Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Turkey Point Site License
Public Meetings

Docket Number: (n/a)

Location: Homestead, Florida

Date: Thursday, July 15, 2010

Work Order No.: NRC-349 Handouts

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CAITLAN MACLAREN

NRC Scoping Comments
Turkey Point, 7/15/10

- Please make available, to the public, all reports concerning groundwater at Turkey Point and areas close to Turkey Point, within the last 20 years. Please include all reports written by:

  U.S. Geological Survey,
  U.S. Environmental Protection Agency,
  U.S. Army Corps of Engineers,
  U.S. Department of the Interior,
  Florida Department of Environmental Protection,
  South Florida Water Management District,
  South Florida Regional Planning Council,
  Miami-Dade County Department of Environmental Resource Management,
  Miami-Dade County Water and Sewer Department,
  Florida Power & Light, and
  Contractors for Florida Power & Light.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of the Turkey Point FPL power station on groundwater (quality or quantity), please provide them.

- Please make available, to the public, all reports concerning hurricane activity in South Florida, within the last 20 years. Please include all reports written by:

  National Oceanic and Atmospheric Administration,
  National Weather Service,
  National Hurricane Center,
  U.S. Geological Survey,
  U.S. Army Corps of Engineers,
  U.S. Department of the Interior,
  South Florida Water Management District,
  South Florida Regional Planning Council,

Florida Power & Light, and
Contractors for Florida Power & Light.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on the Turkey Point FPL power station by hurricane activity since the plant went into service, please provide them.

- Please make available, to the public, All reports concerning sea level rise in South Florida, within the last 10 years. Please include all reports written by:

  NRC,
  NOAA,
  NWS,
  NHC,
  USGS,
  USEPA,
  USACE,
  USDOI,
  SFRPC,
  M-D DERM,
  FPL, and
  Contractors for FPL.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on the Turkey Point FPL power station of future climate change and sea level rise, please provide them. Please state all the projections for sea level rise used by the NRC.

- Please state the 50 year electrical demand projections for the FPL service area considering:

  no sea level rise,
  6 inches of sea level rise,

12 inches of sea level rise, and
24 inches of sea level rise.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to the "50-year electrical demand projections for the FPL service area" considering various climate change and sea level rise scenarios, please provide them.

- Please state the costs and benefits of the Eastern Transmission Corridor as needed for TP 6&7.

- Please state the costs and benefits of the Western Transmission Corridor, as needed for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of the Turkey Point FPL power station and its power transmission lines on the environment, including any cost-benefit analyses please provide them.

- Please state the costs and benefits of utilizing reclaimed water as supplied by M-D County for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of utilizing reclaimed water as supplied by M-D County to the Turkey Point FPL power station in the future, including any cost-benefit analyses please provide them.

- Please state the costs and benefits of utilizing water from Radial Wells for TP 6&7.

To the extent that you are aware of any documents or reports by any federal,

state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of utilizing water from Radial Wells to the Turkey Point FPL power station in the future, including any cost-benefit analyses please provide them.

- Please state the costs and benefits of using water from the Upper Florida Aquifer for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of utilizing water from the Upper Florida Aquifer to the Turkey Point FPL power station in the future, including any cost-benefit analyses please provide them.

- Please state the costs and benefits of using water from the Lower Floridan Aquifer for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of utilizing water from the Lower Floridan Aquifer to the Turkey Point FPL power station in the future, including any cost-benefit analyses please provide them.

- Please state the costs and benefits of using water from a remnant canal intake for TP 6&7.

Same question for the remnant canal intake

- Please state the costs and benefits to Biscayne NP for the construction and operation of TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point

FPL power station on Biscayne National Park, in the past, currently, and in the future, please provide them.

- Please state the costs and benefits to Everglades NP for the construction and operation of TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on Everglades National Park, in the past, currently, and in the future, please provide them.

- Please state the costs and benefits to CERP projects and CERP related projects for the construction and operation of TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on CERP Projects, in the past, currently, and in the future, please provide them.

- Please state the costs and benefits to the FPL Everglades Mitigation Bank for the construction and operation of TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on Everglades Mitigation Bank, in the past, currently, and in the future, please provide them.

- Please state the costs and benefits of rock mining on FPL owned land for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the rock mining

associated with the Turkey Point FPL power station on the environment in the past, currently, and in the future, please provide them.

- Please state the costs and benefits of extracting Biscayne Aquifer water for potable and process uses for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on the Biscayne Aquifer, in the past, currently, and in the future, please provide them.

- Please state the costs and benefits to federal and state listed species for the construction and operation of TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on state or federal endangered or threatened species, in the past, currently, and in the future, please provide them.

- Please state the varieties and concentrations of airborne pathogens, from using reclaimed water, that will be released by the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the numbers of fatal and non-fatal human diseases from airborne pathogens that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the effects from airborne pathogens on farm crops, protected wetlands, protected marine areas, and listed species that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the varieties and concentrations of known airborne toxic matter, from using reclaimed water, that will be released by the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the numbers of fatal and non-fatal human diseases from toxic matter that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the effects from airborne toxic matter on farm crops, protected wetlands, protected marine areas, and listed species that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state varieties and concentrations of airborne Emerging Pollutants of Concern (EPOCs), from using reclaimed water, that will be released by the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the numbers of fatal and non-fatal human diseases from EPOCs that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- Please state the effects from airborne EPOCs on farm crops, protected wetlands, protected marine areas, and listed species that will be caused by using reclaimed water for the operations of cooling towers for TP 6&7.

To the extent that you are aware of any documents or reports by any federal,

state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts on humans and/or the environment of airborne pathogens from the the Turkey Point FPL power station as a result of using reclaimed wastewater for cooling purposes, please provide them.

- ---Please state the varieties and concentrations of pathogenic waste, toxic waste, EPOCs waste, chemical waste, and radioactive waste that will be disposed by deep well injection.

- Please state the ultimate location(s) of the deep well injected wastes.

- Please state a list of the biological forms that will be affected by the deep well injected wastes.

- Please state the geographical extent of the biological forms that will be affected by deep well injected wastes.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to the storage of materials from reclaimed water in the boulder zone from the Turkey Point FPL power station.

- Please make available, to the public, all Consent Decrees and Final Orders concerning Underground Injection Control (UIC) wells.

To the extent that you are aware of any Consent Decrees or administrative orders or settlements, by FPL or any of its subsidiaries in Florida concerning Underground Injection Control wells, please provide them.

- Please state the costs and benefits of constructing and operating Class IV UIC wells in Florida that are banned by Florida state law.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of underground injection wells associated with the Turkey Point FPL power station, please provide them.

