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(10)

David L. Meyer, Chief
Rules and Directives Branch
Division of Administrative Services
Mail Stop T 6 D 59
U.S Nuclear Regulatory Commission
Washington, D.C. 20555-001

RE: Draft Supplement to the General Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 4, Regarding the Edwin I. Hatch Nuclear Plant, Units 1 & 2 [Draft NUREG-1437, Supplement 4]

COMMENTS OF GEORGIANS FOR CLEAN ENERGY

The following comments are filed by Georgians for Clean Energy as part of the Environmental Impact Statement process for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others. The comments herein are a supplement to oral comments made by Sara Barczak, December 12, 2000, before the NRC in Vidalia, Georgia.

Georgians for Clean Energy is a non-profit conservation and energy consumer organization headquartered in Atlanta with a field office located in Savannah. We are a statewide organization with members throughout Georgia and have focused on energy and nuclear concerns for 17 years.

Evaluation Concerns

Georgians for Clean Energy, formerly known as Campaign for a Prosperous Georgia, has been involved in the Hatch relicensing process since it began. We are struck by the broadly insufficient review the Nuclear Regulatory Commission (NRC) conducted in producing Supplement 4 for the draft Generic Environmental Impact Statement (GEIS). Therefore, we resubmit herein all of our past comments and request that these be reviewed again. The following can be found as attachments:

- Attachment 1--CPG Comments on Environmental Impact Statement Application--6-9-2000
- Attachment 2--2.206 Petition Filing by CPG--2-22-00

Template = ADM-013

EDIDS = ADM-03
Add = A. Kugler (ASKI)
A. BERANEK (AFB)

Additionally, we request that the NRC review our oral comments again. Comments from the NRC meeting in Vidalia, Georgia made by Rita Kilpatrick on May 10, 2000 can be accessed at <http://www.nrc.gov/NRC/REACTOR/LR/HATCH/transcript1.htm> for the afternoon session and <http://www.nrc.gov/NRC/REACTOR/LR/HATCH/transcript2.htm> for the evening session. Comments made by Sara Barczak at the December 12, 2000 meeting in Vidalia, GA have not yet been posted to the NRC's License Renewal site but a link to that meeting will likely be found at <http://www.nrc.gov/NRC/PUBLIC/LR/scopingmtg.html>.

Georgians for Clean Energy finds that the GEIS process thus far does not allow for a site-specific analysis of the actual impacts of relicensing. Many organizations, including ours, object to this generic evaluation because it overlooks major site-specific problems. This fundamental flaw in regulatory oversight is glaringly apparent in the Hatch draft GEIS. Many of our and other organizations' site-specific concerns appear to not have been addressed in the draft GEIS, assumingly due in part to the generic assessment process. Georgians for Clean Energy took the time to thoroughly investigate our comments on behalf of the public interest and request that our concerns be properly addressed and incorporated into the final GEIS.

Given how the Hatch draft GEIS is organized, it is impossible to tell if a specific comment made by others or ourselves was ever considered or addressed. For example, Appendix C lists the correspondence the NRC received from various citizens and organizations. It does not provide the comments themselves and, in particular cases, the NRC's responses. Though these documents should be available from the NRC's Public Document Room or ADAMS, both are time-consuming, cumbersome and at times, cost-prohibitive pursuits. What results is a document that appears to have completely dismissed valid, site-specific comments.

Comments on December 12, 2000 NRC Meeting

Georgians for Clean Energy attended the NRC's public meeting and saw that many questions posed by the public were not adequately answered. In many cases, questions were asked and no one on the task team could provide an answer. We are awaiting information from the NRC as to how or where those questions will be answered. Currently, concerned organizations and citizens have no way of knowing whether or not their questions were ever answered.

The Environmental Review presentation led by Task Leader Mary Ann Parkhurst was especially troubling and raised many new concerns surrounding the inadequacy of the NRC's review. Due to poor weather conditions, the aquatic ecology expert was unable to attend the meeting. No one present could satisfactorily answer many of the public's questions that pertained to one of our most significant concerns—Hatch's impact on the aquatic ecology and hydrology of the region. At one point, when the review of the site's impact on our aquatic species was summarized, a comment was made about generic "seafood" in this region. Evidently Ms. Parkhurst did not really know what types of species are present. This region has many types of "seafood" that are eaten by a vast number of locals and tourists throughout the year, not to mention other predatory

species. It is unsatisfactory for the environmental review panel to not be familiar with this simple fact. Additionally, it appeared that the task leader was surprisingly unfamiliar with this environmental review—particularly the site-specific concerns that citizens raised during the meeting despite how some of these concerns were being raised for the second or third time. We were told at the meeting that local “experts” were consulted, though in Appendix B it is readily apparent that specialists with knowledge of the Southeast’s unique geology, hydrology, and ecology are nowhere to be found. We ask the NRC to conduct thorough site-specific analyses using recent data and information, to contact local or regional organizations and specialists, and to fully address our and others concerns with properly documented information easily accessible to the public.

Additionally, it is of overall concern that many of the studies used to support the belief that relicensing the plant will not cause any damage are extremely dated. Many of them were conducted in the mid to late 1970s. Many conditions have changed since then—and many, especially in relation to water supplies, have worsened. A review of the most recent studies is imperative. If there are not updated studies available, it seems equally imperative that they be done prior to the NRC submitting a final GEIS.

During the review of the Environmental Impact of Postulated Accidents, it was apparent that this region is looked at as no more than a number within a massive file of other numbers. Though Mr. Snodderly attempted to present clear information, his numbers and equations raised questions about their relevance in addressing our concerns. The audience in Vidalia was told that if the cost of a Severe Accident Mitigation Alternative (SAMA) is greater than the \$500,000 cost associated with the maximum potential risk benefit, it is dropped from review. This is further confirmed on page 5-12 of the draft GEIS. We are concerned that this method is flawed.

After seeing this approach continually applied when assessing SAMAs, we have become increasingly concerned that the safety of the public and the environment is not of paramount concern to the NRC. This concern is dramatically highlighted on page 5-4 of the draft GEIS when the NRC requested additional information from Southern Nuclear Operating Company regarding how they identified potential SAMAs. The company’s responses “addressed the staff’s concerns and reaffirmed that none of the remaining SAMAs would be cost-beneficial.” This dialogue should have been published in the draft GEIS and we request that the NRC make those documents publicly available. It is apparent that financial costs to the plant owners are more important than the health and safety of the region. Though the NRC does not consider the chances of a meltdown or a catastrophic release to the environment as “credible” they do deem them as “possible.” We ask the NRC to address the impacts of a meltdown and catastrophic releases to the environment, provide the information to us, and include them in the GEIS. 1

1 As a further example of our concerns, regarding the NRC’s approach to SAMAs, the NRC’s panel did not seem to be aware of a recent, regional controversial issue that also revolved around financial costs to the plant owners instead of the costs borne by the local environment. The Southern Company successfully urged the Army Corps of Engineers to drain

Area of Vital Ecological Significance

The relicensing of Hatch nuclear plant has and will continue to negatively impact Georgia's largest river, the Altamaha, which is also the second largest river basin in the eastern United States. For that fact alone, special attention needs to be placed on properly analyzing this ecosystem. In previous comments, Georgians for Clean Energy listed several past releases of contamination into the environment that have detrimentally impacted the region. The NRC should review the entire docket prior to issuing a final GEIS for the plant. Hatch nuclear plant is located in Appling County along the banks of the Altamaha River--an area of vital ecological significance to Georgia and the region. The livelihood of hundreds of thousands of people depends on this river and billions of dollars of resources from fisheries, agriculture, tourism, and other coastal activities are at stake here.

A full review of the most recent studies pertaining to the region's ecology, including all flora and fauna, is extremely important, which requires site visits by the NRC staff to the affected region, not just to the site of the plant. Meeting with locally informed specialists and non-governmental organizations would provide much needed perspectives beyond the ones presented in the draft GEIS. Appendix D indicates that not one regional environmental or conservation group was contacted. Additionally, the state agencies contacted are not specialists in nuclear power related discharges or related environmental activities.

Aquatic Impacts / Concerns

Had specialized organizations been contacted, the NRC review panel would have been alerted to the fact that the robust redhorse, a big-river fish, was inaccurately considered to be extinct in the 1970s and is currently present. Therefore, a review of the impacts of relicensing on this species should have been done in the draft GEIS. Though the fish is currently not a federally listed species, there is concern as to why that designation has not occurred. The NRC review team should investigate these concerns by contacting the Georgian Department of Natural Resources (GADNR) Wildlife Resources Division and the Fish and Wildlife Service, among other agencies, to research their efforts to update lists of threatened and endangered species at both the state and federal levels.

