptable.

⁶ Commissioner Azar finds the discussion of local economic impacts to be irrelevant to the Commission's decision under the Certificate of Authority statute.

⁷ Commissioner Azar finds that impacts on competing business interests to be irrelevant to the Commission's decision under the Certificate of Authority statute.

Biomass Availability, Forest Sustainability, and Greenhouse Gases

The proposed project will require a steady, reliable supply of wood fuel obtained in an environmentally sound manner and chipped to certain standards for delivery. Once in operation, the project is expected to require 500,000 green tons of biomass fuel per year. Domtar would supply 50,000 green tons as paper mill residue. WEPCO provided studies to show that there is enough biomass fuel available and, although PCA expressed concern about the usefulness of the studies, DNR staff agreed with the studies' conclusions.

Domtar will procure the fuel as WEPCO's agent. Domtar has over 35 years of experience with biomass fuel and procures about 80,000 green tons annually for its existing boiler facility. WEPCO and Domtar expect the fuel for the project to be a combination of residue from logging operations, primary mill residues, secondary manufacturing mill residues, municipal wood wastes, and trees cut down to prevent the spread of invasive species or as a result of weather damage.

The biomass supply for the project raises two basic environmental concerns. First, the biomass must be harvested according to Wisconsin's Forestland Woody Biomass Harvesting Guidelines (Guidelines). DNR intends these Guidelines to be combined with a suite of other guidelines and Best Management Practices (BMP) as well as with approved training of foresters through the Sustainable Forestry Initiative and Forest Stewardship Council programs. An auditing plan must also be in place to ensure that suppliers comply with the Guidelines. WEPCO will ensure that the Guidelines are followed and has worked out an auditing plan with DNR that DNR has stated will be satisfactory. WEPCO has already agreed in its application to follow the biomass supply conditions delineated in the Commission's final decision for the Northern States Power

Company-Wisconsin (NSPW) Bay Front project.⁸ The Commission agrees that following the Guidelines will be in the public interest, as are the other three biomass supply conditions in the NSPW Bay Front project, and it is reasonable to require WEPCO to execute the agreed-upon auditing plan.

SOAR requested that the Commission also require WEPCO to do all of the following:

- Comply not only with the Guidelines, but also with the other Forest Management Guidelines and BMPs referenced in the Commission's EA.
- Include in its auditing plan a system of unannounced mid-harvest or post-harvest inspections or audits.
- Fund and undertake research on long-term sustainability and landscape-scale effects of woody biomass harvesting.

Regarding the first condition, the Forest Management Guidelines and BMPs are explicitly part of the Guidelines already, so no extra condition is necessary. Regarding the second condition, the record shows that DNR considers WEPCO's proposed audit plan sufficient, so no additional requirement is needed. Regarding the third condition, one of the conditions of the Bay Front order was for NSPW to dedicate funding to support research on the efficacy of the Guidelines and research that is likely to produce demonstrable benefits to the Guidelines. WEPCO has agreed to comply with this requirement for the project, and the Commission agrees this is appropriate. Research on the long-term and landscape-scale effects of biomass harvesting would certainly fall under this requirement, so an additional condition beyond that included in the Bay Front decision is not necessary.

⁸ Final Decision, docket 4220-CE-169, December 22, 2009; PSC REF #125087.

The second basic concern about the biomass supply is the ability of the forest to resequester the carbon that is harvested for fuel to limit the net emissions of GHGs into the atmosphere. The problem is accounting for the GHGs emitted for all the plant's supply and combustion processes, and relating that accounting in the appropriate time scale with the amount of carbon resequenced by growing trees or regenerating forests. Several intervenors addressed this issue. WEPCO stated that the plant would be carbon neutral, with growing forests able to resequester the carbon emitted by the project's combustion processes. SOAR and CUB express concern about the potential financial impact on WEPCO ratepayers due to monetization of GHG emissions and costs to meet Best Available Control Technology (BACT) requirements.⁹ SOAR and Clean Wisconsin requested that the Commission require a large-scale life cycle analysis of the net impacts of biomass-fueled generating facilities in the state, including an evaluation of the resequstration capacity of Wisconsin forests in light of the time scales involved in burning the fuel and growing the wood again. While such a pursuit would be valuable, it appears to be more appropriate at a statewide level rather than a part of the proposed project.