- Please state the costs and benefits of constructing and operating Class V UIC wells for TP 6&7.

- Please state the maximum pressure the deep well injection pumps will generate.

- Please state the maximum water temperatures of the wastes that will be deep well injected.

- Please state the affects of the geologic fracturing that will occur as a result of pressure, temperature, exotic chemicals, and oxygen from deep well injections.

- Please state the amount of waste seepage, by volume, into drinking water aquifers from deep well injection for TP 6&7.

- Please state the locations and extents of permitted ASR wells sites within 25 miles of TP 6&7.

- Please state the capacity of each of the permitted ASR well sites within 25 miles of TP 6&7.

- Please state the amount of heat that will be discharged into the atmosphere from TP 6&7 and state the temperature differential between the discharged heat and the ambient temperature.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of waste heat discharged into the environment from the operation of the the Turkey Point FPL power station in the past, currently or in the future, please provide them.

- Please state the amount of water vapor that will be discharged into the atmosphere from TP 6&7 and state the moisture differential between the

discharged water vapor and the ambient humidity.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of waste heat discharged into the environment from the operation of the the Turkey Point FPL power station in the past, currently or in the future, please provide them.

- Please state the amount of heat that will be discharged into the stratosphere from TP 6&7 and state the temperature differential between the discharged heat and the stratosphere.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of waste heat discharged into the environment from the operation of the the Turkey Point FPL power station in the past, currently or in the future, please provide them.

- Please state the amount of water vapor that will be discharged into the stratosphere from TP 6&7 and state the moisture differential between the discharged water vapor and the stratosphere.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of waste heat discharged into the environment from the operation of the the Turkey Point FPL power station in the past, currently or in the future, please provide them.

- Please state the amount of greenhouse gases TP 6&7 will contribute to the atmosphere.

See above

- Please state the amount of climate change TP 6&7 will make to the environment.

See above

- Please state the amount of change TP 6&7 will make to local weather conditions.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on weather formation, hurricanes, global warming, in the past, currently, and in the future, please provide them.

- Please state the amount of change TP 6&7 will make to hurricane formation, intensity, and longevity.

Ditto

- Please state the amount of change TP 6&7 will make to tornado formation, intensity, and longevity.

Ditto

- Please state the amount of disruption to sheetflow of wetlands that the construction of TP 6&7 will make including the plant site, all support facilities, all structures, all borrow pits (including rockmines,) all fencing, all roads, all berms, all pipelines, all transmission lines, all basins, all parking lots, and all vehicle usage.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on sheetflow of water to wetlands or any other adverse impacts to wetlands, in the past, currently, and in the future, please provide them.

- Please state the amount of disruption to groundwater flow and the salt front that the construction of TP 6&7 will make including the plant site, all support facilities, all structures, all borrow pits (including rockmines,) all

fencing, all roads, all berms, all pipelines, all transmission lines, all basins, all parking lots, and all vehicle usage.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on saltwater intrusion into local or regional aquifers, in the past, currently, and in the future, please provide them.

- Please state the amount of disruption to listed species that the construction of TP 6&7 will make including the plant site, all support facilities, all structures, all borrow pits (including rockmines,) all fencing, all roads, all berms, all pipelines, all transmission lines, all basins, all parking lots, and all vehicle usage.

See above

- Please state the amount of disruption to the biota of Biscayne National Park and adjacent bodies of Outstanding Florida Waters that the construction of TP 6&7 will make including the plant site, all support facilities, all structures, all borrow pits (including rockmines,) all fencing, all roads, all berms, all pipelines, all transmission lines, all basins, all parking lots, and all vehicle usage.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to adverse impacts of operation of the the Turkey Point FPL power station on the biota of Biscayne National Park and Outstanding Florida Waters, in the past, currently, and in the future, please provide them.

- Please state the worst case scenario and the worst timeline projection, as a result of hydrologic changes from TP 6&7 for salt water intrusion affecting the municipal wellfields of Miami-Dade County, the City of Homestead, the City of Florida City, the Florida Keys Aqueduct Authority,

and private well users.

To the extent that you are aware of any documents or reports by any federal, state, local or regional government agency, FPL or any of its employees or contractors that relate to worst-case scenarios to the environment, including, but not limited to the municipal wellfields of Miami-Dade County, the City of Homestead, the City of Florida City, the Florida Keys Aqueduct Authority, and private well users associated with the operation Turkey Point FPL power station on Everglades National Park, in the past, currently, and in the future, please provide them.

- Please state what protective measures will be taken to prevent salt water intrusion, as a result of hydrologic changes from TP 6&7, to the municipal wellfields of Miami-Dade County, the City of Homestead, the City of Florida City, the Florida Keys Aqueduct Authority, and private well users.

- Please state the "Need for Power" in Florida in light of a population decrease of 58,294 from April 1, 2008 to April 1, 2009.

- Please state the "Need for Power" in the light of sole source municipal wellfields being contaminated with salt water by a sea level rise of 1 foot or less.

- Please state the "Need for Power" in the light of large areas of infrastructure, residential and commercial real estate being flooded by a sea level rise of 1 foot or less.

- Please state the "Need for Power" where TP 6&7 is at the distant end of the electrical grid and is unable to send excess power to the east, the south, or the west.

- Please state the dimensions, capacities, and location(s) of the water management feature(s) resulting from excavations of the FPL-Owned fill source (rockmines).

- Please state the distance between the water management feature(s) and the salt front at the land's surface and the distance between the water management feature(s) and the salt front at the base of the Biscayne Aquifer.

- Please provide a vertical profile of the land showing 1. the surface of the water management feature(s), 2. the depth of the water management feature(s), 3. the location of the current salt front at the land surface, and 4. the location of the current salt front at the base of the Biscayne Aquifer.

- Please provide a map showing new and existing canals, pipelines, STAs, ,pump locations, and pump capacities associated with the water management feature(s).

- Please state the specific material that will be used to line the water management feature(s) and state the minimum thickness of the lining.

- Please state whether the lining of the water management feature(s) will be impervious to the flow of groundwater.

- Please state how the lining of the water management feature(s) will be stabilized knowing that groundwater continually flows through the Biscayne Aquifer.

- Please state the number of times the water management feature(s) can be drained and refilled while retaining its structural integrity.

- Please provide the operating plan for the water management feature(s) and the emergency plan for hurricane tidal surges, toxic spills, or other contamination situations.

- Please state the life-cycle costs of the water management feature(s).

- Please state how long the applicant plans to own and operate the water management feature(s).