Many concerns about the shortnose sturgeon, a federally endangered aquatic species found near the plant, have still not been properly addressed. The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) voiced written concerns as well—including concerns

billions of gallons of water from reservoirs to increase the water levels in the Chattahoochee River so that they could float barges large enough to deliver new steam generators to their aging nuclear Plant Farley just across the Georgia border in Alabama. If the generators could not be delivered by barge, it was estimated that delivering the generators in another way could cost the company more than \$500,000. Yet, though this region of the country is experiencing a severe drought, costs to the company were considered more important than costs to the environment and the region's drinking water supply.

over the freshwater mussel and the flatwoods salamander. The draft GEIS fails to present the public with important information documenting the correspondence that occurred between the numerous agencies and industry representatives. From the draft GEIS, it is not clear whether or not the NMFS has yet concurred with the NRC staff's assertion that the license extension will not impact the sturgeon population. Nor is it clear regarding the dialogue that ensued as to whether other species have been determined not to be impacted either.

In Appendix E, the NRC states that the potential additional twenty years of plant operation at Hatch "may affect, but is not likely to adversely affect, the shortnose sturgeon." Does that statement imply that the plant could somehow positively affect the sturgeon? This possibility is highly doubtful. The analysis provided does not clearly state how the species would or would not be impacted. Specifically, the impingement samples listed in Table 2-2 were collected from 1975-1980 and were used by the NRC in this draft GEIS to provide a characterization of the fish of the Altamaha River and vicinity (Section 2.2.5). The region has changed drastically since then. Those numbers do not accurately reflect current conditions in the area—especially the extreme drought situation that has continued over the past years. Using such old data affects all the listed species; therefore, this is not just a concern for the sturgeon. Also, many of the studies referenced in Appendix E are out-dated as well. Most of the recent studies were not conducted on the Altamaha, but rather were studies commissioned for the shortnose sturgeon population found in the Hudson River in New York. Georgians for Clean Energy is interested in knowing why more recent studies of the Altamaha were not commissioned. Furthermore, Georgia Environmental Protection Division (GAEPD) readings 2-10X above background levels of cobalt-60, zinc-65, manganese-54, and cesium-137 were found in river sediment, in some cases up to 100 miles downstream. Given that the sturgeon is a bottom feeder, why hasn't a study been commissioned for the NRC on the Altamaha sturgeon population to determine whether or not these levels impact the species? The species has declined over the decades and this document fails to prove that plant Hatch operations have not contributed to this decrease.

The study on the sturgeon listed in Appendix E of the draft GEIS suggests that the temperature conditions for the reproductive success of the sturgeon is very important. Plant Hatch currently does not have a maximum discharge temperature requirement with the GAEPD. Maximum discharge temperatures within the mixing box have been reported at 94 F in the summer. It is possible that the discharge temperatures, along with the severe drought conditions, among other factors, could negatively impact the sturgeon. We demand the NRC to conduct new, independent studies for the sturgeon population in the Altamaha. Additionally, Plant Hatch's National Pollutant Discharge Elimination System permit is due to expire in 2003. NPDES permits do not address radioactive effluents but the NRC should review potential future NPDES discharge temperature limits to more effectively gauge whether the plant can comply with state and federal requirements.

Furthermore, plant Hatch is the largest permitted water user on the Altamaha River. The draft GEIS inaccurately states that they are permitted to consume a monthly average of up to 72 million gallons per day with a maximum 24-hour rate of up to 104 million gpd. The Surface Water Withdrawal Permit was amended in April 2000 to increase the monthly average to 85 million gpd with the maximum daily use remaining the same. This permit will expire in 2010. The NRC should update this recent change and contact the GADNR Water Resources Division to investigate future permitting concerns especially in light of the current, sustained drought that this region is experiencing.

As mentioned earlier, the data on the impingement samples are extremely old. Georgians for Clean Energy does not believe that more than twenty-year-old data is reliable to use in order to project future impacts for the region thirty years from now. For instance, the most frequently recovered species listed in the impingement data was the hog choker, a freshwater flounder. Since then, the Altamaha has experienced a wide spread invasion by the non-native flathead catfish and the hog choker has not been as widely seen. In the 1997-99 GADNR Environmental Protection Division's Environmental Radiation Surveillance Report, only one flounder sample was measured, while ten catfish were sampled, out of a total of seventeen samples. Though the EPD report does not explain sampling methodology, this uneven "catch" should raise concerns within the NRC regarding the use of such old sampling data when reviewing the license renewal. The EPD report is only a surveillance study and does not address the biological impacts of radiation within the region's ecosystem.

Terrestrial Impacts / Concerns

A significant number of federally and state-listed endangered terrestrial animal and plant species are found at the Hatch site or within the transmission line rights-of-way (Tables 2-3, 2-4, 2-5). The draft GEIS fails to provide the specific results of the field surveys that Southern Nuclear Operating Company commissioned of the region so it is unclear as to when the sampling occurred, what was sampled, and who conducted them—a reference citation suggests 1998 but it is unclear if that study pertains only to the freshwater mussels in the area. Similarly, the gopher tortoise data appears to be from 1987. Additionally, where can the recent analysis of the bird populations be found? This lack of specificity in NRC reporting is unacceptable. Species of plants, reptiles, amphibians, birds, and mammals were listed in those tables. The draft GEIS fails to document how the NRC assessed that an additional twenty years of plant operation, beyond the current license expiration dates of 2014 and 2018, would have little to no impact on these species. It is unclear as to what agencies specifically were asked to provide comment on the potential future impacts on these species. For instance, correspondence between GADNR, FWS, and NMFS occurred, but what species were they addressing? Did they assess all the species listed or just those overseen by their agencies? How can this assessment be properly reviewed if a full review by knowledgeable organizations and governmental agencies have not been involved in the initial review and resulting correspondence? For example, it appears that the GADNR's Non-

Game/Heritage Program was contacted and they do indeed have expertise in this area. But were they asked to comment just on the mussel study that was completed in 1998?

The analysis of various species of mussels that are found along the Altamaha is not mentioned in the draft GEIS yet public comments have been raised about several endemic species. Several species have lessened in their frequency downstream of plant Hatch. How has plant Hatch been ruled out as not partially contributing to that decline? Furthermore, the Altamaha spiny mussel likely will be recommended to add to the state's list of concerned species and may also be a candidate for federal listing. These designations could occur after plant Hatch receives a license renewal. With this information, how can the NRC confidently predict that the continued and extended operation of this plant will not impact this species? Other species of plants, birds, animals, reptiles, amphibians, or aquatic organisms could change their listing status as well and it is not clear that the NRC looked at future listing changes. Yet, it can somehow be predicted that the plant itself will not impact the region's future ecosystem even though the draft GEIS is lacking a future projection of what the region may be like. We ask the NRC to meet with the GADNR, FWS, and the NMFS to discuss changes that may be made to threatened and endangered species lists in order to more accurately assess future impacts of plant Hatch on these organisms. Additionally, these agencies should receive copies of all the inspection reports, violations, and past contaminations to the river, the nearby wetlands, and the site itself that have occurred from the docket so they can see how plant Hatch has negatively affected the environment.

Air Quality Impacts / Concerns

On page 2-21 the draft GEIS incorrectly states "HNP is located on the Altamaha River between Savannah and Macon in western Georgia." Plant Hatch is more accurately in south central Georgia, definitely more east than west. Additionally, Hatch is southwest of Savannah and is along the Altamaha between Macon, where one of the Altamaha's headwater sources is, the Ocmulgee, and Darien, where the mouth of the Altamaha is found, not Savannah. The NRC review staff is obviously not familiar even with the location of the plant.

The closest non-attainment area is soon to be Macon since Georgia's Governor Barnes has alerted the EPA that Macon, Columbus, and Augusta have violated the new ozone ambient air quality standards. The EPA will likely designate Macon as a non-attainment area based on the old 1-hour ozone standard in the near future. Though Savannah has not yet violated the ozone standard it has come close and may do so in the future. If it does, this could potentially affect surrounding areas, including Hatch. The draft GEIS analysis is lacking crucial, current information in assessing Hatch's impact on the region's air quality.

