

ILLINOIS POLLUTION CONTROL BOARD
January 30, 1973

WESTERN ILLINOIS POWER COOPERATIVE, INC.)	
)	
Petitioner,)	
)	
V.)	PCB72-441
)	
ENVIRONMENTAL PROTECTION AGENCY,)	
)	
Respondent.)	

Theodore Rammelkamp, Esq., of Jacksonville, Illinois, for Petitioner;
Delbert Haschemeyer, Esq., Assistant Attorney General, for Respondent.

OPINION AND ORDER OF THE BOARD (by Mr. Lawton):

On November 13, 1972, Western Illinois Power Cooperative, Inc. ("WIPCO") filed a petition for variance from Rule 2-2.53 of the Rules and Regulations Governing the Control of Air Pollution, remaining in effect pursuant to Section 49 (c) of the Environmental Protection Act. This particulate emissions regulation remains in effect until May 30, 1975, when it will be superseded by Rule 203 (g) of the Pollution Control Board Air Pollution Regulations.

WIPCO is an Illinois not-for-profit corporation engaged in the business of producing, generating and selling electric power at its Pearl station generating plant located in Pike County near the town of Pearl. The plant is a 22 megawatt coal burning steam turbine power plant consisting of one unit fired by four burners, and is equipped with a mechanical multiple cyclone dust collector. The boiler unit exhausts into one stack which is 203 feet in height (Petitioner's Exh. 1).

WIPCO is organized under the rules and regulations of the Rural Electrification Administration (REA) of the United States Department of Agriculture (R. 10-11). WIPCO was formed in 1960 by 7 electric distribution cooperatives in western Illinois to provide electric energy to them on a wholesale basis, which they would then distribute to the ultimate consumer (R. 11). WIPCO serves 19 or 20 counties in a predominantly rural portion of Illinois (R. 11). Under the Rural Electrification Act, WIPCO is prohibited from serving urban areas over 1,500 in population unless

that area does not have central generating station service (R. 12). WIPCO serves no industrial customers; the majority of its customers are farmers and a few small grain elevators (R. 11, 112, 113).

The Pearl facility, designed in 1964, includes a mechanical dust collector to remove particulates from the exhaust gases (R. 13). The facility, with the dust collector, became commercially operable early in 1967 (R. 13). The computed efficiency of the collector was either 85% (Petitioner's Exh. 1) or 90% (R. 13), and using the 90% computed efficiency, WIPCO's calculations indicated that it would meet the particulate regulations of the Air Pollution Control Board (R. 13).

The Environmental Protection Agency indicated to WIPCO in April of 1972 that it believed WIPCO was not in compliance with the particulate emission rule (R. 15). WIPCO then arranged to have stack tests performed by Burns and McDonnell Engineering Company, which tests, performed June 5 and 6, 1972, confirmed that the Petitioner was probably in violation of Rule 2-2.53 (R. 15; Petitioner's Exh. A). WIPCO's feasibility studies indicated that installation of a wet scrubber, rather innovative equipment for coal fired electrical generating plants (R. 17, 70), at the Pearl station would reduce particulate emissions to a level below both Rule 2-2.53 and Rule 203 (g). The wet scrubber will provide the additional benefit of reducing SO₂ emissions (R. 17). On October 16, 1972, WIPCO received approval of the project from REA (R. 16). The stack tests also indicated that the mechanical collector had an operating efficiency of 74.8% (Petitioner's Exh. 1).

Even before being informed of possible violations by the Agency, WIPCO had begun serious discussions with REA for money to upgrade the Pearl facility to meet the tightened requirements of Rule 203 (g) (R. 13-14). On December 11, 1972, REA informed WIPCO that \$1,000,000 would be available to WIPCO to proceed with its pollution control program (R. 16). At the time of hearing, WIPCO was preparing specifications for bids on the equipment, and hoped to have its specifications approved by REA by February of 1973 at which time the bidding process would begin (R. 65,66). Contracts to purchase and install the equipment are expected to be entered into by May, 1973 (Petitioner's Exh. L). The total estimated capital cost of the wet scrubber is approximately \$600,000 (R. 18), and the estimated additional operating cost to WIPCO for the wet scrubber is \$67,400 (R. 19, Petitioner's Exh. G).

At the same time that WIPCO is pursuing its long term control program, it is attempting to reduce particulate emissions by blending low ash petroleum coke with coal. They have been so blending

fuels since August of 1972. Burns and McDonnell Engineering Company estimated that this process will reduce the particulate emission rate of 1.960 lbs. per million BTU of heat input to 1.51 lbs., and will reduce the SO₂ emission rate from 8.235 lbs. per million BTU of heat input to 6.5 lbs. This estimated reduction of approximately 25% has not been verified by stack testing, and the emissions will still be in excess of the .8 lbs. of particulates per million BTU of input allowed by Rule 2-2.53.

Alternative methods of complying with Rule 2-2.53 have been investigated by WIPCO, and were deemed unsuitable. Mr. Donald B. Bringman, General Manager of WIPCO, stated that use of gas or oil is not a feasible alternative because gas is not available to WIPCO, and oil is impracticable as the Pearl facility cannot be fired with oil (R. 19). To modify the boilers to fire with oil would cost approximately \$250,000 for capital improvements and approximately \$600,000 for operating costs (R. 20).

