FROM	DATE OF DOCUMENT	DATE RECEIVED	NO.:
Federal Power Commission Washington, D.C.	8-20-70	8-24-70	2667

LTR.	MEMO:	REPORT:	OTHER:
X			

TO: G.T. Seaborg

ORIG.:	CC:	OTHER:
	X	

ACTION NECESSARY	CONCURRENCE	DATE ANSWERED
NO ACTION NECESSARY	COMMENT	BY:

CLASSIF: U

POST OFFICE

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DESCRIPTION: (Must Be Unclassified)

Ltr ack our 7-22-70 ltr....RE: NEPA & trans the following:

(1 cy)

ENCLOSURES:

FPC- Comments relatives to the Enviro. Report for Duke Power (Oconee Nuclear Plants- Units 1-2-3

REMARKS:

NOTE: Orig ltr sent to Seaborg....

REFERRED TO	DATE	RECEIVED BY	DATE
Long H/2 cys for action	8-26-70	Orig ltr not sent filed in 50-269	
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FEDERAL POWER COMMISSION
WASHINGTON 20426

AUG 20 1970

Honorable Glenn T. Seaborg
Chairman
United States Atomic Energy Commission
Washington, D. C. 20545

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Our resulting comments on pertinent factors related to the proposed environmental statement on the Oconee Nuclear Plant are enclosed.

Sincerely,

(SIGNED) JOHN N. NASSIKAS
CHAIRMAN

John N. Nassikas
Chairman

Enclosure
1. Comments on the AEC Environmental Statement

Federal Power Commission
Comments Relative to the Environmental Statement
on the Oconee Nuclear Power Plant of the Duke
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The new and larger operating pool can be expected to have a higher peak load than the old CARVA pool. The new members are planning additions to installed capacity of 248 megawatts during the three years to 1973, but these additions will have little effect on the reserve margins of the Group which will be similar to those of the old CARVA pool.

In general we feel that reserve margins which fall below the 15-20 percent range are detrimental to reliability of electric supply of any operating pool.

On the basis of anticipated loads and scheduled additions to generating capacity, it is evident that the Oconee Nuclear Units are needed not only by the Duke Power Company's system alone but also by the Virginia-Carolinas Reliability Group.

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Against the background of the electric supply situation of the Middle Atlantic and Southeastern States, the fact that the Oconee Power Station is planned as a nuclear plant stands out as particularly noteworthy. This is so because of the shortages which are developing in the domestic supplies of natural gas and coal and because of the continuing world shortage of low-sulfur residual fuel oil. Severe shortages of natural gas are anticipated during the next few years particularly along the eastern seaboard where substitute generating capacity for the Oconee Power Plant would logically be situated. These shortages can be expected to preclude the burning of this valuable natural resource for electric power generation in these areas.

A similar situation has recently developed with respect to coal supply although for different reasons. Many utilities east of the Mississippi are continuing to experience a decline of coal storage piles because of a shortage of coal on the utility coal markets. While this situation will eventually clear up with an improvement in the economics of mining coal, the current coal shortage is likely to extend to 1973 and beyond. If this should prove to be the case, a coal fired substitute for the Oconee Nuclear Power Plant, might not be able to deliver its rated capacity when needed.

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This coal comes from Virginia, West Virginia, Tennessee and Kentucky mines, and has a sulfur content in the range of 0.5 to 1.5 percent, and on an annual basis averages 1.0 percent. Since low-sulfur coal is increasingly difficult to obtain and low-sulfur oil is virtually unavailable, the planning of the Oconee Power Plant as a nuclear facility offers important environmental advantages with respect to air quality in the State of South Carolina.

Power Imports

The likelihood of substituting purchased firm power from systems or pools bordering upon the Duke Power Company's system or those of the Virginia-Carolinas Reliability Group, as an alternative for the building of the Oconee Nuclear Power Plant does not appear to be feasible.

This conclusion is based on a review of the present load-capacity situations of the surrounding utility systems and operating pools from which imported power would have to come. At the present time the Pennsylvania-New Jersey-Maryland Interconnection to the north is operating under a narrow reserve margin of 8.3 percent. The Southern Company's systems to the south are in a more precarious situation with only 7.7 percent reserves. To the west the Tennessee Valley Authority's system has a reserve margin of 13.1 percent and to the northwest the American Electric Power's systems have a reserve margin of 16.8 percent. In each of these outlying areas, the reserve margins are such that none of the systems is in a position to export large blocks of power on a firm basis. Because of the trend to larger generating units and the problems associated with plant siting and transmission line routing, it is unlikely that the reserve situation in 1973 will differ to any extent from that of 1970. Thus, the power supply situation would hardly be improved in the time available even if the Duke Power Company departed from generally accepted utility practice of relying principally on construction of its own generating capacity to provide for its own loads and sought to buy power from others instead of completing the construction of the Oconee Nuclear Units.