Furthermore, there is significant concern over the emissions from the plant's cooling towers. A tremendous amount of water is lost every day in the form of radioactive water vapor from the towers. The draft GEIS states that plant Hatch consumes an average of 33 million gallons of water per day. Fine particulate matter would be suspended in that water vapor and carried

through the air to be deposited elsewhere within the region. Given Plant Hatch's daily water vapor losses, these numbers could be significant and may qualify the plant as a major source and should be assessed under the federal Prevention of Significant Deterioration program specifically in reference to its PM-10 emissions. It is not clear if Plant Hatch's Title V permit properly assessed whether or not the cooling towers should be added as a source—currently they are not. The permit will expire in February 2004 and therefore the NRC should consider future amendments. Additionally, there are mercury advisories for various fish species in the Altamaha. Depending on the levels of mercury present in the river water, mercury could also be present in the water vapor, and though not currently listed as a criteria pollutant, it may be in the future. An assessment of the Altamaha's water quality should be conducted in order to properly determine the towers' possible emissions. Additionally, radioactive decay products coming from the cooling towers decay to, for example, cesium-137 and strontium-90, which contaminate the surrounding populations and ecology. Georgians for Clean Energy demands that the NRC review staff thoroughly review these concerns before granting the license renewal.

Impacts of Uranium Fuel Cycle

On page 6-7, under "Onsite spent fuel", the NRC found: "The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available." At the public meeting on December 12, 2000 in Vidalia, Georgia, the NRC staff made statements that were somewhat confusing when asked about this subject. Does the draft GEIS address the site's Independent Spent Fuel Storage Installation (ISFSI). If not, why not, as it directly affects the environmental impact of plant Hatch operations – now and in any relicensed future? The ISFSI is storing "onsite spent fuel" so it seems reasonable that the impacts should be addressed.

Is it the NRC's assessment that if a permanent repository or monitored retrievable storage is not available in the future then it will be acceptable to continue storing waste at plant Hatch? Does this mean that on-site storage of highly radioactive waste at plant Hatch could permanently remain on the outdoor cement storage slab, the ISFSI? How can the long-term environmental effects of dry cask storage at Hatch be known at this time when the first three casks, casks that have never before been used at any other nuclear plant, were just loaded this summer? How is it possible to know that the casks will not impact the environment more than thirty years from now? The generation of highly radioactive waste is an unavoidable result of nuclear power generation. According to the relicensing application, plant Hatch will generate 5000 more radioactive spent fuel assemblies (as each assembly contains 60 spent fuel rods, that equals 300,000 additional spent fuel rods). It is imperative that a proper analysis of the facility's waste generation and how that future generation will impact the surrounding community and regional ecosystems be included in the final GEIS. We request that the NRC answer these questions and add the ISFSI and its projected future impact on the region into the scope of the license renewal review.

Inadequate Analysis of Alternatives

The NRC staff analysis of alternatives considers merely one combined option: replacing plant Hatch with gas plants and energy efficiency. This analysis does not consider a more robust mix of natural gas, purchase power from non-utility generation, energy-efficiency, and distributed generation technologies.

Nor does it adequately compare alternatives over the life cycle of Plant Hatch and the subsequent storage of spent fuel. Plant Hatch's current license assumes retirement in 2014 and 2018. These dates are approximately 13 and 17 years away. NRC staff analysis fails to consider technological changes in the maturation of generation technology such as fuel cells and solar photovoltaic that may occur in the coming decade, as well as other opportunities with environmentally sound biomass options.

Considering that the most recent long-range Integrated Resource Plan for Georgia Power Company, approved by the Georgia Public Service Commission, identifies ways that the company plans to secure power supplies in the long term based on future, projected demand and assumes that Hatch is not relicensed, it is clear that the analysis of alternatives along the planning horizon is inadequate.

Georgians for Clean Energy holds that the application and the NRC staff analysis fail to consider the ability of renewable energy supplies in combination with energy efficiency and cleaner generation (fuel cells, cogeneration, micro turbines, high efficiency gas, bio-fuels, etc.) to make a major, low cost impact on the applicant's high polluting and unsafe generation profile.

In the summer of 2000, the severe drought in Georgia forced Georgia Power Company to purchase peak priced electricity – almost \$100 million dollars worth that was not planned. Money spent on these “band-aid” supply-side solutions does not return any value to company customers. Had the money been invested in distributed resources and peak-clipping technology, a return would have been realized for many years beyond the summer of 2000. Shortsighted planning such as this and the inadequate review of alternatives presented in the application fail to provide value to consumers and to protect the environment.

Regarding market-based, renewable energy programs, Georgians for Clean Energy urges that the Southern Company and its partners continue working with our organization, the renewable energy industry, and the Center for Resource Solutions, a voluntary certification program that requires utility participants to follow specific guidelines that promote renewable resources to offer clean renewable resources to its customers. We request the NRC to review the Integrated Resource Plan mentioned above and to re-evaluate alternative energy options for this region.

Conclusion

Georgians for Clean Energy maintains that the NRC's history of frequently categorizing problems as generic industry problems is not serving the public interest in the case of plant Hatch's relicensing. We request that the NRC treat all problems and areas of concern raised about Plant Hatch in this re-licensing proceeding and others as "site specific problems," not generic industry problems. Many have been identified in these and previous comments and require further review.

Building a safe, affordable and efficient energy supply that provides safe jobs to the area is a top priority. Georgians for Clean Energy does not believe that the relicensing of Plant Hatch will work towards those goals. Along with the variety of reasons mentioned in these comments and those issued previously, we are opposed to the license renewal of the plant. Extending the life of this decrepit nuclear plant will only ensure the continued degradation of the environment and increase the already high risks to the surrounding population and downstream and downwind communities. We urge the NRC to thoroughly investigate our concerns and those of other organizations and individuals who have raised concerns in the public interest.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Sara Barczak', with a long horizontal flourish extending to the right.

Sara Barczak
Safe Energy Director

Attachments (3)

June 9, 2000
sent via certified mail

License Renewal Division
Chief of Rules and Directives
Div. of Administrative Services
Office of Administrator
Mail Stop T-6, D59
U.S Nuclear Regulatory Commission
Washington, D.C. 20555

RE: Environmental Impact Statement for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others.

COMMENTS OF CAMPAIGN FOR A PROSPEROUS GEORGIA

The following comments are filed by Campaign for a Prosperous Georgia (CPG) as part of the Environmental Impact Statement process for the License Renewal Application for Edwin I. Hatch Nuclear Reactors I and II by the Southern Nuclear Operating Company and others. The comments herein are a supplement to oral comments made by Rita Kilpatrick, May 10, 2000, before the NRC in Vidalia, Georgia.

CPG is a non-profit conservation and energy consumer organization headquartered in Atlanta with a field office located in Savannah. We are a statewide organization with members throughout Georgia and have focused on energy and nuclear concerns for 17 years.

Area of Vital Ecological Significance

The area where the Hatch nuclear plant is located in Appling County along the banks of the Altamaha River is an area of vital ecological significance to Georgia and the region. The livelihood of hundreds of thousands of people depends on this river and billions of dollars of resources from fisheries, agriculture, tourism, and other coastal activities are at stake here.

Earthquake Zone

One major concern is that Plant Hatch is located in an earthquake zone that threatens the public and the surrounding environment. On Jan. 18, 2000 there was an earthquake with a magnitude of 2.5-4 with the epicenter at Lake Sinclair. According to specialists at the Georgia Institute of Technology, there was no fault but rather a zone of weakness and these shifts occur regularly every 2-4 years. These shifts, in addition to the Charleston earthquake zone, would further threaten the operational integrity of the plant.

Attachment 1

Vulnerability to Hurricanes and Wildfires

A major concern is that every decade in the 50's, 60's, 70's and 80's, a hurricane has crossed South Georgia. The NRC report "Effects of Hurricane Andrew on Turkey Point Nuclear Generating Station (August 20-30, 1992)" shows serious consequences. Also, the severe gridlock that has occurred during hurricane evacuations in Florida is comparable to the type of gridlock that would occur in the event of a catastrophic event surrounding Hatch.

In addition, wildfires pose a threat to the area. At present, there is a wildfire that firefighters are trying to contain near Waycross in South Georgia. As recently occurred at the nuclear facility in Los Alamos, wildfire forced the town and workers to evacuate the area. A similar or worse occurrence at Hatch would force worker evacuation and threaten plant and public safety.

Natural Deterioration of the Plant

The plant is decayed and contaminated at present. This will worsen with time due to the deteriorating effects that radiation has on a nuclear plant. The Hatch reactors have a cracked core shroud, held together by steel braces which become brittle and corroded due to exposure to radiation. These have the potential to snap due to vibration leading to severe problems.

