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Chapter 13 - Overview of the Required Decisions and Summary of Impacts

Approval, Denial, or Modification of Proposed Plan

The Commission has the obligation to approve, deny, or modify the applicants' proposal to build the ERGS, and to issue an order to that effect with appropriate conditions added.

Wis. Stat. § 196.491(3) requires the Commission to make the following determinations before approving construction of the ERGS project.

1. Under Wis. Stat. § 196.491(3)(d)2, the plant must satisfy the reasonable needs of the public for an adequate supply of electric energy.
2. Under Wis. Stat. § 196.491(3)(d)3, the plant must have a design and location that is in the public interest considering:
    a. Alternative sources of supply
    b. Alternative locations
    c. Individual hardships
    d. Engineering factors
    e. Economic factors
    f. Safety
    g. Reliability
    h. Environmental factors -- In its consideration of environmental factors, the Commission may not determine that the design or location is not in the public interest because of the impact of air pollution if the proposed plant meets the requirements of Wis. Stat. ch. 285.
3. Under Wis. Stat. § 196.491(3)(d)4, the plant must not have undue adverse impact on other environmental values such as, but not limited to:
    a. Ecological balance
    b. Public health and welfare
    c. Historic sites

   d. Geological formations
   e. Aesthetics of land and water
   f. Recreational use

4. Under Wis. Stat. § 196.491(3)(d)6, the plant must not unreasonably interfere with the orderly land use and development plans for the area involved.
5. Under Wis. Stat. § 196.491(3)(d)7, the plant must not have a material adverse impact on competition in the relevant wholesale electric service market.

All of the above items have been considered and described at least to some extent for the proposed ERGS project.

Under Wis. Stat. § 196.491(3)(e), the Commission may not issue a CPCN until the DNR has issued all permits and approvals identified by the DNR that are required prior to construction.

Alternative power plant sites

Two power plant sites have been proposed for the ERGS facilities, the North Site and the South Site. The CPCN application also included a variation of the South Site layout that was slightly larger; this is called the South Site-Exp throughout this document.

An alternate site layout on the North Site, the CUP Option, was brought forward by WEPCO in its direct testimony filed in late May 2003. An environmental review of this alternate layout has been included in this final EIS, to the extent possible. However, incomplete or inconsistent information has hindered a detailed review of this option.

The North Site alternatives would locate the proposed generating facilities north of the existing South Oak Creek units, in the city of Oak Creek, Milwaukee County. The South Site alternatives would place the proposed generating units south of the existing South Oak Creek units, in the town of Caledonia, Racine County. The site alternatives address, to varying degrees, the public interest, environmental values, and consistency with orderly local development. However, the Commission must decide whether they do this adequately.

Alternative technologies or actions

As discussed in Chapter 4, Wis. Stat. §§ 1.12 and 196.025 require the Commission to give priority to specific methods of meeting energy demands, to the extent these methods are "cost-effective and technically feasible." The Commission must consider options based on the following priorities, in the order listed, for all energy-related decisions:

1. Energy conservation and efficiency.
2. Noncombustible renewable energy resources.
3. Combustible renewable energy resources.
4. Nonrenewable combustible energy resources, in the following order:
   a. Natural gas.
   b. Oil or coal with a sulfur content of less than 1 percent.

c. All other carbon-based fuels.

Options based on the above priorities have been analyzed and are discussed in Chapter 4 of this EIS. If the Commission identifies an alternative to all or a portion of the proposed ERGS project during this review that is cost-effective and technically feasible, it could reject or modify the ERGS power plant project as proposed.

Market power

Wis. Stat. § 196.491(3)(d)7 states that the Commission must find that the ERGS project "will not have a material adverse impact on competition in the relevant wholesale electric service market." As discussed in the section on Horizontal Market Power in Chapter 3, it is unlikely that the proposed project would have any adverse impacts on competition. This is because capacity and energy from the ERGS would be provided to WEPCO via a Facility Lease, at rates the PSC regulates through its review of the lease's economic terms and conditions.