Even if time were available for new construction, these neighboring systems and operating pools would be hard put under the present conditions of popular environmental concern, to find the sites for plants whose principal purposes would be to export power to distant utility systems. These systems in common with utility systems everywhere are having difficulties in timely construction of new capacity to improve their own unsatisfactory reserve margins. Even though it is highly desirable to have a strong transmission network interconnecting regions for purposes of improved diversity and reserve backup, such interconnections together with out-of-the-area generation would not lessen the overall impact of power facilities on the environment.

It is evident, therefore, that if the Duke Power Company and the Virginia-Carolinas Reliability Group are to meet expected loads in 1973, reliance cannot be placed on the import of required firm power from neighboring systems and pools to the north, south or west as a substitute for the proposed Oconee Nuclear Power Plant.

Hydro Power Alternate

A hydroelectric installation as a substitute for a nuclear Oconee Power Plant must be ruled out as a practical consideration because of the lack of a site with a potential high enough to satisfy the requirements of the Company and the Virginia-Carolinas Reliability Group. Moreover, the lack of time between the present and the appearance of the 1973 loads for construction for such an installation and the stream flows in the region which limit any hydroelectric installation, conventional or pumped storage, to service as a peaking facility, are factors which mitigate against such a substitution.

There is some hydroelectric planning in the service area of the Virginia-Carolinas Reliability Group, but little prospect that this will materialize in time as substantial generating capacity to be useful by 1973. For example, the Virginia Electric and Power Company's Marble Valley pumped storage project in the James River Basin with an initial capacity of 1,250 megawatts is scheduled for 1976 but is currently being opposed by municipal and civic groups who fear its impact on the environment. The U. S. Corps of Engineers is building the Gathright Project on the Jackson River in Virginia without generating facilities even though 49 megawatts of power were authorized for the project.

Water Quality

By virtue of its responsibilities under the Federal Power Act for licensing of non-Federal hydroelectric projects, the Federal Power Commission has a direct interest in the water quality of streams and reservoirs associated with the hydroelectric projects which come under its jurisdiction. Water quality of the Keowee Reservoir as it might be affected by the siting of steam generating plants on its shores came under investigation at the time of the granting of a license for the Keowee-Toxaway hydroelectric installation, Project No. 2503.

In its order issuing a license for this project, the Commission found that the use of Keowee Reservoir as a source of condenser cooling waters for up to 3,000 megawatts of nuclear steam-electric power would produce no detrimental effects upon the fishery resources within the reservoir. The order also authorized the Licensee to use the reservoir at a site designated as "Site L" for this purpose. Since the capacity of three units of the Oconee Nuclear Station is less than 3,000 megawatts

and since the plant is to be constructed as "Site L", the operation of the three nuclear units of the Oconee Power Plant should have no detrimental effect on water quality.

With regard to the Keowee Reservoir, however, the Licensee is not permitted to initiate construction of any other steam-electric plants without prior approval of the Commission (Article 23 of the License). The Licensee is also required to establish and to carry out adequate monitoring of the thermal effects of any "Site L" plant operations and to collect climatological data necessary for the Commission to establish the thermal effects of any other steam-electric plants which the Licensee may propose for construction in the future. (Article 29 of the License).

In the interest of pollution abatement and other beneficial public uses, the Commission required the Licensee to cooperate with the South Carolina Water Pollution Control Authority, and to release a minimum daily average flow of up to 152 cubic feet per second or such lesser amount specified by the Authority, and provided guidelines for checking the amount of water so discharged.

Continuing Environmental Responsibilities

In addition to the responsibilities of the Commission in administering the license for the Keowee-Toxaway Project as outlined under water quality, the Commission has other continuing responsibilities with respect to the impact of the project on the environment, as specified by special license articles requiring:

(a) Licensee financing of archeological surveys at project reservoir sites (Article 39)

(b) Licensee submittal for Commission approval of supplemental information to ensure that the recreation facilities and lands are adequate for present and future public needs (Articles 41 and 42).

(c) The Commission be kept informed by the Licensee during planning for the relocation of all roads in the areas to be inundated by project reservoirs, of plans for boat passageways to insure full recreational utilization of project waters (Article 43)

(d) Commission approval of a plan for clearing the reservoir areas which shall be prepared following consultation with appropriate Federal and State conservation, health, and recreation agencies (Article 45)

In addition to these provisions, the license is subject to conditions in Form L-11 (9/1/66) "Terms and Conditions of License for Unconstructed Major Project Affecting the Interests of Interstate or Foreign Commerce" which contains the following articles by which the Commission can exercise continuing regulation over other aspects of the project's impact on the environment:

(a) Article 13 provides for Commission control over the use, storage and discharge from storage of waters affected by the license for the protection of life, health, and property, and conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreation purposes.