Continuous serious problems at Hatch that included automatic shutdowns (6-15-99, 6-28-99 and 1-26-00) are other examples of major problems, faulty equipment and aging machinery. The aging status of the plant and the lack of aging monitoring are of high concern to public safety.

Added concerns, which CPG supports, are identified in a May 3, 2000 petition filed by the Union of Concerned Scientists regarding aging effects due to radiation, specifically the degradation of liquid and gaseous radwaste systems.

Unacceptable Contamination of Air, Water, and Land

There has already been unacceptable damage and risk to the immediate environment. Extending plant operations will worsen the situation.

During the December 3-4, 1986 spill of 141,500 gallons of highly radioactive contaminated water from the spent fuel pool resulted in 44,000 gallons of that contaminated water released between the reactor buildings and contaminated on-site soils, equipment, asphalt, walls, turbine buildings, control building, hot machine shop, nitrogen storage area among other locations. This was in part due to leaking seals, lack of attention to documented problems, equipment failures, inadequate licensee action, and inoperable leak detection systems, all of which resulted in the highly contaminated water also contaminating the river, sediment, wetlands (swamp) and would have seeped into the groundwater adding to the existing groundwater contamination from numerous prior events. Prior events include the 1979 failure of a pump seal in the condenser tank system that contaminated the local aquifer or the release of radioactive RHR service water system containing Manganese 54, Cobalt 60, Zinc 65, and Xenon 135.

State documents from 1999 confirm that Hatch has contaminated sediments in the Altamaha River. Radioactive contamination of sediments attributed to operations of Hatch have extended as far as Jesup and Darien.

Hatch is situated over a major regional limestone aquifer system of groundwater resources and the surrounding community relies on underground wells; therefore water quality and health are of top concern. One of the local aquifers near the plant is an unconfined Miocene/Pliocene aquifer (Hydrologic Atlas 18).

A June 2, 1995 Inspection Report shows that leaking fuel caused increases in radioactivity in liquid effluent dumped into the Altamaha River in 1994 and increases in particulate forms of radioactivity as gaseous effluents released to the air, including Cobalt 58, Cobalt 60, Zinc 65, Cesium 134, Cesium 137.

The absence of independent analysis on levels of radioactive contamination in the river and waterways is a high concern. Independent analysis is sorely needed. It should be noted that state analysis only involves cross-checking and cannot be considered independent analysis.

The NRC Docket shows the site has become a radioactive dump inadequately held together; for example, the wall thinning and pitting of the piping systems is so bad (resulting from conditions such as but not limited to flow-assisted corrosion and microbiological corrosion and radioactive decay products) that the Southern Company has sought relief to use alternative repair techniques which would result in adding more metals around the pipes to restore wall thickness rather than replacing the pipes, requesting permission to use an ASME-approved code which has not been incorporated into NRC regulatory guide 1.147 and thus is not available for application at nuclear power plants as the Southern Company has stated in its third 10-year interval Request for Relief RR-25.

Detailed inspection reports from 1999 alone showed multiple equipment failures that could have had serious consequences, including meltdown.

The Hatch licensee dumped radioactive contaminated sludge on the land since 1982 without ever surveying the sludge until May 1992, which would have seeped into groundwater (Jan. 8, 1993 Inspection Report). The State of Georgia was negligent as an agreement state in issuing National Pollutant Discharge Elimination System (NPDES) permits for disposing of sludge, which did not address measurements for or content of radioactive material in the sludge.

A practice existed for years of upending radioactive contaminated drums, so that the residue would drain onto the ground from the drums which held radioactive waste oil and water, contaminated the soil and an underground storage tank with Cobalt 60, Manganese 54, Zinc 65, and Cesium 137. Subsequently contaminated soil was removed, but it is unclear where it was taken. Although the contaminated underground storage tank was removed and stored on-site at Hatch, the groundwater and possibly workers would have been contaminated and this issue was never addressed (Special Report 1-sp-80-3 Contaminated Soil at Waste Oil Storage Area).

The dam on Lake Sinclair owned by the Southern Company was completed in 1953. This is an old dam and would not have been built to current specifications of a modern dam. A severe earthquake could break the dam, which would release a massive amount of water. The effect of dam breakage particularly in times of major flooding on the Oconee, Ocmulgee and Altamaha rivers could have catastrophic consequences not only to Hatch but to the Independent Spent Fuel Storage Installation (ISFSI) for high-level radioactive waste currently constructed next to the Altamaha River.

The NRC has revealed that the ISFSI casks will give off 125 millirems/hr on the side of the cask over pack and 85 millirems/hr on the top. This will stream to the environment and will further add to the radiological burden to people in the area and to the environment, including wildlife and migrating birds, at levels over and above already existing contamination and above daily releases of radioactive contamination to water and air, due to current plant operations.

Goat farms and families with goats located in and around Appling County face added risks because tritium has a high transfer factor (17 times higher for goat milk than for cow milk), according to study done for the U.S. Department of Energy.

Worker Contamination

After years of operation the licensee has problems refueling without contaminating workers and the surrounding site; for example, Mar. 12, 1990 Inspection Report where the particulate airborne Cobalt releases were 5.2 times the already high maximum permissible concentration in air and 17 individuals were contaminated (14 contaminated internally), the contamination events actually started in Aug. 1989 and continued until Jan. 1990 and the contamination of personnel, equipment, and fuel water was significant. Over the years the NRC has repeatedly put concerns in writing due to "the continuing radiological and contamination control deficiencies" yet the NRC has been ineffective in bringing corrective change.

Historic Preservation and Ecologically Significant Sites in the Wind Paths and Surrounding Area

The following, among other local historic and ecologically significant sites, would be lost forever in the event of a catastrophic accident:

- J. Clayton Stephens Museum of Local History located in an adjacent county where local history is assembled;
- The Little Ocmulgee State Park on the Little Ocmulgee River in McRae;
- Horse Creek Wildlife Management Area in the Ocmulgee proper;

- The Gordonia-Altamaha State Park at Reidsville;
- Altamaha River Bioreserve.

Low-Income Population Impacts

There is not adequate attention to issues surrounding economic justice and the long-term, negative economic implications of Plant Hatch on the community. The area is being contaminated to the extent that the location is made undesirable for future economic development. This will only worsen with extended plant operations.

Unacceptable Fatalities and Injuries in the Event of Serious Accident

If there were a meltdown, there would be an unacceptable number of immediate fatalities and peak early injuries due to radiation and additional unacceptable fatalities and injuries from an accident and meltdown in the radioactive spent fuel pool.

Hatch's aging reactors, spent fuel pool and proposed ISFSI pose unacceptable risks to people, agriculture and fishing in the surrounding area. It would constitute malfeasance and negligence on the part of the NRC to re-license this plant and to allow the storage cask scheme to go forward.

The licensee's analysis of severe accident mitigation alternatives is grossly deficient.

The Brookhaven National Laboratory study done for the NRC in 1997 determined that spent fuel accidents with a full storage pool as exists at Hatch would cause 101 prompt fatalities within a 500-mile distance, 138,000 latent fatalities and 2,170 square miles of land that could never be de-contaminated. According to other government documents, reactors of the Hatch GE Mark I type can begin to melt down in as little as 40 minutes due to known design deficiencies.

The lack of a traditional containment dome at Hatch adds to public health and economic risks.

Increased Liability for Local and State Governments

The utility industry is undergoing dramatic change involving deregulation, plant sales, and company mergers that create an unstable and unsafe environment for nuclear plants and the surrounding communities. New companies that may purchase old facilities are often unaware of the historical record at nuclear plants. Southern Company, which operates the plant, is undergoing continual reorganization that heightens uncertainties. The company has encountered notable problems with risky investments in global expansion, as evident in reviewing the company's annual reports and filings with the U.S. Securities & Exchange Commission.

As nuclear companies close down and walk away from radioactively contaminated areas in the future, the liability for clean-up will fall on local governments to deal with the contamination at the site and in the surrounding area. There is no mechanism for remediation or responsibility for dealing with high levels of contamination that will only escalate with continued plant operations in the future and the site could fall to a "third party," most likely the state or municipality. Generation of more waste including the proposed 5000 additional assemblies will exacerbate growing liability to local governments.

Handling of Generic Industry Problems

We have concern that the NRC frequently categorizes problems as generic industry problems. We request that the NRC treat all problems and areas of concern raised about Plant Hatch in this re-licensing proceeding and others as "site specific problems," not generic industry problems.