- Please show the barge routes and state the number of barge trips for each

route for TP 6&7 that traverse the waters of Biscayne National Park and other protected waters.

- Please state the sizes and drafts of the barges.

- Please state the average speed and maximum speed of the barge trips.

- Please state the increased damage to the benthic communities due to physical contact, turbidity, silt deposition, and wake disruptions.

- Please state the amounts of cumulative damage to the benthic communities resulting from historic barge trips and the increased barge trips due to TP 6&7.

- Please state the plan for preventing barge collisions with manatees, turtles, and other protected species.

- Please state the plan for minimizing the number of barge trips for TP 6&7.

- Please state the mitigation for damage to the benthic communities of Biscayne National Park and other protected waters.

- Please show the plans to cleanse contamination from events such as fuel spills, chemical spills, tank ruptures, fires, weather related events, and other accidents where the contaminants will not automatically be routed to the industrial wastewater facility.

- Please state, specifically, which wastewater batches will be deep well injected and which wastewater batches will be released into the unlined cooling canal system for both construction activities and normal operation activities.

- Please state the plan for protecting benthic communities for all alterations to the plant site affecting the marine environment.

- Please state the plan for protecting manatees, turtles, dolphins, sawfish, and other protected species from non-explosive dredging activities.

- Please state the plan for protecting manatees, turtles, dolphins, sawfish, and other protected species from explosive activities.

- Please state, specifically, all additives and all additive quantities, injected into the cooling water , such as solvents, detergents, biocides, corrosion inhibitors, lubricants, scale inhibitors, oxygen removing agents, foam removing agents, salts, and any other chemicals.

- Please state, specifically, all additives and all additive quantities that will be released to the atmosphere in gaseous, particulate, or droplet form, from the cooling towers and cooling water.

- Please state the cumulative emissions of construction activities for each of the greenhouse gases including water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

- Please state the cumulative emissions of operation activities for each of the greenhouse gases including water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Sincerely,
(signatures waived to expedite delivery)

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CITIZENS ALLIED FOR SAFE ENERGY, Inc.

South Miami Town Hall information meeting on power line safety and nuclear expansion 7-9 pm

Introduction

Barry White
Citizens for Safe Energy, Inc., www.CASE-FL.org

Health risks from power lines & Turkey Point's troubled history

Dr. Philip Stoddard
Professor of Biological Sciences
Florida International University

Turkey Point expansion and Everglades restoration: contradicting interests

Laura Reynolds
Executive Director
Tropical Audubon Society, www.tropicalaudubon.org

Dawn Shirreffs
Program Coordinator
Clean Water Action, www.cleanwateraction.org

Concerns for marine and human life from FPL's Nuclear expansion proposal

Dr. Eric Prince
Chief of Migratory Fishery Biology Branch, National Marine Fisheries Service, National Oceanographic and Atmospheric Administration (NOAA)

Economics of nuclear power and energy efficiency

George Cavros, Esq.
Attorney with the Southern Alliance for Clean Energy, Inc.
Knoxville, TN, www.cleanenergy.org

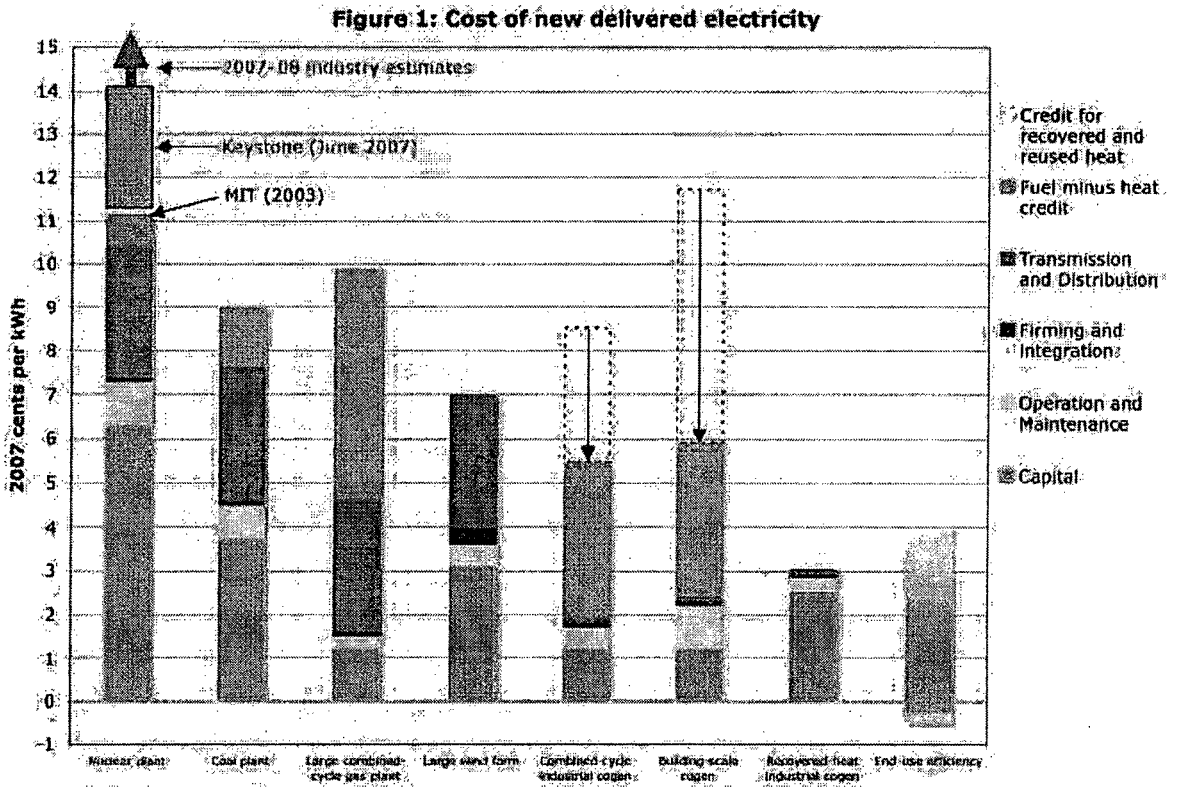
Nuclear power: the most expensive form of electricity

Dr. Jerry Brown
Founding Professor Global and Sociocultural Studies
Florida International University