Selection of the Site for the Plant

Project site selection

Two sites, one with an alternate variation, were proposed in the project application. In May 2003, the city of Oak Creek and the applicants agreed that the applicants should seek a Conditional Use Permit (CUP) from the city and that the permit should include some possible changes to the proposed project. These changes include the relocation of several of the planned facilities and other changes related to aesthetics. To the extent possible, the potential impacts related to these changes are reviewed and analyzed in this document and thus are available for consideration by the Commission.

If the Commission determines that the proposed sites are reasonable and viable, and if it approves the plant based on the legal findings listed above, it would select one of the plant sites and facility layouts as part of the approval of the plant.

The original proposed site alternatives are discussed in detail in Chapters 6 through 11 and the CUP Option is discussed in Chapter 12. These alternatives are briefly compared in terms of public interest and environmental values in Table 13-1.

Summary

The Commission has a CPCN application before it for three electric power generating units. With a 180-day time extension granted by the circuit court, it must issue an order by November 10, 2003 on whether to approve the proposed plants and under what conditions. If the plants are approved, the Commission must also approve a plant site. For whichever site is selected, the Commission must decide under what conditions the plants would be built and operated. The DNR must independently issue an air pollution control construction permit and several water-related permits before construction can begin. The Commission must determine that these DNR permits have been obtained or can be obtained before it decides whether to issue a CPCN.

Table 13-1 Comparisons between the proposed power plant sites for public interest and environmental values

Siting Factor	North Site – Original	North Site - CUP	South Site	South Site-Exp
Air	Concentrations of particulate matter, especially total suspended solids (TSP 24-hr), PM10 (24-hr), and SO2 (both 3- and 24-hr) would increase substantially, Several of these pollutant concentrations are nearly 100 % of the NAAQS for the region.	Concentrations of particulate matter, especially total suspended solids (TSP 24-hr), PM10 (24-hr), and SO2 (both 3- and 24-hr) would increase substantially, Several of these pollutant concentrations are nearly 100 % of the NAAQS for the region.	Concentrations of particulate matter, especially total suspended solids (TSP 24-hr), PM10 (24-hr), and SO2 (both 3- and 24-hr) would increase substantially, Several of these pollutant concentrations are nearly 100 % of the NAAQS for the region.	Concentrations of particulate matter, especially total suspended solids (TSP 24-hr), PM10 (24-hr), and SO2 (both 3- and 24-hr) would increase substantially, Several of these pollutant concentrations are nearly 100 % of the NAAQS for the region.
General location	The SCPC units and IGCC unit would be placed north of the existing OCPP. The coal storage area would be moved to inside the rail loop. A new 138 kV switchyard would be located west of the rail loop and a new 345 kV switchyard would be expanded and moved southeast of the loop, extending onto the shooting range.	The SCPC units and IGCC unit would be placed north of the existing OCPP. The coal storage area would be moved to inside the rail loop, replacing the substation. A new 138 kV switchyard would be located west of the rail loop and a new 345 kV switchyard would be expanded by 40% and moved southeast of the rail loop, extending onto the shooting range property.	The SCPC units and IGCC unit would be located south of existing OCPP and north the shooting range.	The SCPC units would be at the same location as the South Site, but the IGCC would extend onto the shooting range property.
Lake Michigan	Constructing and operating a new water intake system and a water discharge structure would require dredging and result in temporary water quality and habitat impacts as well as long-term effects on the bathymetry and lakebed composition and loss of aquatic habitat.* Ship delivery of coal would require extension of the coal dock, a new breakwater and a ship channel. Construction of these facilities would substantially alter the lakebed and destroy diverse nearshore habitat.	Constructing and operating a new water intake system and a water discharge structure would require dredging and result in temporary water quality and habitat impacts as well as long-term effects on the bathymetry and lakebed composition and loss of aquatic habitat.* Ship delivery of coal would require extension of the coal dock, a new breakwater and a ship channel. Construction of these facilities would substantially alter the lakebed and destroy diverse nearshore habitat.	Constructing and operating a new water intake system and a water discharge structure would require dredging and result in temporary water quality and habitat impacts as well as long-term effects on the bathymetry and lakebed composition and loss of aquatic habitat.* Ship delivery of coal would require extension of the coal dock, a new breakwater and a ship channel. Construction of these facilities would substantially alter the lakebed and destroy diverse nearshore habitat.	Constructing and operating a new water intake system and a water discharge structure would require dredging and result in temporary water quality and habitat impacts as well as long-term effects on the bathymetry and lakebed composition and loss of aquatic habitat.* Ship delivery of coal would require extension of the coal dock, a new breakwater and a ship channel. Construction of these facilities would substantially alter the lakebed and destroy diverse nearshore habitat.