Inadequate Analysis of Alternatives

The applicant's analysis of alternatives is inadequate and does not consider a viable set of alternatives. Also, the extent of economic analysis done on the alternatives is unclear in the application. Some alternatives are clearly not in the public interest nor the company's economic interest: (1) new coal, (2) new oil, and (3) new nuclear.

The most recent long-range Integrated Resource Plan for Georgia Power Company, approved by the Georgia Public Service Commission, identifies ways that the company plans to secure power supplies in the long term based on future, projected demand. It should be noted that this PSC-approved plan assumes that Hatch reactors will retire according to Hatch's original license in 2014 and 2018.

The applicant has not properly assessed the following renewable energy options:

(1) Wind power options: The applicant states that there are not adequate wind/ land resources in Georgia, and that wind is not an option. Land use maps indicate that the northeast corner of Georgia has small but good sites. It is important to note that throughout the U.S., many good sites are not on any resource maps. When energy developers are asked to find a resource at a reasonable price they seem to find the wind resource. The applicant could also negotiate with other companies to wheel wind power from other states. Off shore is a growing resource.

(2) Solar: The applicant states that solar is too expensive, and that Georgia does not possess adequate resources. The most cost effective photovoltaic (pv) applications are roof top and building integrated where distribution and reliability issues are addressed. Roof top pv and building integrated pv installations have no environmental impact.

(3) Geothermal: Geothermal heat pumps are a viable option in Georgia, already under development, with potential to expand significantly.

(4) Wood energy and biomass: The upgrade of inefficiency of current biomass plants should be considered. Also, agricultural waste, urban wood waste, and methane gas recovery from landfills should be considered.

Renewable energy supplies in combination with energy efficiency and cleaner generation (fuel cells, cogeneration, micro turbines, high efficiency gas, bio-fuels, etc.) can make a major, low cost impact on the applicant's dirty and unsafe generation profile. The do-nothing approach presented in the application is inadequate. There is a clear need to ramp up renewables, efficiency and cleaner generation today if customers future needs are to be met.

Similar to Americans nation-wide, Georgians are asking for clean air and clean water. The applicant parties can make this happen if they use economic leverage to support clean power. Regarding renewable energy programs, CPG urges that the Southern Company and its partners begin participation in the Center for Resource Solutions, a voluntary certification program that requires utility participants to follow specific guidelines that promote renewable resources. The goal of this program is to help regulated utilities offer programs to its customers to meet a high standard of public accountability. The Tennessee Valley Authority, which serves part of Georgia, launched a Green Power Switch program in April 2000 which give its customers the choice of paying a small premium to ensure that some of their electricity comes from non-polluting, renewable energy sources. We believe the applicant can significantly surpass TVA in "green power" development.

Attached herein is an excerpt from the Integrated Resource Plan by Georgia Power Company, filed in the past at the Georgia Public Service Commission for consideration in the company's long-range planning. Several of these programs were never implemented. Although current policy at the Georgia PSC requires a "ratepayer impact measures" screening test for energy efficiency programs to be approved for rate-based customer service programs, the company has in the past and currently has the ability to develop programs that go beyond the screening test. The company has had ample opportunity to develop its own energy-efficient programs for customers outside of rate-based approved programs. Unfortunately, to date, such programs have been designed primarily to build customer electric load which encourage usage at times that bolster nuclear supplies. This load-building effort is detrimental and should be abandoned, along with the pursuit of extended operations at Hatch.

Georgia is exporting power equivalent to that generated by Hatch. No analysis was presented about the contract terms and the potential for retaining the power in the state.

False Claims to be "Environmentally Clean"

The bravado with which the nuclear industry touts that nuclear power is "environmentally clean," including during the public hearings on Hatch re-licensing, requires that the record be set straight

about complaints raised to date. In 1998, the federal Better Business Bureau ruled that advertisements placed by the Nuclear Energy Institute on behalf of the nuclear industry were misleading and that the industry should “discontinue” its “inaccurate” statements. Last year, the Federal Trade Commission also agreed that the industry “failed to substantiate its general environmental benefit claims.” Attached herein is the Federal Trade Commission’s finding.

Conclusion

Building a safe, affordable and efficient energy supply that provides safe jobs to the area is a top priority.

In closing, we request the following:

- rejection of the licensee’s application to extend Hatch’s operating life;
- clean-up of the contaminated areas;
- pumping of the radioactively contaminated groundwater;
- retrieval of all particulate radiation, in particular Cobalt 60 in sediment, sub-surface soil, groundwater, and river water both on site and in the Altamaha River and in any adjacent creeks, tributaries, wetlands, and swamps within and without the licensee’s protected area;
- decontamination of all equipment, material and buildings on-site;
- adequate compensation of contaminated workers and any of the general public who may have been affected or whose well water may have been affected;
- and irreversible revocation of the plant license;
- a halt of the proposed Independent Spent Fuel Storage Installation.

Respectfully submitted,

Rita Kilpatrick
Executive Director



UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580

Office of the Director
Bureau of Consumer Protection

December 15, 1993

Joseph Calvin
President and CEO
Nuclear Energy Institute
1776 I Street, N.W.
Suite 400
Washington, DC 20006

Dear Mr. Calvin:

This letter states the views of the staff of the Federal Trade Commission ("FTC") with respect to a matter that the National Advertising Division of the Council of Better Business Bureaus, Inc. ("NAD") has referred to us, relating to certain advertisements that the Nuclear Energy Institute ("NEI") has run concerning environmental aspects of nuclear power generation. For reasons that will be explained below, FTC staff have determined not to recommend any law enforcement action in response to the referral.

Background

The National Resources Defense Council, joined by eleven other environmental advocacy groups and other organizations' (collectively "NRDC"), initiated the matter by asking NAD to investigate certain advertisements that NEI placed in several publications. NEI is a trade association whose members, it notes, include "all utilities licensed to operate commercial nuclear power plants in the United States, nuclear power plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear materials handlers such as hospitals and universities, and other organizations and individuals involved in the nuclear energy industry." NEI's advertisements, which consist of a few sentences of text in non-technical language accompanying colorful photographs, make certain claims as to the environmental benefits of nuclear power.

These other groups are: Citizens Action Coalition of Indiana, Center for Energy Efficiency and Renewable Technology, Clean Energy Group, Environmental Defense Fund, Environmental Law and Policy Center of the Midwest, Green Mountain Energy Resources, Legal Environmental Assistance Foundation, Nuclear Energy Information Service, Nuclear Information and Resource Service, Pace Energy Project, Public Citizens Critical Mass Energy Project, Union of Concerned Scientists, and United States Public Interest Research Group.

First, the advertisements make the general claim that nuclear power is "environmentally clean," and that it supplies electricity "without polluting the environment." Second, they claim that generation of nuclear power "produces no greenhouse gas emissions," and that nuclear plants "don't burn anything to produce electricity, so they don't pollute the air." Third, they claim that nuclear power generation does not pollute the water, stating that it "generates electricity without polluting air and water." The advertisements appeared in a number of publications.

NAD, after consideration of the parties' submissions, issued a decision in November 1998, upholding the challenge. NAD first found that the advertisements did not amount to "political" or "issue" advertising, and were therefore within its review jurisdiction. On this matter, NAD concluded that the environmental claims contained in the advertisements were not acceptable, and recommended that NEI refrain from making such claims.

Next, concerning the general environmental claim, NAD referenced the FTC's Guidelines for the Use of Environmental Marketing Claims, 16 C.F.R. Part 260, which state that unqualified general claims of environmental benefit "may convey a wide range of meanings to consumers," and are therefore difficult to substantiate adequately. NAD found "that consumers can reasonably interpret the claim to mean that electricity generated by nuclear power is produced without any negative impact on the environment." Since there is not yet any permanent disposal system for radioactive waste, and since the process of enriching the uranium that fuels nuclear reactors emits greenhouse gases, NAD concluded that the claim of no negative environmental impact is not substantiated.

Second, NAD found that the claim that nuclear power plants "don't burn anything to produce electricity, so they don't pollute the air," while perhaps technically true, is misleading in its failure to disclose that the uranium enrichment process produces greenhouse gases. Third, NAD found misleading the claim that nuclear power generation does not result in water pollution. Since the Clean Water Act defines "pollutant" to include heat that is discharged into water, and since once-through cooling systems do in fact discharge heat into water, NAD found that the claim was not acceptable.