What citizens can do

Barry White
Citizens for Safe Energy, Inc., www.CASE-FL.org

Supplemental page for Jerry Brown's handout



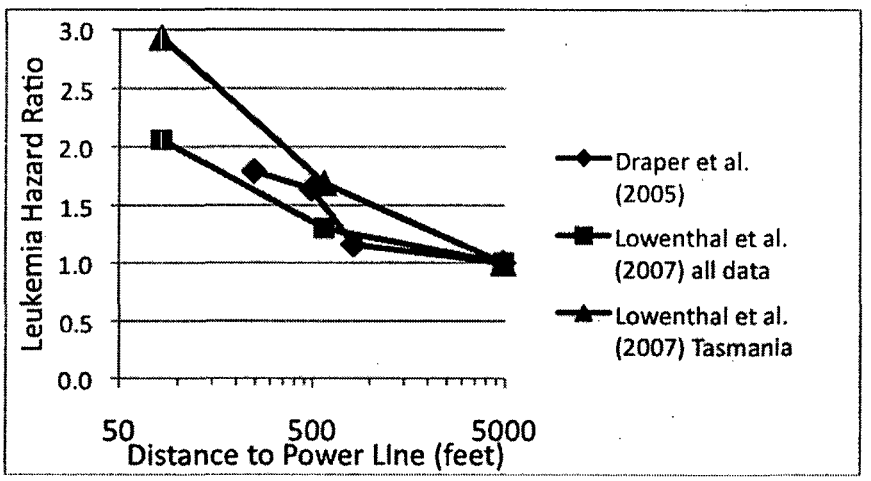
Source: Amory B. Lovins, Imran Shikh and Alex Markevich,
"Forget Nuclear," *Solutions Journal*, Rocky Mountain Institute, Spring 2008

Recent Biomedical Literature on Health Risks of Power Transmission Lines

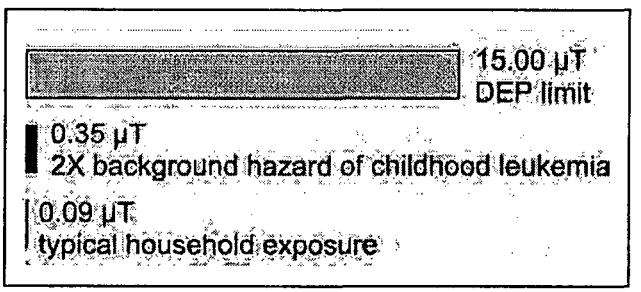
Philip Stoddard, Dept Biological Sciences, Florida International University

Childhood Leukemia

Over a dozen studies have shown a doubling in the incidence of leukemia in children living near power lines and in children chronically exposed to weak magnetic fields of 0.3 or 0.4 μT. Data from two recent studies on incidence of leukemia in people living near power lines are shown below (Draper et al., 2005; Lowenthal et al., 2007). Hazard ratio is the measured incidence relative to the background population incidence. In the study by Lowenthal et al. (2007) hazard ratios were even higher for people exposed as children during years 0-5. The sub-population from Tasmania (triangles) is more sedentary and thus may have had longer exposure times.



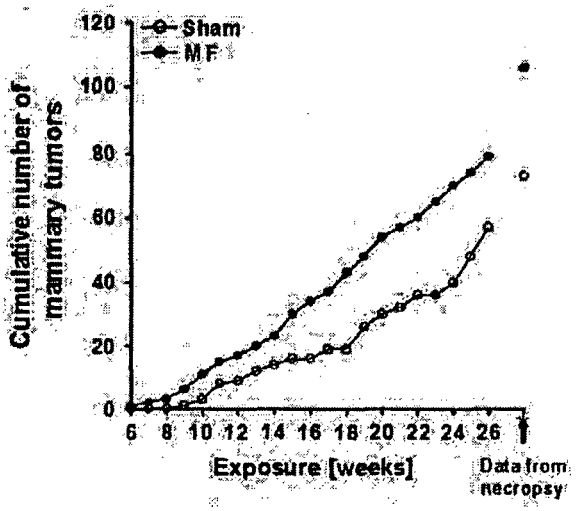
The U.S., the EU, and the World Health Organization all consider 100μT to be a safe chronic level of exposure to low frequency magnetic fields (LFMFs). Florida Dept of Environmental Protection (2008, DEP chapter 62-814) permits LFMF intensities of 15 μT at the edge of a 115-230 kV power line right-of-way. However LFMF intensities of only 0.3 to 0.4 μT have been associated with a doubling in risk of childhood leukemia (Greenland et al., 2000; Kabuto et al., 2006). Two new studies have shown that those children who do get leukemia are more likely to die if they reside in LFMF intensities above 0.2 or 0.3 μT (Foliart et al., 2006; Svendsen et al., 2007).



A common issue in the interpretation of childhood leukemia studies is that small number of contributing cases. To get around the "tyranny of small numbers", multiple studies may be combined in "meta-analysis", which is not without its own problems because of differences in methods of individual studies. The published meta-analyses of data from the 1990s (Michelle et al., 1995; Daniel, 2001) support the relation between proximity to transmission lines (wire codes), EMF exposure, and childhood leukemia. These findings have been confirmed by more recent results using better methods.

Epidemiological studies have been discounted by the electric power industry and government panels because no lab based animal studies confirm the epidemiological results. This issue is being remedied by elegant new lab studies showing that magnetic field intensities permitted under U.S. and EU law increase cancer rates in rats. In these studies, rats are treated with the carcinogen BDMA to produce mammary cancers in about 50% of individuals. Exposure to magnetic fields of 100 μT increased their incidence of cancers by another 45% in 4 months (Fedrowitz & Loscher, 2008).

Since 2000, the mounting tide of evidence has shifted the dominant view of risks from low frequency EMF. The EU and the conservative NIH now list low frequency magnetic fields as a "possible carcinogen". One of FPL's own consultants on health risks of transmission lines, a biostatistician and professional skeptic, now says in public that the mass of data on health risks of power lines must be taken seriously.



Alzheimer's Disease and Senile Dementia

The biomedical literature has many reports of magnetic fields intensifying mental disorders. These effects, even if significant in one study, have proven elusive in follow-up studies. One particularly worrisome paper shows a strong relation between residence near power lines and the doubling of Alzheimer's Disease (AD) cases and other forms of senile dementia (Huss et al., 2009). With incidence of AD on the rise, this study begs for replication.

Application

While adhering to Florida DEP standards, FPL's planned powerlines will legally expose people to magnetic fields 40 to 50 times greater than those associated with a doubling in the incidence of childhood leukemia and Alzheimer's disease. This year, FPL representatives and the head of the Florida DEP Siting Coordination Office have both stated in public forums that the risks of transmission lines are unsupported by science. Such claims can only be made if one ignores all recent evidence to the contrary. If anyone is to look out for the health of our children it must be us.