(b) Articles 16 and 17 -- relate to licensee responsibilities to conserve and develop fish and widelife resources and to permit the United States to do so if it so desires.

(c) Articles 18 and 19 -- relate to licensee responsibilities to provide and maintain recreation facilities, or to permit others to do so, and to allow free public access to project waters and adjacent project lands.

(d) Article 20 -- concerns licensee responsibility for prevention of soil erosion, stream siltation or pollution which might occur as a result of construction, operation, or maintance of the project.

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50-269

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

AS 8/24/70

AUG. 20 1970

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Chairman
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50-269-270-287

FEDERAL POWER COMMISSION
WASHINGTON 20426

RECEIVED
AUG 24 1970
U.S. ATOMIC ENERGY COMMISSION
Regulatory
Mail Section

AUG 20 1970

C O P Y

Honorable Glenn T. Seaborg
Chairman
United States Atomic Energy Commission
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REGULATORY
MAIL SECTION

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On the basis of anticipated loads and scheduled additions to generating capacity, it is evident that the Oconee Nuclear Units are needed not only by the Duke Power Company's system alone but also by the Virginia-Carolinas Reliability Group.

The Fuels Situation

Against the background of the electric supply situation of the Middle Atlantic and Southeastern States, the fact that the Oconee Power Station is planned as a nuclear plant stands out as particularly noteworthy. This is so because of the shortages which are developing in the domestic supplies of natural gas and coal and because of the continuing world shortage of low-sulfur residual fuel oil. Severe shortages of natural gas are anticipated during the next few years particularly along the eastern seaboard where substitute generating capacity for the Oconee Power Plant would logically be situated. These shortages can be expected to preclude the burning of this valuable natural resource for electric power generation in these areas.

A similar situation has recently developed with respect to coal supply although for different reasons. Many utilities east of the Mississippi are continuing to experience a decline of coal storage piles because of a shortage of coal on the utility coal markets. While this situation will eventually clear up with an improvement in the economics of mining coal, the current coal shortage is likely to extend to 1973 and beyond. If this should prove to be the case, a coal fired substitute for the Oconee Nuclear Power Plant, might not be able to deliver its rated capacity when needed.

Environmental Advantages

Any fossil fuel plant as an alternate to the nuclear Oconee Plant would necessarily add to the particulate or gaseous burden of the South Carolina atmosphere. At the present time all of the steam-generating stations of the Duke Power Company depend on coal as the principal fuel.

This coal comes from Virginia, West Virginia, Tennessee and Kentucky mines, and has a sulfur content in the range of 0.5 to 1.5 percent, and on an annual basis averages 1.0 percent. Since low-sulfur coal is increasingly difficult to obtain and low-sulfur oil is virtually unavailable, the planning of the Oconee Power Plant as a nuclear facility offers important environmental advantages with respect to air quality in the State of South Carolina.

Power Imports

The likelihood of substituting purchased firm power from systems or pools bordering upon the Duke Power Company's system or those of the Virginia-Carolinas Reliability Group, as an alternative for the building of the Oconee Nuclear Power Plant does not appear to be feasible.

This conclusion is based on a review of the present load-capacity situations of the surrounding utility systems and operating pools from which imported power would have to come. At the present time the Pennsylvania-New Jersey-Maryland Interconnection to the north is operating under a narrow reserve margin of 8.3 percent. The Southern Company's systems to the south are in a more precarious situation with only 7.7 percent reserves. To the west the Tennessee Valley Authority's system has a reserve margin of 13.1 percent and to the northwest the American Electric Power's systems have a reserve margin of 16.8 percent. In each of these outlying areas, the reserve margins are such that none of the systems is in a position to export large blocks of power on a firm basis. Because of the trend to larger generating units and the problems associated with plant siting and transmission line routing, it is unlikely that the reserve situation in 1973 will differ to any extent from that of 1970. Thus, the power supply situation would hardly be improved in the time available even if the Duke Power Company departed from generally accepted utility practice of relying principally on construction of its own generating capacity to provide for its own loads and sought to buy power from others instead of completing the construction of the Oconee Nuclear Units.

Even if time were available for new construction, these neighboring systems and operating pools would be hard put under the present conditions of popular environmental concern, to find the sites for plants whose principal purposes would be to export power to distant utility systems. These systems in common with utility systems everywhere are having difficulties in timely construction of new capacity to improve their own unsatisfactory reserve margins. Even though it is highly desirable to have a strong transmission network interconnecting regions for purposes of improved diversity and reserve backup, such interconnections together with out-of-the-area generation would not lessen the overall impact of power facilities on the environment.

It is evident, therefore, that if the Duke Power Company and the Virginia-Carolinas Reliability Group are to meet expected loads in 1973, reliance cannot be placed on the import of required firm power from neighboring systems and pools to the north, south or west as a substitute for the proposed Oconee Nuclear Power Plant.