NEI, in its response to NAD's decision, took issue with two of NAD's conclusions. First, it disagreed with NAD's determination that the advertisements were within NAD's review jurisdiction. Second, it noted that the 18-cycle analysis that NAD applied to the zero-emissions claim was a novel approach that the Federal Trade Commission had not passed upon. It also expressed the view that NAD should broadly disavow its guidance on this point to companies in applicability to claims of environmental benefits that might be made with respect to any product. NEI thereafter appealed the decision to the National Advertising Review Board, but the Board declined to undertake this appeal, finding that the appeal was procedurally defective.

NEI subsequently ran another advertisement in which it made a zero-emissions claim using wording similar to that which appeared in the earlier advertisement: "These plants don't burn anything to generate electricity, so they don't pollute the air." NRDC brought this advertisement to the attention of NAD, which notified NEI that the advertisement conflicted with

in November 1998 reconsideration, and requested that NEI bring the advertisement into compliance with the reconsideration. When NEI declined to do so, NAD referred the matter, on June 2, 1999, to the FTC.¹

Analysis

At the outset, we raise questions whether the FTC has jurisdiction to review the advertisements in question. The FTC's jurisdiction extends to trade practices that are "in or affecting commerce." 15 U.S.C. § 45(a). Trade practices consisting of speech fall within this jurisdictional grant only if they can be characterized as "commercial speech" for purposes of First Amendment free-speech analysis. *K.J. Reynolds Tobacco Co.*, 111 F.T.C. 539, 541 (1988).

We believe that a difficult question is presented as to whether the advertisements in question amount to commercial speech, rather than fully protected speech. On the one hand, the advertisements address important public policy issues in a manner that appears calculated to reach legislators and other opinion leaders. The advertisements were not concentrated in local publications in states where consumers currently can choose their electricity supplier, but were placed primarily in publications with a national readership, and in some publications that are read almost exclusively by those who make or seek to influence public policy.² Contemporaneous evidence regarding the advertising campaign that NEI has submitted to the FTC tends to support NEI's position that the advertisements were aimed at opinion leaders. The advertising campaign was conceived as part of a strategy to improve the image of nuclear power among opinion leaders, and the advertisements were targeted on groups with the characteristics of policymakers rather than typical consumers. In addition, numerous legislative proposals potentially affecting the interests of NEI's members were pending before Congress at the time the advertisements were run, and the timing of some of the advertisements coincided with expected votes on legislation important to the nuclear industry and with significant international meetings of policy makers. To this extent, the advertisements have characteristics normally associated with fully protected speech.

On the other hand, a large number of comments now here, or will soon here, the opinion

¹ On the same date, Public Citizen filed a petition with the FTC, requesting that the Commission find NEI's advertisements to be deceptive and that it prohibit further use of them. Public Citizen's petition, which is filed on behalf of Citizen Action Coalition of Indiana, Nuclear Information and Resource Service, State Energy Conservation Council, and U.S. Public Interest Research Group, objects to the advertisements on broader grounds than those which NADC presses in its petition.

² The publications in which the advertisements appeared include *The Washington Post*, *The Washington Times*, *National Review*, *The New Republic*, *The Economist*, *CQ Weekly*, *National Journal*, *The Atlantic Monthly*, *The Hill*, *Congress Daily AM*, *Bull Oak*, *The New York Times*, *Barron's*, and the *San Francisco Chronicle*.

of selecting the source of their residential electricity supply. Many of these have undoubtedly encountered NEI's advertisements. The environmental claims made in these advertisements will be material to some proportion of these consumers, and may influence their purchasing decisions — that is, the belief that nuclear power is environmentally benign may induce them either to select a supplier that generates electricity from nuclear plants, or to forgo paying more for electricity that is produced by non-nuclear sources. By encouraging the consumption of nuclear-generated electricity, the advertisements thus further the economic interests of NEI's members. To this extent, the advertisements constitute actionable commercial speech.

Given this question as to whether NEI's advertisements are commercial speech, we decline to exercise jurisdiction over this matter. Nevertheless, we are aware that the use of environmental benefit claims in the marketing of electricity to consumers is a significant practice that will likely gain increasing reliance as the restructuring of the residential electricity market proceeds. Furthermore, it is clear that environmental benefit claims may, depending on the circumstances, constitute commercial speech, regardless of whether such circumstances exist in the present matter. For example, marketing messages of the sort contained in NEI's advertisements would probably be commercial speech if they were sent by direct mail to consumers who have a choice among electricity suppliers. Therefore, we think it may be useful to present FTC staff's views on the propriety of the claims contained in NEI's advertisements.

As to NEI's general environmental benefit claim — its statement that nuclear power is "environmentally clean," and that it supplies electricity "without polluting the environment" — we agree with NAD's conclusion. The FTC's Green Guides advise that "[u]nspecialized general claims of environmental benefit . . . may convey a wide range of meanings to consumers," all of which require substantiation if the claims are not to be deceptive. Guides for the Use of Environmental Marketing Claims, 16 C.F.R. § 260.7(a). For example, the claim that a product is "Environmentally Friendly" may be interpreted by consumers to mean "that no significant harmful substances are currently released to the environment." *Id.*, Example 2. We believe that the same is true of NEI's claim that nuclear power is "environmentally clean." Because the discharge of hot water from cooling systems is known to harm the environment, and given the unresolved issues surrounding disposal of radioactive waste, we think that NEI has failed to substantiate its general environmental benefit claim.

We also agree with NAD that NEI has not substantiated its statement that the production of nuclear power does not pollute the water. Consumers are likely to interpret this as a claim that nuclear power generation does not harm aquatic environments. Since discharges of hot water from cooling systems is known to cause various harms to aquatic life, the claim is not substantiated. Although this discharge may be, as NEI points out, within levels permitted by federal law, that does not keep the absence of harm to the environment.

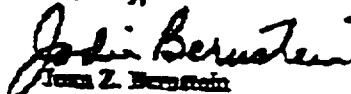
NAD also found deceptive NEI's statement that nuclear power generation "produces no greenhouse gas emissions." NAD recognized that the operation of nuclear plants does not release any combustion products. Its analysis, however, was based on the fact that the process of emitting radiation so that it can be used to fuel nuclear reactors requires large quantities of

electricity, and the generation of this electricity by plants burning fossil fuels releases greenhouse gases. The use of such a "life-cycle" analysis in interpreting environmental benefit claims is controversial. In its Green Guides, the FTC declined to take a position on the life-cycle approach, stating: "Such analyses are still in their infancy and thus the Commission lacks sufficient information on which to base guidance at this time." 16 C.F.R. § 260.7, note 2. Evaluating whether a life-cycle analysis would be appropriate for NEI's zero-emissions claim would require an extensive investigation. Because we are declining to exercise jurisdiction in this matter, we do not believe this is the appropriate forum in which to arrive at a position on the life-cycle approach, and therefore express no opinion on NEI's clean-air claim or NAD's analysis of it.

As you know, the FTC strongly supports the self-regulatory program that the Council of Better Business Bureaus, Inc. operates through its NAD. We commend NEI and NRDC for their participation in NAD's advertising review process, and hope that NEI will take to heart the evaluation of its advertising that has been rendered by its peers. The market for supplying electricity to residential customers is in the earliest stages of development, and the FTC will be monitoring marketing claims in order to prevent unfair and deceptive practices.

The closing of this investigation is not to be construed as a determination that a violation may not have occurred, just as the pendency of an investigation should not be construed as a determination that a violation has occurred. The Commission reserves the right to take such further action as the public interest may require.

Sincerely,

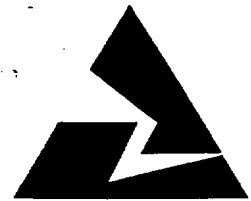

Jodi Bernstein
Director

cc: Robert W. Bishop
Vice President & General Counsel
Nuclear Energy Institute

GEORGIA POWER COMPANY

1995 INTEGRATED RESOURCE PLAN

Georgia Power



SECTION 1 – SUMMARY OF 1995 PLAN

1.1 FOREWORD

Georgia Power's Integrated Resource Plan (IRP) contains the Company's electric demand and energy forecast for the next twenty years and describes how we will meet the requirements shown in the forecast in an economical and reliable manner. The IRP process was developed by the General Assembly in 1991. It is intended to provide a forum for the Georgia Public Service Commission to review and approve the Company's Preferred Plan.

The Company has several options to meet its customers' future electrical needs. It can build or purchase a new generating plant. It can buy excess power from other suppliers. Or it can encourage customers to reduce their electrical consumption by offering incentives to encourage energy efficiency. The Company selects the most economical options, and the Commission then reviews the specifics of the proposed options in a subsequent, more formal, certification proceeding.