Literature Cited

Daniel, W. 2001. Residential EMF exposure and childhood leukemia: Meta-analysis and population attributable risk. *Bioelectromagnetics*, 22, S86-S104

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TURKEY POINT'S TROUBLED HISTORY

Philip Stoddard, Dept. Biological Sciences, FIU

Sources include public material from newspapers, NRC filings, and court filings.

1972 The power plant begins commercial operation. The total cost is $235 million.

1974 First problems detected in steam generators. FPL sues Westinghouse for more than the cost of repairs and loses, appeals and loses, takes case to FL Supreme Court and loses.

1975 880 gallons of radioactive wastewater stored in 55 gallon drums is inadvertently pumped into a storm drain from the Unit 4 Cask Wash Area.

2960 gallons of radioactive water in Unit 4 Spent Fuel Pit leaks through a concrete wall into the ground.

1978 Unit 4 Spent Fuel Pit Cooling Pump seal failed causing ~150 gallons of radioactive water to spill out to a paved area.

1979 Unit 3 Refueling Water Storage Tank leaks ~25 gallons of radioactive water into the soil.

Unit 4 Refueling Water Storage Tank valve misalignment causes Spent Fuel Pit to fill and overflow ~3000 gallons of radioactive water onto the ground.

1981 FPL fined $40,000 after operator is discovered away from controls of one unit.

1982 ~600 gallons radioactive water spilled from the B Monitor tank and potentially to the storm drain system.

FPL gets NRC permission to cover 10,000 square feet of radioactive ground with 5.5 ft of earth.

1983 FPL fined $100,000 failure to properly maintain the backup water pumps.

NRC drops $40,000 fine for 2 workers exposed to radiation.

1984 FPL fined $150,000 for allowing failure of the backup cooling water pumps and violations of rules on electrical design changes. FPL's profits are $300 million this year.

1985 FPL fined $100,000 for the improper safety margins & open valves in spent fuel pool.

FPL fined $25,000 for leaving core cooling water line closed for 5 days.

1986 FPL fined $25,000 for allowing worker to enter high radiation area.

FPL fined $300,000 because the core cooling water system is not fully operable. NRC staff finds violations of six main areas of FPL 's operation of the backup cooling water system, which is designed to keep the reactor core from melting if the primary system should fail. The violations include inadequate control of design modifications, failure to properly evaluate the safety consequences of design changes, inadequate procedures for documenting safety regulations, poor management oversight and failure to promptly correct problems with the cooling water systems, failure to shut down the plant within 72 hours, as required, when tests showed three valves weren't in proper condition.

FPL spokesman says *"We think Turkey Point is on the road to improvement."*

FPL fined $50,000 for conducting improper tests of accident systems and not conducting startup tests.

The reactor is tripped manually following a loss of turbine governor oil system pressure and the subsequent rapid electrical load decrease. Control rods fail to insert automatically because of two cold solder joints in the power mismatch circuit. During the transient, a power-operated relief valve opens but fails to close. NRC report 12/27/86

1987 FPL fined $75,000 for inadequate security during refueling.

FPL fined $75,000 for sleeping security guards and failure to escort visitors.

FPL fined $225,000 for improper operation and maintenance of backup reactor cooling systems.

FPL fined $100,000 for failing to correct leak leading to corrosion and build-up of 550 pounds of boric acid crystals on reactor head. Steam leak resulting from poorly fit clamp had been observed and ignored.

NRC ponders fine after unlicensed technician allowed to operate reactor.

Turkey Point goes on the NRC's "Watch List" of troubled plants.

1988 FPL fined $150,000 for security violations at Turkey Point.

Unit 4 Spent Fuel Pit Cooling Pump leaked again spilling ~1460 gallons of radioactive water.

The NRC threatens to close the nuclear reactors at Turkey Point.

1989 Eleven of 24 reactor operators fail requalification exams. One unit shut down for lack of operators.

FPL fined $100,000 for security violations.

Leak found in weld of instrument tube in reactor core.

FPL gets serious and invests money to address the problems. The next 15 years are relatively quiet.

1990 Turkey Point goes off the NRC "Watch List." Both units set a record for length of operation before scheduled shutdown at the end of the year.

1996 FPL fined $100,000 by NRC for firing an employee who reported safety concerns. However, between 1988 and 2003, over a dozen employees file retaliation cases against FPL under the ERA.

2002 NRC extends Turkey Point's 40-year licenses for another 20 years. Licenses set to expire in 2012 and 2013 will expire in 2032 & 2033.

2003 Unknown amount of radioactive water leaked from a temporary pump to the ground.

Radioactive tritium at 10-30X background level is detected by FIU and UM scientists in well 1 mile inland of Turkey Point. This level of tritium is not a danger itself, but indicates saltwater intrusion of aquifer from Turkey Point cooling canals.

2004 FPL profits rise 12%.

2005 Valve was left partially opened spills radioactive water (~5 gal?) at Unit 4 Tendon Gallery.

Turkey Point reactor is taken off-line after a transformer catches fire outside the reactor building.

2006 Turkey Point cited by NRC for failure to adequately assess and manage the increase in risk before performing maintenance on the A-train 480-volt 3C load center.

NRC issues Notice of Violation for 2 year malfunction of feedwater pump caused by improper installation.

Although NRC regulations require supervision of all visitors and contractors on a nuclear site, an unsupervised contractor drills hole in pipe in retaliation over payment issue. FPL charges customers for $6.2 million in lost revenue while plant is repaired. State orders FPL to return the money to its customers.

2007 Senior licensed nuclear plant operator David Hoffman resigns rather than follow FPL orders to restart Turkey Point plants prior to completing NRC-mandated safety checks after emergency shut-down.

FPL announces plans for 2 new reactors at Turkey Point.

2008 NRC fines FPL $208,000 after two security guards found to have disabled their weapons.

NRC objects that Turkey Point is seriously understaffed, with plant operators working overtime, up to 72 hours/week.

NRC fines FPL $130,000 after security guards are found to be napping on the job and covering for each other.

Turkey Point reactor taken off-line to repair leak caused by structural weld crack.

FPL conducts anonymous survey of Turkey Point Employee Concerns Program (ECP).
In the report: 29% disagreed with the statement: *"I am confident that nuclear safety and quality issues reported through the ECP are thoroughly investigated and appropriately resolved."*
35% disagreed with the statement: *"I can use the ECP without fear of retaliation."*
Narrative of employee interviews reads: *"A lot said that there is retaliation for using ECP."*
The lead author of the report, a licensed plant operator at Turkey Point, was fired after submitting the report to the NRC but won a court settlement against FPL. A respected professional, he now works for a different utility.