Significant Environmental, Agricultural, and Sociological Elements of System Alternatives Considered

WEPCO proposed only one location for the project. Location alternatives for the project were proposed by members of the public. Alternatives included building the project at the existing Weston Generating Station owned by Wisconsin Public Service Corporation, at the Brokaw paper mill north of Wausau, or on the north end of the Domtar property. At each of these alternate sites, the plant would produce the same air and noise impacts but, because the project would be more distant from the residents concerned about WEPCO's proposed location, the impact on these

⁹ DNR has already issued an air pollution control permit that includes BACT requirements for GHG emissions.

residents would be less. Because the record does not evaluate these location alternatives for comparison with WEPCO's proposed location, the Commission cannot consider them.

The record does evaluate the significant environmental impacts of some system alternatives. The considered alternatives were projects that would satisfy RPS requirements for WEPCO, essentially biomass or wind power project alternatives. Environmentally, the wind power alternatives would avoid the air emissions expected from the proposed biomass plant but would include noise, shadow flicker, and land use concerns expressed by landowners about other wind projects sited in Wisconsin. A biomass power plant located in a greenfield would entail all of the air and water impacts expected for the proposed project and also involve the impacts typically associated with siting a combustion plant on a new landscape. The record does not discuss other potential impacts of alternative locations or system alternatives.

Brownfield Requirement

Under Wis. Stat. § 196.49(4), a Certificate of Authority may not be issued unless the Commission determines that brownfields, as defined in Wis. Stat. § 560.13(1)(a), are used to the extent practicable. In that statute, "brownfields" means "abandoned, idle, or underused industrial or commercial facilities or sites, the expansion or redevelopment of which is adversely affected by actual or perceived environmental contamination." The site for the project is an idle or underused portion of the Domtar industrial property, used now for little more than outdoor storage. DNR indicates that the site is contaminated. The site is a brownfield, and the statutory requirement is satisfied.

Effect on Archeological and Historic Sites

The construction of the proposed facilities does not affect any historic or archeological properties under Wis. Stat. § 44.40 or 157.70.

Threatened or Endangered Species

There are no protected species or natural communities or landscapes of concern known to exist on the proposed plant site.

Project Cost and Construction Schedule

The estimated project cost is \$255,000,000, not including AFUDC. The estimated cost of the project by major plant account is shown in Appendix B of this Final Decision.

The construction schedule was undisputed during the hearing. As part of its application, WEPCO provided a schedule which indicated that securing the boiler contract was a critical item for project completion. WEPCO's goal is to place the project in service in 2013 in order to take advantage of the federal PTC for renewable energy resources currently set to expire at the end of 2013.

In order to permit as much time as practicable for the construction schedule, this Final Decision shall take effect the day after the date of mailing pursuant to Wis. Stat. § 196.40.

Certificate of Authority

WEPCO is authorized to construct, install, and place in operation a 50 MW biomass-fired cogeneration facility at the Domtar paper mill facility in Rothschild, Wisconsin, to produce electricity and steam, as described in its application and subsequent filings and as modified by this Final Decision.

Order

1. The total gross project cost is estimated to be \$255,000,000, not including AFUDC. WEPCO is authorized to construct the project described in the application and subsequent filings, subject to the conditions specified in this Final Decision. If the scope, design, or location of the project changes significantly, or if it is discovered or identified that the project cost, including *force majeure* costs, may exceed the estimated cost by more than 10 percent, WEPCO shall promptly notify the Commission as soon as it becomes aware of the possible change or cost increase.

2. WEPCO shall obtain all necessary permits prior to commencing construction and operation of the facilities.

3. WEPCO shall begin construction within 12 months from the effective date of this Final Decision unless the Commission grants an extension in writing.

4. Within 45 days of the date of the Final Decision, WEPCO and Domtar shall modify their commercial agreements to increase Domtar's capital cost allocation from \$25 million to \$47 million. If Domtar agrees to increase its capital cost allocation above \$47 million, the commercial agreements shall be modified to reflect the higher figure. WEPCO shall submit the modified agreements to the Commission for Commission approval.