In addition, the Company can also encourage customers to reduce their electrical consumption by proposing electric rates with prices that more closely follow the Company's cost to produce electricity. These pricing "signals" tell customers when electrical demand is high (and more costly to produce) and when demand is low (and less costly to produce). While these pricing signals do not need to be certified, they do need to be approved by the Commission. Our experience has shown that these pricing signals, when provided to our customers, can lower peak demand even more than certified demand-side programs.

Georgia Power proposes to use all of these methods (purchasing new generating plant, buying excess power, offering certified demand-side programs, and providing innovative cost-based pricing signals) to meet the electrical demand of its customers. The Company plans to meet this demand in a manner that will keep the cost of electrical energy to its customers low while maintaining flexibility to meet the challenges of a rapidly changing power industry. This Preferred Plan includes meeting forecast requirements with existing capacity, capacity already under construction, existing power purchases, the Mid-Georgia Cogeneration Project (if certified by the Commission), shorter-term power purchases, and by continuing the existing residential demand-side program certified by the Commission in 1992. Though not part of the IRP process, the Company also intends to continue and expand the pricing options currently offered to its customers.

1.1.1 History

In January 1992, Georgia Power filed its first Integrated Resource Plan. The 1992 IRP was designed to meet the energy needs of our customers using a mix of supply-side and demand-side resources as required by the Commission.

The Commission, while approving the 1992 IRP, also charged us to be "bold and aggressive" in promoting conservation, and to offer "meaningful and significant incentives" to encourage greater customer participation in our demand-side programs. As a result, we redesigned the demand-side proposals in our certification filing to offer much higher rebates to our residential customers. We also proposed pilot programs offering rebates and special financing options to encourage our commercial and industrial customers to take additional steps to conserve electricity.

During the IRP and the certification process, the responses from our commercial and industrial (C & I) customers to the proposed demand-side programs were very negative. Businesses that had already invested in energy management over the years strongly objected to being asked to subsidize competitors (which the demand-side program would do) who had not. Responding to these concerns, Georgia Power agreed to a stipulation with representatives of the Commercial and Industrial Groups, the Commission Staff, and certain other intervenors that called for C & I demand-side programs that would minimize cross-subsidization in these customer classes. Nonetheless, some intervenors continued to support the original programs in the belief that the overall benefits to customers and society outweighed increases in rates and bills to the nonparticipating customers. The end result of this debate was that the Commission approved an IRP that included:

1. Residential demand-side programs that utilized aggressive rebates, and
2. Customized programs for commercial and industrial customer that minimized cross-subsidization.

The residential customers' participation in the approved residential demand-side program was greater than our projections. This caused the program costs to be more than originally planned. During the same time, projections of our costs to operate our existing system, and to build and operate new generating plants, decreased. This reduction in our projected "avoided cost" meant that the approved demand-side program was no longer going to save as much as originally expected. Therefore, when the program was reevaluated with the Commission Staff, the rebate levels offered in the program were reduced to make it more cost-effective when compared to our other options.

After further evaluation of the commercial and industrial demand-side programs, we elected not to pursue these programs and surrendered our commercial and industrial demand-side program certificates. Our decision was based on the following factors:

1. Preliminary impact analysis that showed the programs would not produce the energy reduction expected,
2. Passage of the Energy Policy Act which mandated increased energy efficiency in the commercial and industrial classes, and
3. Lower avoided cost that reduced the value of demand and energy savings offsetting program cost.

1.1.2 Recent Developments

Since the 1992 IRP hearings, competitive pressures have become much more significant in the electric utility industry. A Request-for-Proposal (RFP) was issued to meet the Company's need for a total of 1,200 megawatts (MW) of generating capacity in 1996 and 1997. We received more than one hundred bids from suppliers offering a combined total of 47,000 MW. Not only was the supply of electricity almost forty times greater than our capacity needs, but the prices offered (including our self-build proposals) were dramatically lower than the prices we anticipated in 1992. There is reason to believe that independent power producers, brokers and marketers, and other utilities — competing with Georgia Power in a robust bulk power market — will continue to keep power costs low. In addition, the fact that the Southeast has substantial supplies of available energy allows us the opportunity to develop a "portfolio" of shorter-term energy options to compliment our existing long-term commitments. A balanced portfolio of supply options minimizes the risk inherent in the evolving competitive environment.

The need to keep supply-side costs down is not unique to Georgia Power. The Company's competitors, within the state and throughout the region, also are taking advantage of this market-driven situation. It is a well-established fact that businesses looking to locate in Georgia or expand their Georgia operations usually have the choice of going to another state. These businesses are often facing intense competition from around the nation and the world. The cost of electricity can be an important part of their choice of locations. These facts require that our costs and prices to each customer be kept as low as practical.

The competitive forces that are impacting the industry's supply side also are having an equally dramatic impact on the demand side. A program designed to reduce the demand for electricity is cost-effective to all customers if the cost of the program is less than it would cost us to operate our existing system, build and operate new generating plants, or to purchase power. As our "avoided costs" have decreased, the cost-effectiveness of demand-side programs has diminished. The existing residential program is less cost-effective than when originally authorized for this reason. Although these programs pass the Total Resource Cost (TRC) Test, they do not pass the Rate Impact Measure (RIM) Test.



CAMPAIGN
FOR A
PROSPEROUS
GEORGIA

February 22, 2000
via facsimile 301-415-1759 &
301-415-1222

Director
Nuclear Regulatory Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555

RE: 2.206 Petition

Dear Director:

We are hereby submitting a petition under Section 2.206 of 10 C.F.R. regarding the Edwin I. Hatch nuclear power plant located near Baxley, Georgia in Appling County along the banks of the Altamaha River, an area of vital ecological significance upon which the livelihood of hundreds of thousands of people depend.

This petition is asking for shutdown of the facility, clean-up of the contaminated areas, pumping of the radioactively contaminated groundwater, retrieval of all particulate radiation, in particular Cobalt 60 in sediment, sub-surface soil, groundwater, and river water both on site and in the Altamaha River and in any adjacent creeks, tributaries, wetlands, and swamps within and without the licensee's protected area, decontamination of all equipment, material and buildings on-site, adequate compensation of contaminated workers, and any of the general public who may have been affected or whose wellwater may have been affected, and irreversible revocation of the plant license. Furthermore, the proposed Independent Spent Fuel Storage Installation should be halted for reasons which will be enumerated below.

The bases for this request are as follows:

Poor Personnel Practices

(a) Since the operation of Plant Hatch and its neighbor Plant Vogtle by persons under the influence of cocaine, marijuana, or alcohol in the 1990's is appalling (Inspection Report 50-321/94-23, 50-366/94-23);

Poor Facility Conditions, Maintenance, and Management

(b) Since the facility is decrepit, decayed and contaminated;

Attachment 2

- (c) Since start-up (see reports Nov. 1, 1974 and Feb. 1, 1977), Hatch has had problems with exceeding the technical specifications and lost pieces in the reactor and left them there (Dec. 15, 1975 Georgia Power to NRC);
- (d) Since, at start-up, Hatch personnel failed to document test steps and failed to calibrate radiation detectors and since there have been vibration problems (Sept. 19, 1975) and it is unclear if the vibration problems were ever fixed;
- (e) Since Hatch was exempted from reporting on the status of the facility 9 months after criticality (March 23, 1979);
- (f) Since the cracked core shroud (held together by steel braces) becomes brittle and corroded due to radiation exposure and could snap due to vibration leading to a disaster;
- (g) Since a reactor vessel feedwater nozzle inside radius and bore cracking (1974-1980) exacerbates the situation;
- (h) Since the Oct. 3, 1994 Inspection Report shows that the Southern Nuclear Company had ignored recommendations concerning looking for weld defects on the core shroud and even reduced inspection criteria; Since NRC inspectors only looked at videotapes of visual examinations of the reactor core shroud which is unacceptable as is the performance of General Electric examiners who wrongly positioned the scanning fixture on the core shroud wells (further problems are detailed in inspection conducted Mar. 25 - Apr. 1 1994);
- (i) Since the continuous serious problems at Hatch which included two automatic reactor shutdowns (6-15-99, 6-28-99 and 1-26-00) are other examples of major problems, faulty equipment and aging machinery at Hatch;