Siting Factor	North Site – Original	North Site - CUP	South Site	South Site-Exp
Wetlands	Approximately 18.8 acres filled. Wetlands impacted include the larger high-quality wetlands located along the beach and bluff area.	Values provided in WEPCO's testimony indicate about 19.5 acres filled, comprising about 24 % of the total delineated wetlands. These figures may be low if the future wallboard facility is taken into account as it has been for the other sites.	About 15.8 acres filled, comprising about 19% of the total delineated wetlands.	About 15.2 acres filled. Impacts similar to wetland impacts of South Site. Would also fill in a high-quality hardwood swamp located in southernmost corner of property.
Vegetation - woodlands	About 1.65 acres removed inside the rail loop, incl. large beech, sugar maple, and basswood trees. About 2 acres removed for rail loop extension and wallboard plant. About 2.9 acres removed for soil stockpile west of railroad. Woods north of Elm Road reduced and divided by construction.	Several woodlands, all CSHs, severely affected: half of Wood Duck Woods for transmission ROW and roads; WEPCO Oak Woods completely removed for switchyard and road; portion of OCPP Woods removed for rail loop expansion; WEPCO Woods partially removed for transmission ROW east of Caledonia Landfill. Woods north of Elm Road fragmented by construction. Accurate acreage totals not available.	About 0.16 acres removed for rail track in rail loop. About 6.3 acres of woodland-wetland complex removed for rail loop extension and IGCC. Approx. 2.9 acres removed for soil stockpile west of railroad. Woods removed north of Elm Road if wallboard plant is built.	About 0.16 acres removed for rail track in rail loop. About 6 removed for construction laydown. Approx. 2.9 acres removed for soil stockpile west of railroad. Woods removed north of Elm Road if wallboard plant is built
Vegetation - grasslands	Grasslands on existing ash landfills to be buried under soil stockpiles and replanted as grasslands. Portions would be kept in place each year for bird nesting and other uses. New soil stockpiles at west side of property and near switchyard would eventually add grassland acres.	Grasslands on existing ash landfills would be buried and reestablished at some future date. Loss of old field habitat within the rail loop due to new coal storage location. New berms for the shooting range near Seven Mile Road could be planted to grassland, mitigating for some lost habitat.	Grasslands would be buried and reestablished on ash landfills as for plant at North Site. Fewer new grasslands as North Landfill is reduced in size and soil stockpile near switchyard is not needed.	Grasslands would be buried and reestablished on ash landfills as on the North Site. Soil stockpiles near west side and switchyard would create new grasslands. Cropland near Seven Mile Road would be covered by a soil stockpile, and established as grassland.
Vegetation-areas of special habitat	A large area of the northern PEC removed, including beach, bluff, and riparian habitat; 1.8 acres of CSH removed; 9.2 acres of INRA removed.	A large area of the northern PEC removed, including beach, bluff, and riparian habitat due to SCPCs. Three INRAs would be highly disturbed by the new transmission facilities and roads, the largest would be nearly eliminated. Accurate acreage totals not available.	About 75 acres of PEC removed; 1.8 acres of CSH removed; 10.0 acres of INRA removed.	About 87 acres of PEC removed; 1.8 acres of CSH removed; 21.4 acres of INRA removed.