5. Within 45 days of the date of the Final Decision, WEPCO and Domtar shall notify the Commission whether they will reduce the capital costs of the project allocated to the electric output of the plant by an additional \$10 million or whether they will modify the fuel cost allocation as described in the Opinion section of this Final Decision. WEPCO and Domtar shall modify their

commercial agreements to reflect the selected alternative and submit the modified agreements to the Commission for Commission approval.

6. The Commission retains jurisdiction over the allocation of fuel costs in the Steam Supply Agreement between the electric and steam outputs of the Rothschild plant so that the Commission has the authority to protect electric ratepayers from bearing uneconomic dispatch costs that result from WEPCO's obligation to supply steam to Domtar.

7. No later than 45 days after the effective date of this Final Decision, WEPCO and Domtar may file information sufficient to prove that the assets pledged by Domtar are equal to or greater in value than the capital cost owed by Domtar, which at the beginning of the agreements will be at least \$47 million and possibly up to \$57 million. If the assets pledged in the record are less than the capital cost owed, then Domtar may pledge any other assets or collateral to increase the value up to the capital cost owed. Domtar's collateral may decrease to correspond with its payments of the capital over time. If a compliance filing is not made or is deficient, and Domtar cancels its agreements prior to paying its full allocation of capital costs owed, WEPCO's ratepayers shall not be responsible for any of Domtar's unpaid capital costs that are not compensated through the conveyance of collateral. The value of collateral conveyed by Domtar to WEPCO shall be based on an independent appraisal at the time of the conveyance to WEPCO.

8. No later than 45 days after the effective date of this Final Decision, WEPCO shall submit evidence to the Commission of the ongoing site investigation and environmental due diligence as it relates to the facility site.

9. No later than 45 days after the effective date of this Final Decision, WEPCO shall modify its agreements with Domtar so that WEPCO has the option, but not the obligation, to

accept the real estate for the facility site if Domtar cancels the agreements or Domtar abandons the site. WEPCO shall file the modified agreements for Commission approval.

10. The contracts that WEPCO enters into with the harvesters supplying fuel for the project shall require compliance with the Forestland Woody Biomass Harvesting Guidelines, including updates to the Guidelines as they are developed. WEPCO shall ensure that these contracts include penalty provisions in the event there is a failure to comply with the Guidelines. WEPCO shall implement the auditing program it has created in consultation with DNR to ensure compliance with the Guidelines.

11. WEPCO shall track sites where harvesters obtain woody residues or roundwood for the project and shall provide biomass fuel reports to the Commission and DNR on a quarterly basis, beginning with the first full calendar quarter after operation commences.

12. WEPCO shall devote resources to support research on the efficacy of the Guidelines and research that is likely to produce demonstrable benefits to the Guidelines. Determining the specific amount of support to fulfill this requirement is delegated to the Administrator of the Gas and Energy Division, using the funding levels for Focus on Energy biomass research projects where appropriate as guides.

13. WEPCO may not develop energy plantations to provide fuel for the project in existing natural woodlands. Any energy plantations that WEPCO develops or uses to provide fuel shall be located on existing or abandoned farmland or urban land. WEPCO shall notify the Commission and DNR if and when it decides to develop energy plantations to provide fuel for the project.

14. WEPCO shall submit to the Commission the date when it places the facilities in service.

15. WEPCO shall submit to the Commission the final actual costs, segregated by major accounts, within one year after the in-service date. For those accounts or categories where actual costs deviate significantly from those authorized, WEPCO shall itemize and explain the reasons for such deviations in its final cost report.

16. Until the facility is fully operational, WEPCO shall submit quarterly progress reports to the Commission that summarize the status of construction, the anticipated date of the start of construction, the anticipated in-service date, the status of environmental control activities, the expenditures to date by line item, and the overall percent of physical completion. WEPCO shall include the date when construction commences in its report for that three-month period. The first report is due for the quarter ending September 30, 2011, and each report shall be filed within 30 days after the end of the quarter. Once each year, WEPCO's quarterly progress report shall include a revised total cost estimate for the project.

17. WEPCO shall notify the Commission in writing within ten days of any decision not to proceed with this project or to enter into any partnership or other arrangement with a third party concerning ownership or operation of the facility.

18. All commitments and conditions of this Final Decision apply to WEPCO and to its agents, contractors, successors, and assigns.