Hydro Power Alternate

A hydroelectric installation as a substitute for a nuclear Oconee Power Plant must be ruled out as a practical consideration because of the lack of a site with a potential high enough to satisfy the requirements of the Company and the Virginia-Carolinas Reliability Group. Moreover, the lack of time between the present and the appearance of the 1973 loads for construction for such an installation and the stream flows in the region which limit any hydroelectric installation, conventional or pumped storage, to service as a peaking facility, are factors which mitigate against such a substitution.

There is some hydroelectric planning in the service area of the Virginia-Carolinas Reliability Group, but little prospect that this will materialize in time as substantial generating capacity to be useful by 1973. For example, the Virginia Electric and Power Company's Marble Valley pumped storage project in the James River Basin with an initial capacity of 1,250 megawatts is scheduled for 1976 but is currently being opposed by municipal and civic groups who fear its impact on the environment. The U. S. Corps of Engineers is building the Gathright Project on the Jackson River in Virginia without generating facilities even though 49 megawatts of power were authorized for the project.

Water Quality

By virtue of its responsibilities under the Federal Power Act for licensing of non-Federal hydroelectric projects, the Federal Power Commission has a direct interest in the water quality of streams and reservoirs associated with the hydroelectric projects which come under its jurisdiction. Water quality of the Keowee Reservoir as it might be affected by the siting of steam generating plants on its shores came under investigation at the time of the granting of a license for the Keowee-Toxaway hydroelectric installation, Project No. 2503.

In its order issuing a license for this project, the Commission found that the use of Keowee Reservoir as a source of condenser cooling waters for up to 3,000 megawatts of nuclear steam-electric power would produce no detrimental effects upon the fishery resources within the reservoir. The order also authorized the Licensee to use the reservoir at a site designated as "Site L" for this purpose. Since the capacity of three units of the Oconee Nuclear Station is less than 3,000 megawatts

and since the plant is to be constructed as "Site L", the operation of the three nuclear units of the Oconee Power Plant should have no detrimental effect on water quality.

With regard to the Keowee Reservoir, however, the Licensee is not permitted to initiate construction of any other steam-electric plants without prior approval of the Commission (Article 23 of the License). The Licensee is also required to establish and to carry out adequate monitoring of the thermal effects of any "Site L" plant operations and to collect climatological data necessary for the Commission to establish the thermal effects of any other steam-electric plants which the Licensee may propose for construction in the future. (Article 29 of the License).

In the interest of pollution abatement and other beneficial public uses, the Commission required the Licensee to cooperate with the South Carolina Water Pollution Control Authority, and to release a minimum daily average flow of up to 152 cubic feet per second or such lesser amount specified by the Authority, and provided guidelines for checking the amount of water so discharged.

Continuing Environmental Responsibilities

In addition to the responsibilities of the Commission in administering the license for the Keowee-Toxaway Project as outlined under water quality, the Commission has other continuing responsibilities with respect to the impact of the project on the environment, as specified by special license articles requiring:

(a) Licensee financing of archeological surveys at project reservoir sites (Article 39)

(b) Licensee submittal for Commission approval of supplemental information to ensure that the recreation facilities and lands are adequate for present and future public needs (Articles 41 and 42)

(c) The Commission be kept informed by the Licensee during planning for the relocation of all roads in the areas to be inundated by project reservoirs, of plans for boat passageways to insure full recreational utilization of project waters (Article 43)

(d) Commission approval of a plan for clearing the reservoir areas which shall be prepared following consultation with appropriate Federal and State conservation, health, and recreation agencies (Article 45)

In addition to these provisions, the license is subject to conditions in Form L-11 (9/1/66) "Terms and Conditions of License for Unconstructed Major Project Affecting the Interests of Interstate or Foreign Commerce" which contains the following articles by which the Commission can exercise continuing regulation over other aspects of the project's impact on the environment:

(a) Article 13 provides for Commission control over the use, storage and discharge from storage of waters affected by the license for the protection of life, health, and property, and conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreation purposes.

(b) Articles 16 and 17 -- relate to licensee responsibilities to conserve and develop fish and widelife resources and to permit the United States to do so if it so desires.

(c) Articles 18 and 19 -- relate to licensee responsibilities to provide and maintain recreation facilities, or to permit others to do so, and to allow free public access to project waters and adjacent project lands.

(d) Article 20 -- concerns licensee responsibility for prevention of soil erosion, stream siltation or pollution which might occur as a result of construction, operation, or maintance of the project.

(e) Article 22 -- relates to good housekeeping with respect to clearing if lands and disposal of material at the project including temporary structures, unused timber, brush, refuse or inflammable material.

(f) Article 24 -- has to do with restoration of project area and stream upon abandonment of the project by removal of all structures, equipment and power lines.