WIPCO also investigated the possibility of purchasing power from Springfield, Illinois. WIPCO presently has a 15 megawatt line to the City of Springfield (R. 23). Because WIPCO generates approximately 25 megawatts for its customers, it could not get all the power necessary from the 15 megawatt transmission line from Springfield (R. 23), even if Springfield had the capacity available to transmit continuously 15 megawatts to WIPCO. Bringman doubted that Central Illinois Light Company would sell power to Springfield for Springfield in turn to sell to WIPCO (R. 24). Bringman also doubted that Central Illinois Public Service Company would interconnect with WIPCO as long as WIPCO was interconnected with Springfield (R. 25). He further stated that even if those utilities would sell power, the negotiations would take as long as one year, and construction of necessary transmission facilities at least six months (R. 61).

WIPCO also considered the use of its two other small generating facilities, a three megawatt diesel electric generating plant near Winchester, Illinois, and an eight megawatt diesel electric generating plant near Pittsfield, Illinois. The units on these plants range from 18 to 35 years old, and are used on a peak basis or emergency basis only (R. 27). These facilities, although having the capability of firing on gas, would have to be oil fired because of the gas shortage (R. 28). Mr. Bringman estimated that the additional cost of using these two diesel facilities for their total 11 watt capacity, assuming their reliability (which he believed very questionable (R.28)), would increase costs approximately 1¢ per kilowatt hour (R.28)

Mr. Bringman testified that the principal impact on WIPCO and its customers of obtaining power from some other source would be the additional cost to WIPCO of approximately \$1,250,000 per year (R. 29). He also stated that if WIPCO could purchase all the

power for its customers rather than continuing to generate it, the Pearl facility would be closed down. Closure would render the facility's 21 employees unemployed, resulting in a payroll loss to the community of nearly \$250,000 (R. 29). If the Pearl facility were closed down, WIPCO would also be unable to pay its debt obligations on it to REA, an amount of \$280,000 per year (R. 30).

The environmental consequences of the Pearl facility appear minimal. The facility is located in a sparsely populated area with no towns in excess of 500 people within a 10 mile radius (Petitioner's Exhibit O). Mr. Bringman testified that he knew of no other particulate emission sources in the area except automobiles, agricultural operations, and field and trash fires (R.33). He also had received no complaints regarding the Pearl facility (R.66).

Ambient air quality in the vicinity of the Pearl facility is well within federal ambient air quality standards (R. 79-80, Petitioner's Exhibit G). The Petitioner's consulting engineer stated that the same is true for SO₂ concentrations in the area of the Pearl facility (R. 81). However, the ambient air quality levels for particulates and SO₂ were calculated by WIPCO on the basis of contribution of those contaminants solely by the Pearl facility and did not consider any other emission sources (R. 81).

Balancing the hardships to WIPCO and its customers, the minimal environmental impact of the Pearl facility, and WIPCO's diligence in pursuing a solution to its problems, we believe that WIPCO is entitled to a variance from 2-2.53 of the Rules and Regulations Governing the Control of Air Pollution. The only issue remaining is the length of time needed by WIPCO to bring the Pearl facility into compliance. WIPCO requested a variance until May 30, 1975, yet its own Exhibit L indicates WIPCO expects the scrubber to be operational by July, 1974. WIPCO's witnesses testified that the project could be complete by the end of 1974 (R. 41, 51, 105). The Agency recommended that a variance be granted for one year subject to extension to April, 1974, stating that the Petitioner can install the necessary control equipment by that date. Since the Board is restricted by law to granting variances not to exceed one year, WIPCO would have to seek extension of whatever variance this Board grants. The evidence on the length of time necessary to install the equipment is conflicting, but does indicate that the equipment should be operational well before May 30, 1975. We feel that July 31, 1974 should be considered a deadline, and that WIPCO should continue to expedite the installation of the control equipment. In order to keep apprised of the progress that WIPCO will be making, we will require progress reports regarding completion of its control program.

This opinion constitutes the findings of fact and conclusions of law of the Board.

IT IS THE ORDER of the Pollution Control Board:

1. WIPCO's petition for variance from Rule 2-2.53 of the Rules and Regulations Governing the Control of Air Pollution as respects its Pearl facility is granted to January 30, 1974, pending installation of abatement equipment to bring its operation into compliance with the relevant air regulations by July 31, 1974.
2. The variance granted in paragraph 1 above is subject to the following conditions:
 - (a) WIPCO shall submit quarterly reports to the Agency indicating its progress towards completion of its control program, said progress reports to begin not more than 30 days from the date of this Order;
 - (b) WIPCO shall continue to blend fuels to minimize emissions from the Pearl facility, and shall include in its quarterly reports the types of fuel used and the percentages of each;
 - (c) WIPCO shall post, within 30 days from the date of this Order, a performance bond with the Agency in a form acceptable to the Agency, in the amount of \$250,000 to guarantee installation of the abatement equipment by July 31, 1974. Provision shall also be made for the forfeiture of \$10,000 to the State of Illinois in the event WIPCO is not in compliance with the relevant regulations with respect to particulate emissions by said date. Bond shall be filed with the Illinois Environmental Protection Agency, Fiscal Services Division, 2200 Churchill Drive, Springfield, Illinois 62706.
 - (d) This variance may be extended upon the filing of a petition and demonstration by petitioner that it is pursuing its abatement program pursuant to this Order.

I, Christan Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted on the 30th day of January, 1973, by a vote of 3 to 0.

Christan J. Moffett