Chairman of NRC visits Turkey Point because of chronic safety violations.

2009 NRC tightens overtime rules after chronic abuses by FPL.

Turkey Point unit 3 shut down to repair steam leak.

Control rods jam while refueling Turkey Point unit 3, forcing extended shut-down for repairs.

20 plant operators sue FPL for covering overtime with long-term retention bonuses rather than issuing true overtime pay for long hours worked.

NRC finds design flaw in new Westinghouse AP1000 reactors that FPL plans to build at Turkey Point. The reactor is not designed to withstand hurricanes.

Undetected by security guards, 34 Cuban immigrants are dropped off on the Turkey Point grounds. After waiting around for eight hours they phone the control room, requesting that someone pick them up.

Following a shutdown of Turkey Point unit 4 for refueling, the control rods were lifted and tested. When all control rods were supposed to be up, two rods dropped into the reactor core of the shutdown reactor; however the remaining control rods apparently failed to automatically drop into the reactor core as designed and had to be manually released. While this particular malfunction posed no danger, any malfunction of the control rod drive mechanism constitutes a serious failure of the nuclear reactor's most significant safety feature.

FPL is fined $25 million for mistakes that caused the 2007 blackout, the same one in which Turkey Point operator David Hoffman refused to restart reactors prematurely. This state-issued fine is 10,000 times larger than the largest ever imposed by the NRC.

FPL has accumulated 2,000,000 pounds of nuclear waste at Turkey Point.

Under pressure, FPL agrees to design a program to monitor tritium and salinity in the local aquifer.

Turkey Point Expansion and Everglades Restoration: Competing Interests

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TROPICAL AUDUBON SOCIETY
The voice of conservation in South Florida

CLEAN WATER ACTION

Energy and water issues are inexorably linked. In the United States, energy consumption accounts for up to 80 percent of the cost of pumping, transporting and processing valuable water resources. Florida's energy industry is the second largest water user the state. An application by Florida Power & Light (FPL) to build two new nuclear reactors (6&7) would increase water demands by over **90 million gallons a day**. South Florida already struggles to meet water supply demands.

Meanwhile, our federal and state governments are spending an estimated $22.5 billion to restore Everglades National Park and Biscayne National Park. The proposed expansion of Turkey Point directly conflicts with planned restoration projects.

Water Impact

- FPL proposes to place radial collector wells 40 feet below Biscayne Bay Aquatic Preserve, in the upper levels of the Biscayne Aquifer (the Fort Thompson Formation). This depth may be within the "take zone" of the Biscayne Aquifer and has not been approved by the South Florida Water Management District for a consumptive use permit.
- FPL proposes to inject 40 million gallons a day (MGD) of waste in the boulder zone, a layer of the lower Floridan aquifer. This assumes infinite holding capacity within this layer.
- The Turkey Point expansion would require either approximately **90 million gallons a day** (MGD) of reclaimed water, **124 MGD** from its radial wells under Biscayne Bay or a combination of both. By comparison, the entire Florida Keys uses about 17 MGD.
- To date, no continuous testing or monitoring of the waste is proposed to ensure that our drinking water supply is not contaminated.

Everglades Impacts

- The availability of reuse water to meet both the projected needs of FPL to operate the new plant and the needs of the Biscayne Bay Coastal Wetlands (BBCW) restoration, part of the Comprehensive Everglades Restoration Plan (CERP), is questionable. The outcome of a reuse feasibility study is expected in 2011.

- The plan includes construction of transmission lines within Everglades National Park and along US1.
    - FPL's proposed transmission corridors impede upon lands within Everglades National Park and the footprint of BBCW and seek to fill more than 300 acres of wetlands.
    - US1 is an important corridor for growth because it is a public transportation route.
- The proposed rock mining project, which is planned within the BBCW footprint, violates Miami-Dade County's Comprehensive Development Master Plan, interferes with planned restoration projects and could worsen saltwater intrusion and chloride contamination in the Biscayne aquifer—South Florida's primary drinking water supply.
- The expansion will impact over 800 acres of wetlands. FPL's plan to mitigate this loss is not sufficient.
- Planned road expansions would block water flow to wetlands within CERP and compartmentalize the areas to be used in wetland rehydration.
- Releasing 30 MGD of steam from the reactor cooling process into the atmosphere (known as aerosol drift) has potentially damaging implications for local climate, wildlife and wildlife habitat, Biscayne Bay and locally grown food.
- The Turkey Point property is a known habitat for endangered or threatened species such as indigo snakes, Florida panther, wood storks and roseate spoonbills and is critical habitat for the American crocodile. Contaminant loading into the Cooling Canal System and loss of habitat through plant operation and construction may negatively impact these species.
- At least 3% of the water to be used in the radial collector wells will come from the Biscayne Aquifer. This will result in a reduction of more than 3 million gallons a day of groundwater flow needed to support the flora and fauna of Biscayne Bay. The proposed expansion is in direct conflict with the Biscayne Bay Coastal Wetlands project, the goal of which is to return the bay to less saline conditions.

Conclusion

In addition to ongoing problems from the existing facility, the combination of losing wetlands and worsening saltwater intrusion could significantly impact the habitats, water quality, surface flow, projected restoration water levels and groundwater hydrology functions that are the object of Everglades restoration plans.

Construction of the plant itself, as well as operation of the facility, will have adverse impacts on water quality, ecology and aesthetics of Biscayne National Park. It will negatively impact the area's protected species, wetlands, and much-needed fresh groundwater input to Biscayne Bay.

The estimated cost of the project is currently $24 billion. The public is expected to pre-pay the expansion costs, plus interest to FPL, through rate increases with no guarantee that the plant will be built.

Additional costs for future damage to our economy caused by a disrupted tourism industry and water supply shortages will further burden taxpayers. We can meet our energy needs through less expensive means by improving conservation and renewable energy alternatives. Approval of this plan is not in the public's best interest.

FPL's Power Plant Siting application and rate increase requests by the Public Service Commission should be denied.

Proposed Turkey Point Nuclear Reactor Units 6 & 7 – Financially Prudent?
George Cavros, Esq.

Why does in matter? – The Florida Legislature in 2006 shifted the risk of building nuclear reactors from the company's shareholders to its customers.[1]

Is <u>now</u> the time to spend over $18 billion of your money on a reactor project given the gathering of the "perfect storm" of economic and regulatory risk factors?
A sampling of risk factors includes:

>Demand Drop
The Great Recession has slashed demand significantly, and reversed growth.

