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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

10/16/78

In the Matter of	)	
	)	Docket 50-344
PORTLAND GENERAL ELECTRIC COMPANY	)	
et al	)	(Control Building Proceeding)
	)	
(Trojan Nuclear Plant)	)	

TESTIMONY OF GLEN E. BREDEMEIER

My name is Glen E. Bredemeier. My title is Vice President, Power Operations. A statement of my qualifications is attached. The following discussion describes, from a Power Operations standpoint, the consequences of Trojan not being allowed to operate.

The Trojan Nuclear Plant has a demonstrated capacity of 1080 MW. As a 67.5 percent owner of Trojan, Portland General Electric Company (PGE) is entitled to 729 MW of energy when the Plant is operating at its peak. Taking such matters as temporary outages into consideration, PGE normally expects to obtain an operating average of 620 MW of energy production from Trojan. The current incremental cost of such energy is approximately 3 mills/kWh.

Our initial analysis of the power supply situation (June 1978), considering that Trojan was shut down, anticipated a termination of the supply of surplus hydroelectric energy during July as the annual spring runoff subsided in the region. Replacing Trojan's energy supply was expected to result in added costs which would soon escalate to \$7 million per month and which would total over \$40 million by the end of 1978.

The situation as it has developed to date has indeed brought excess power costs, but for several reasons, those costs have not been as great as at first anticipated. First, the spring runoff situation persisted substantially longer than predicted, resulting in the availability of significant

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quantities of surplus hydro energy into early October. At 3 mills/kWh through August 31 and 3.5 mills/kWh thereafter, this surplus hydro energy has not cost much more than the approximately 3 mills/kWh incremental cost of Trojan production.

In addition to the relief provided by the availability of surplus hydro energy, PGE has been able to obtain several commitments for supply of power which, while significantly more costly than Trojan's output, are nevertheless less costly than original estimates of probable power supply cost. We have entered into two contracts for purchase of energy at a cost of 18 to 22 mills/kWh delivered. We have also arranged to borrow, or for the option to borrow, substantial quantities of energy with repayment in kind scheduled for dates as far in the future as the 1982-83 operating season. The cost of energy to repay these obligations would appear to vary from about 6 to 18 mills/kWh. These several arrangements along with the probable continuing availability of some "spot" purchases should greatly minimize any expected operation of oil-fired combustion turbine generating units where incremental generating costs would be in the range of 28 to 35 mills/kWh.

Despite the improved situation described above, PGE's actual excess power costs to meet load requirements were \$3 million in August and about \$2 million in September. We anticipate additional excess power costs of \$18 million for the period October through December. A deterioration in the present situation could result in greater costs. Added costs will persist into 1979 if Trojan is not restored to service.

NAME: Glen E. Bredemeier

TITLE AND DUTIES: Vice President, Power Operations - Responsible for System Load Dispatching, scheduling of generation and power interchanges, pooling and coordination, power contracts, fuel planning and procurement, mining and exploration, hydrogeneration and communication.

EDUCATION: OSU - BS in EE (1942); Stanford U. - Executive Development Program (1966); NF - OSU (1968); INP - NUS (1969).

PROFESSIONAL

AFFILIATIONS: PE - Oregon; PEO; NSPE; IEEE - Senior Member; NELPA; Tau Beta Pi, Eta Kappa Nu, Sigma Tau Engineering Societies.

EXPERIENCE: General Electric Company - Test Engineer (1942-1943); U. S. Navy - Radar Countermeasures Officer (1943-1946); Portland General Electric Company - Electrical Draftsman (1946-1948); Assistant to Superintendent of Production (1948-1953); Intercompany Pool Engineer - Power Pool Operations (1953-1961); Manager, Power Operations Department (1961-1975); Vice President, Power Operations (1975- ).