Siting Factor	North Site – Original	North Site - CUP	South Site	South Site-Exp
Amount of soil requiring excavation*	Approx. 7.3 million cubic yards for the SCPCs; an additional 2.7 million cubic yards for the IGCC. Total 10.0 million cubic yards.	Accurate acreage totals not available. Would likely be very similar to the North Site – Original.	About 5.8 million cubic yards for SCPCs; 1.5 million cubic yards additional for the IGCC. Total of 7.3 million cubic yards.	About 5.8 million cubic yards for the SCPCs; an additional 4.1 million cubic yards for IGCC. Total of 9.9 million cubic yards.
Land use	Little to no difference across sites.	Use of this layout would permanently remove more land from agricultural use than other sites.	Little to no difference across sites.	Use of this site would permanently remove more land from agricultural use than other sites.
Noise potential	More residences located nearer to the sources of noise for construction of the plant buildings. Many noises related to operation of the plant (i.e. coal handling, train traffic) would not be different based on site.	When the plant is operational, noise may be somewhat less than at other sites because the coal handling facilities would be somewhat further from residences. Also traffic would be routed away from the Elm Road area to a greater extent. Relocation of the shooting range would increase noise levels further south near Six and Seven Mile Roads.	The impact of noise related to constructing the plant buildings would shift southward; however many noises related to operation of the plant (i.e. coal handling, train traffic) would not be different based on site.	The impact of noise related to constructing the plant buildings would shift southward; however many noises related to operation of the plant (i.e. coal handling, train traffic) would not be different based on site.
Visual impacts	The plant would appear larger to residents nearest to the site in Milwaukee County, especially residents of Barton Oaks subdivision.	The plant would appear larger to residents nearest to the site in Milwaukee County, especially residents of the Barton Oaks subdivision. One exhaust stack for the SCPC units (rather than two) at 550 feet tall. Berms for the shooting range would be closer to homes along Seven Mile Road.	Plant buildings would appear larger to the residents nearest to the site in Racine County; however, exhaust stacks would be shorter than those on North Site.	Plant buildings would apperar larger to the residents nearest to the site in Racine County; however, exhaust stacks would be shorter than those on North Site. The berm for the shooting range would be relocated closer to these homes.
Historic sites	Eight archeological sites on property, none expected be adversely affected.	Eight archeological sites on property. Most are out of the construction zone. Several are in the area where new transmission line structures would be located. However, due to previous disturbances, adverse effects on these resources are not expected.	Eight archeological sites on property, none expected be adversely affected.	Eight archeological sites on property, none expected be adversely affected.
Train traffic	No differences among sites.	No differences among sites.	No differences among sites.	No differences among sites.

Siting Factor	North Site – Original	North Site - CUP	South Site	South Site-Exp
Car traffic	Local and regional traffic would increase. On-site traffic could reach 4,180 vehicle trips per day during peak construction. New access roads could increase traffic on Oakwood Road and decrease it on Elm Road.	Local and regional traffic would increase. On-site traffic could reach 4,180 vehicle trips per day. Most traffic would enter and exit site from STH 32, decreasing dust and noise.	Local and regional traffic would increase. On-site traffic could reach 4,180 vehicle trips per day during peak construction. New site access road off of STH 32 would improve on-site traffic flow and reduce dust and noise.	Local and regional traffic would increase. On-site traffic could reach 4,180 vehicle trips per day during peak construction. New site access road off of STH 32 would improve on-site traffic flow and reduce dust and noise.
Economic effects	No substantial cost differences among sites. Additional excavation costs related to the North site could be negated by longer extensions for coal handling and intake water.	No substantial cost difference among sites. Expansion and relocation of the switchyards would add $20-$40 million..	No substantial cost differences among sites. Additional excavation costs related to the North site could be negated by longer extensions for coal handling and intake water.	No substantial cost differences among sites. Additional excavation costs related to the North site could be negated by longer extensions for coal handling and intake water.
Electric transmission	No differences among sites.	Relocation of the 138 and 345 kV switchyards and associated transmission line connections would result in increased costs and new environmental impacts.	No differences among sites	No differences among sites
Water supply	No differences among sites.	No differences among sites..	No differences among sites.	No differences among sites.
Sewer	No differences among sites	No differences among sites..	No differences among sites.	No differences among sites.

* These acreages include construction of the wallboard facility described in the CPCN application.