FPL: *"The 2009 forecasted Summer peaks, compared to the 2008 forecasted values, are lower for all years shown. This change will tend to lower the projected economic benefits of additional nuclear capacity, at least in the near term."*[2]

Dr. Mark Cooper *(senior fellow for economic analysis at the Institute for Energy and the Environment at Vermont Law School): "The reduction in peak demand between the 2008 and 2009 feasibility analysis is striking. . . [u]nder the 2009 projection, FPL does not reach the 2017 peak projected in 2008 until 2022, five years later."*[3]

>Escalating Construction Cost Estimates of Reactors

2002: $1,500-2,100/kw
2007: $4,000/kw
2008: $6,000/kw
2009: $7,000-$9,000/kw

Dr. Cooper: *"As described in the FPL need study, FPL's cost estimate was derived from an early low estimate for a different type of reactor and its current estimates remain in the low range of projections. . . [t]he two conclusions I would draw from this analysis are (1) the range of costs considered by FPL is narrow and too low and (2) the uncertainty is huge."*[4]

>Uranium Cost Escalating
FPL: *"The forecasted uranium costs utilized in the 2009 feasibility analyses are higher than those in the 2008 analyses. This assumption change will lower the projected economic benefits of additional nuclear capacity."*[5]

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[1] § 366.93, Fla. Sta. (2006).
[2] Testimony of Steven R. Sim, Nuclear Power Plant Cost Recovery, Docket 09-0009, May 1, 2009.
[3] Direct Testimony of Dr. Mark Cooper, Nuclear Power Plant Cost Recovery, Docket 09-0009, July 15, 2009.
[4] *Id.*
[5] Testimony of Steven R. Sim, Nuclear Power Plant Cost Recovery, Docket 09-0009, May 1, 2009.

>Westinghouse AP 1000 nuclear reactor design not yet approved by NRC.
Design changes and costly delays plagued the nuclear industry in the 1970s and 1980s, leading to enormous cost overruns. How can we best insulate customers from price shocks of conventional energy and risky and costly nuclear reactors?
We need meaningful energy efficiency and renewable energy investment.

>Energy Efficiency
A well-implemented energy efficiency measure has a levelized cost of **$.02-.04**/kwh. A nuclear reactor's levelized cost is **over $.12**/kwh. *Seventeen* states have set high goals for energy efficiency intended to help customers lower their bills. These states have set a goal of meeting 1% of annual demand through energy efficiency.[6] By comparison, FPL has been recording paltry energy savings of about two tenths of one percent per year. In other words, the leading states and utilities around the county are realizing at least 5 times more energy efficiency than FPL.

Analysts of clean energy groups have concluded that FPL could reasonably avoid the unnecessary generation of about 11,000 gigawatt-hours of energy by 2019 through efficiency. Thus, boosting efficiency alone could replace one of the nuclear reactors FPL plans for Turkey Point.

>Renewable Energy
Capital costs are dropping steadily for renewable energy sources. For instance, the price per watt peak of photovoltaic (PV) solar has dropped from $27 in 1982 to $4 today. Renewable energy resources have little or no fuel cost and can be developed much faster than conventional plants or nuclear reactors. A Navigant Consulting, Inc. study concluded that Florida could reach 24 percent renewables by 2020 with a moderate investment. It simply requires that the right policies (RPS) be in place. *Twenty eight* states have mandated renewable energy targets, Florida has not.

***Dr. Cooper**: "Under a 20% renewable mandate by 2020, FPL does not reach the peak for 2017 projected in the [nuclear] Need Docket until 2036."*[7]

>What next? Influence Policy. Contact your state legislative leaders about the importance of meaningful energy efficiency and renewable energy targets (20% by 2020), especially state House representatives. Find them at: **www.myfloridahouse.gov**

Also, contact all 5 members of the Florida Public Service Commission (PSC) regarding your concerns about the financially risky and almost speculative nature of moving forward with plans to build nuclear reactors. Commissioner contact info: **www.psc.state.fl.us/**

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[6] ACEEE, *Laying the Foundation for Implementing a Federal Energy Efficiency Standard*, March 2009. The states include: VA-2.2%; VT-2%; IL-2%; CA-2%; NJ-2%, CT-2%; WA-2%; MA-2%; OH-2%, RI-2%; MI-1.5%; NY-1.5%; IA-1.5%; MD-3.3%.
[7] Direct Testimony of Dr. Mark Cooper, Nuclear Power Plant Cost Recovery, Docket 09-0009, July 15, 2009.

Nuclear Power: The Most Expensive Form of Electricity

Jerry B. Brown, Ph.D., Florida International University

December 10, 2009

A) Past Performance: Free Market Failure - Buyer Beware

- Historically, the utilities did a horrible job controlling costs on massive nuclear power projects, leading to the "malpractice of nuclear economics." As a result, the bill for 75 first-generation nuclear power plants soared to nearly $225 billion (in current dollars), *219% more than estimated*, according to a 1986 U.S. Department of Energy study.[1]

- A February 11, 1985, *Forbes* cover study on "Nuclear Follies," portrayed nuclear power as "the largest management disaster in business history."[2] Forbes observed, "Only the blind, or the biased, can now think that most of the money has been well spent. It is a defeat for the U.S. consumer and for the competitiveness of U.S. industry, for the utilities that undertook the program, and for the private enterprise systems that made it possible."

- In the early 1980s, following the financial fiasco of the Washington Public Power Supply System's $2.25 billion default (the largest default in utility history), Wall Street rated nuclear power plants as "high risk" and cut off access to capital markets.[3]

B) Current Critique: Most Expensive Form of Electricity

- "Nuclear power, once claimed to be too cheap to meter, is now too costly to matter" – cheap to run but very expensive to build. *The Economist*, 2001

- A 2006 *Business Week* article on "Nuclear Power's Missing Fuel," observed, "It's a nuclear renaissance, right? Not yet. While smart money is placing multibillion dollar bets on ethanol, wind power, and solar, it's not throwing buckets of cash at nukes."[4]

- "With $13 billion in new subsidies, if the government wants to prove that if it spends enough it can build nuclear power plants, it can do that...But, that's not the same as saying it makes economic sense to do it." – Christopher Flavin, Worldwatch Institute[5]

- "By 2007, as Figure 1 shows, nuclear was the costliest option among all main competitors, whether using MIT's authoritative but now low 2003 cost assessment, the Keystone Center's mid-2007 update, or later and even higher industry estimates."[6]
- Despite federal subsidies of ~5-9 cents per kilowatt-hour, or ~60-90% of entire projected cost of first new nuclear plants, Wall Street is still skeptical, including