Docket 6630-CE-305

19. This Final Decision takes effect on the day after it is mailed.

20. Jurisdiction is retained.

Dated at Madison, Wisconsin, May 12, 2011

By the Commission:



Sandra J. Paske
Secretary to the Commission

SJP:PRR:jlt:g:\order\pending\6630-CE-305 final.doc

Attachments

See attached Notice of Rights

PUBLIC SERVICE COMMISSION OF WISCONSIN
610 North Whitney Way
P.O. Box 7854
Madison, Wisconsin 53707-7854

**NOTICE OF RIGHTS FOR REHEARING OR JUDICIAL REVIEW, THE
TIMES ALLOWED FOR EACH, AND THE IDENTIFICATION OF THE
PARTY TO BE NAMED AS RESPONDENT**

The following notice is served on you as part of the Commission's written decision. This general notice is for the purpose of ensuring compliance with Wis. Stat. § 227.48(2), and does not constitute a conclusion or admission that any particular party or person is necessarily aggrieved or that any particular decision or order is final or judicially reviewable.

PETITION FOR REHEARING

If this decision is an order following a contested case proceeding as defined in Wis. Stat. § 227.01(3), a person aggrieved by the decision has a right to petition the Commission for rehearing within 20 days of mailing of this decision, as provided in Wis. Stat. § 227.49. The mailing date is shown on the first page. If there is no date on the first page, the date of mailing is shown immediately above the signature line. The petition for rehearing must be filed with the Public Service Commission of Wisconsin and served on the parties. An appeal of this decision may also be taken directly to circuit court through the filing of a petition for judicial review. It is not necessary to first petition for rehearing.

PETITION FOR JUDICIAL REVIEW

A person aggrieved by this decision has a right to petition for judicial review as provided in Wis. Stat. § 227.53. In a contested case, the petition must be filed in circuit court and served upon the Public Service Commission of Wisconsin within 30 days of mailing of this decision if there has been no petition for rehearing. If a timely petition for rehearing has been filed, the petition for judicial review must be filed within 30 days of mailing of the order finally disposing of the petition for rehearing, or within 30 days after the final disposition of the petition for rehearing by operation of law pursuant to Wis. Stat. § 227.49(5), whichever is sooner. If an *untimely* petition for rehearing is filed, the 30-day period to petition for judicial review commences the date the Commission mailed its original decision.¹ The Public Service Commission of Wisconsin must be named as respondent in the petition for judicial review.

If this decision is an order denying rehearing, a person aggrieved who wishes to appeal must seek judicial review rather than rehearing. A second petition for rehearing is not permitted.

Revised: December 17, 2008

¹ See *State v. Currier*, 2006 WI App 12, 288 Wis. 2d 693, 709 N.W.2d 520.

APPENDIX A
(CONTESTED)

In order to comply with Wis. Stat. § 227.47, the following parties who appeared before the agency are considered parties for purposes of review under Wis. Stat. § 227.53.

Public Service Commission of Wisconsin
(Not a party but must be served)
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Madison, WI 53707-7854

WISCONSIN ELECTRIC POWER COMPANY

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CITIZENS UTILITY BOARD

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CLEAN WISCONSIN

Katie Nekola
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D.C. EVEREST AREA SCHOOL DISTRICT

William J. Mulligan, Kevin J. Lyons, Elizabeth K. Miles
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DOMTAR PAPER COMPANY, LLC

David J. Gilles
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LOCAL 2150
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MENOMINEE TRIBAL ENTERPRISES

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THILMANY PAPERS

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UNITED STEELWORKERS DISTRICT 2 LOCAL 319

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WISCONSIN PAPER COUNCIL

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APPENDIX B

Project Cost
Docket 6630-CE-305
Rothschild Biomass-Fueled Cogeneration Facility

Direct Costs	Amount (in million \$)
Structures and Improvements	\$45.7
Boiler Plant Equipment	\$127.4
Turbo-generator Units	\$41.5
Accessory Electric Equipment	\$20.2
Miscellaneous Power Plant Equipment	\$0.3
Allowance	\$19.9
Subtotal Direct Costs w/o AFUDC	\$255.0
AFUDC	\$37.3
Sub-total Capital Expense	\$292.3
CA Development Costs	\$1.5
Total Gross Project Cost	\$293.8

From Table 1.4-1 Project Cost