Unacceptable Damage and Risk to the Immediate Environment

- (j) Since during the December 3-4, 1986 spill of 141,500 gallons of highly radioactive contaminated water from the spent fuel pool resulted in 44,000 gallons of that contaminated water released between the reactor buildings and contaminated on-site soils, equipment, asphalt, walls, turbine buildings, control building, hot machine shop, nitrogen storage area among other locations, in part due to leaking seals, lack of attention to documented problems, equipment failures, inadequate licensee action, and inoperable leak detection systems, all of which resulted in the highly contaminated water also contaminating the river, sediment, wetlands (swamp) and would have seeped into the groundwater massively adding to the existing groundwater contamination from numerous prior events, such as the 1979 failure of a pump seal in the condenser tank system which

contaminated the local aquifer or the release of radioactive RHR service water system containing Manganese 54, Cobalt 60, Zinc 65, and Xenon 135;

(k) Since Hatch is situated over a major regional limestone aquifer system of groundwater resources and the surrounding community relies on underground wells and since one of the local aquifers near the plant is an unconfined miocene/pliocene aquifer (Hydrologic Atlas 18);

(l) Since the June 2, 1995 Inspection Report shows that leaking fuel caused increases in radioactivity in liquid effluent dumped into the Altamaha River in 1994 and increases in particulate forms of radioactivity as gaseous effluents released to the air, including Cobalt 58, Cobalt 60, Zinc 65, Cesium 134, Cesium 137;

(m) Since, the Docket shows the site has become a radioactive dump inadequately held together; for example, the wall thinning and pitting of the piping systems is so bad (resulting from conditions such as but not limited to flow-assisted corrosion and microbiological corrosion and radioactive decay products) that the Southern Company is seeking relief to use alternative repair techniques which would result in adding more metals around the pipes to restore wall thickness rather than replacing the pipes, requesting permission to use an ASME-approved code which has not been incorporated into NRC regulatory guide 1.147 and thus is not available for application at nuclear power plants as the Southern Company has stated in its third 10-year interval Request for Relief RR-25;

(n) Since after years of operation the licensee has problems refueling without contaminating workers and the surrounding site; for example, Mar. 12, 1990 Inspection Report where the particulate airborne Cobalt releases were 5.2 times the already high maximum permissible concentration in air and 17 individuals were contaminated (14 contaminated internally), the contamination events actually started in Aug. 1989 and continued until Jan. 1990 and the contamination of personnel, equipment, and fuel water was significant, and over the years the NRC has repeatedly put concerns in writing due to "the continuing radiological and contamination control deficiencies" yet the NRC has been ineffective in bringing corrective change;

(o) Since the Hatch licensee dumped radioactive contaminated sludge on the land since 1992 without ever surveying the sludge until May 1992 which would have seeped into groundwater (Jan. 8, 1993 Inspection Report) and the State of Georgia was negligent as an agreement state in issuing National Pollutant Discharge Elimination System (NPDES) permits for disposing of sludge which did not address measurements for or content of radioactive material in the sludge;

(p) Since the practice that existed for years of upending radioactive contaminated drums, so that the residue would drain onto the ground from the drums which held radioactive waste oil and water, contaminated the soil and an underground storage tank with Cobalt 60, Manganese 54, Zinc 65, and Cesium 137; Since subsequently contaminated soil was removed, it is unclear where it was taken to, and although the contaminated underground storage tank was removed and stored on-site at Hatch, the groundwater and possibly workers would have been contaminated and this issue was never addressed (Special Report 1-sp-80-3 Contaminated Soil at Waste Oil Storage Area);

(q) Since Hatch is situated in an earthquake zone and on Jan. 18, 2000 there was an earthquake with a magnitude of 2.5-4 with the epicenter at Lake Sinclair and according to specialists at Georgia Tech, there was no fault but rather a zone of weakness and these shifts occur regularly every 2-4 years which, in addition to the Charleston earthquake zone, would further threaten the operational integrity of the plant;

(r) Since the dam on Lake Sinclair is owned by the Southern Company and Lake Sinclair in pounds contains 15,330 acres of water (extending into 3 counties) and construction began in 1929, stopped during the depression, re-started and then stopped during WWII, and was only completed in 1953, it is therefore obvious that this is an old dam and is not being built to current specifications of a modern dam. Since a severe earthquake could break the dam which would release a massive amount of water, the effect of dam breakage in particular in times of major flooding in the Oconee, Ocmulgee and Altamaha rivers could have catastrophic consequences not only to Hatch but to the Independent Spent Fuel Storage Installation (ISFSI) for high-level radioactive waste currently constructed next to the Altamaha River;

(s) Since the NRC's conversation Feb. 1, 2000 with Pamela Blockey O'Brien revealed that the ISFSI casks will give off 125 millirems/hr on the side of the cask overpack and 85 millirems/hr on the top which will stream to the environment and will further add to the radiological burden to people and the environment, wildlife and migrating birds at levels over and above already existing contamination and above daily releases of radioactive contamination to water and air due to current plant operations;

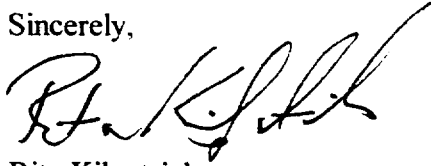
(t) Since radioactive contamination of sediments attributed to operations of Hatch have extended to Jesup and Darien;

(u) Since were there to be a meltdown there would be an unacceptable number of immediate fatalities and peak early injuries due to radiation and additional unacceptable fatalities and injuries from an accident and meltdown in the radioactive spent fuel pool;

We therefore pray and demand that this petition be granted because Hatch's aging reactors, spent fuel pool and proposed ISFSI pose unacceptable risk to people and agriculture and fishing in the surrounding area. We believe it would constitute malfeasance and negligence on the part of the NRC to deny this petition.

Had we been aware that our letter of February 3, 2000 would be taken up by the NRC Petition Review Board as a petition-initiating process, we would have accompanied it with this letter. We reserve the right to supplement the above materials as we deem necessary.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rita Kilpatrick', with a stylized, cursive script.

Rita Kilpatrick

Executive Director, Campaign for a Prosperous Georgia

cc: Leonard Olshan, NRC Petition Review Board
NRC Director of Operations
NRC Docketing and Service Branch

Georgia Department of Natural Resources

200 Butler Street, S.E., Suite 1154, Atlanta, GA 30334

Lanier C. Barrett, Commissioner
Environmental Protection DivisionHarold F. Roberts, Director
404/654-6713**Contact:**Jeff Carter, Georgia Environmental Protection Division
404/363-7014**FOR IMMEDIATE RELEASE:****June 30, 2000****GEORGIA SUBMITS LIST OF NONATTAINMENT RECOMMENDATIONS**

June 30, 2000 - Atlanta, Georgia. As requested by the U. S. Environmental Protection Agency, Governor Roy Barnes signed a letter today recommending which Georgia counties should be officially designated "nonattainment" for the revised ground-level ozone national air quality standard. However, the Governor asked that the EPA not make any final designations until the U. S. Supreme Court acts on the May 1999 D. C. Circuit Court of Appeals ruling regarding the revised standard. The court is not expected to act on the case until 2001.

The recommendation was sent in response to a U.S. EPA request that each State Governor submit their recommendations by the end of this month. Governor Barnes' recommendation includes the 13 counties already designated nonattainment for the previous ozone standard in the metro Atlanta area (Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale), along with eight additional surrounding counties (Barrow, Bartow, Carroll, Dawson, Hall, Newton, Spalding and Walton). The other three counties include Muscogee, Bibb, and Richmond counties. The Governor also recommends that 135 Georgia counties be designated as fully attaining the ground-level ozone standard.

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Ground-level ozone, a major component of smog, is a pollutant in the air that can reach unhealthy levels during summer months (May through September). Unhealthy ozone levels can cause adverse health effects for children, the elderly, people with respiratory problems and diseases, and people who work or play outdoors. Ground-level ozone is formed when volatile organic compounds and nitrogen oxides coming from man-made and natural sources react in the presence of heat and sunlight. A major source of these pollutants is the burning of fuels and other combustible materials.

U.S. EPA adopted a more stringent "revised" ground-level ozone standard three years ago. The State of Georgia has been monitoring the air for ground-level ozone in various locations in Georgia. The Governor's recommendation is based on this monitoring data. The final decision on which ozone level will be designated as unattainment will ultimately be made by the U.S. EPA.

U.S. EPA's revised ground-level ozone standard (on which these designations are based) is the subject of national litigation that is expected to go before the U.S. Supreme Court.

The Governor's recommendation does not contain any new requirements for the 24 Georgia counties nor does it prompt immediate transportation planning oversight by the Georgia Regional Transportation Authority. Also, the recommendation today does not alter or broaden any of the rules or requirements that have already been adopted by the State to help solve the ground-level ozone problem in the existing 13 county Metro-Atlanta nonattainment area.

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