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[1] Jerry B. Brown et. al., Chapter 5, "Nuclear Power: A Mistake in Search of a Mission," in *Freedom From Mid-East Oil* (World Business Academy, 2007), p. 160 (available for download at www.worldbusiness.org)
[2] "Nuclear Follies," *Forbes*, February 11, 1985.
[3] Jerry B. Brown, "The Ratepayers' Revolt," *Profiles in Power* (Simon & Schuster, 1997), pp. 56-87.
[4] "Nuclear Power's Missing Fuel," *Business Week*, July 10, 2006
[5] Karen Charman, "Brave Nuclear World?" *Worldwatch,* May/June 2006, p. 31.
[6] Amory Lovins et. al., "Forget Nuclear," *Solutions Journal*, Spring 2008 (www.rmi.org)

investment guru Warren Buffet, who abandoned a nuclear project because "it does not make economic sense." The smart money has headed for the exits.

- "In today's capital market, governments can have only about as many nuclear power plants as they can force taxpayers to buy."[7]

C) Not the Solution to Global Warming

- Considering the complete nuclear fuel life cycle, it is inaccurate to say that nuclear power is "clean" or "carbon-free." A study by the Öko Institute of Germany found that when *indirect emissions* are included, nuclear power produces significantly less green house gas emissions than combined-cycle natural gas and coal plants, but more greenhouse gas emissions that wind or hydroelectric plants.[8]

- Comparing all options' ability to protect the earth's climate and enhance energy security reveals why nuclear power could never deliver these promised benefits even if it could find free market buyers – while its carbon-free rivals, which won $71 billion of private investment in 2007 alone, do offer high effective climate and security solutions, soon, with greater confidence.

D) An Alternative: Accelerate Florida's Green Energy Resources

- "Despite sun, currents and wind, renewable energy is underused in Florida, leading to the state's ranking of 23rd in a recent energy efficiency study."[9]

- FPL's proposed two new nuclear units at Turkey Point will produce an estimated 2,200 MW of electricity — "enough to power more than 745,000 homes in South Florida" — at a cost that could top $24 billion, with estimated completion dates of 2018 and 2020.

- A Navigant Consulting Study, prepared for the Florida Public Service Commission, found that "between 1.8 and 16 GW of Renewable Energy capacity could be installed in Florida by 2020, depending on the scenario used," representing up to 24% of Florida's retail electricity.[10]

- The Navigant Report focused on the following renewable technologies: solar (photovoltaics, concentrating solar power, solar water heating); wind (onshore, offshore); biomass (solid, landfill gas, anaerobic digester gas); and ocean (wave energy, ocean current, thermal energy conversion, and tidal energy).

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[7] Amory Lovins et. al., "Forget Nuclear," *Solutions Journal*, Spring 2008

[8] Uwe R. Fristche, Comparing Greenhouse-Gas Emissions and Abatement Costs of Nuclear and Alternative Energy Options from a Life-Cycle Perspective (Berlin: Öko-Institut, Nov. 1997).

[9] "Green energy mostly untapped in Florida," *Miami Herald*, November 28, 2009, 5B

[10] Navigant Consulting, "Florida Renewable Energy Potential Assessment," December 30, 2008.

CASE Public Contact Information

Here are the organizations and individuals responsible for energy creation and distribution in Florida and the nation and for providing public information regarding energy matters. CASE will contact its members asking them to contact them with specific requests or suggestions. Individuals are, of course, free to contact them at any time to express their concerns or to request information or clarification on an issue.

Telephone calls are encouraged but written letters and emails are also effective. **One letter is worth one hundred emails.** Write to any commissioner at the NRC. Letters To The Editor and call-ins to radio programs will also help to bring our perspectives to public attention. Do something; make a difference.

The Governor and his cabinet can stop the nuclear expansion at Turkey Point:

www.myflorida.com/myflorida/cabinet/members.html

The Honorable Charlie Crist, Governor
Office of Governor The Capitol
Tallahassee, Florida 32399-0001
(850) 488-4441

The Honorable Bill McCollum, Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32399-1050
(850) 414-3300

The Honorable Alex Sink, Chief Financial Officer
Department of Financial Services
The Capitol
Tallahassee, Florida 32399-0300
850-413-2850

The Honorable Charles H. Bronson, Commissioner
Department of Agriculture and Consumer Services
The Capitol
Tallahassee, Florida 32399-0810
(850) 488-3022

Your state representative and senator must hear your views instead of just FPL's:

FLORIDA HOUSE REPRESENTATIVES: www.myfloridahouse.gov

FLORIDA STATE SENATE: www.flsenate.gov

More on next page

It's a good time to tell the PSC what you think about nuclear vs. renewable energy, and about increasing economic incentives for renewable energy (e.g., rooftop solar):

PUBLIC SERVICE COMMISSION, STATE OF FLORIDA (PSC)
2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 www.psc.state.fl.us

Commissioner Nancy Argenziano
Phone: (850) 413-6038 Email: Commissioner.Argenziano@psc.state.fl.us

Chairman Matthew M. Carter II
Phone: (850) 413-6046 Email: Chairman@psc.state.fl.us

Commissioner Lisa Polak Edgar
Phone: (850) 413-6044 Email: Commissioner.Edgar@psc.state.fl.us

Commissioner David E. Klement
Phone: (850) 413-6040 Email: Commissioner.Klement@psc.state.fl.us

Commissioner Nathan A. Skop
Phone: (850) 413-6042 E-mail: commissioner.skop@psc.state.fl.us

NUCLEAR REGULATORY COMMISSION, FEDERAL (NRC)
www.nrc.gov/about-nrc/contactus.html
NRC has several special contacts so it would be helpful to visit their website.
Mailing Address: U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001
1-800-368-5642, 301-415-7000 TTD: 301-415-5575

FLORIDA POWER & LIGHT (FPL): www.fpl.com
Chairman and CEO: Lewis (Lew) Hay III
FPL Group, Inc. 700 Universe Blvd., Juno Beach, FL 33408
FL Tel. 561-694-4000 Fax 561-694-4620

For more info, and to keep up with developments, follow: **www.CASE-FL.org**

C.A.S.E.

CITIZENS ALLIED FOR SAFE ENERGY, Inc.

Citizens Allied for Safe Energy, Inc. is a Florida non-profit corporation. CASE is an all-volunteer organization dedicated to informing the public, elected officials, and professional staff regarding safe energy concerns. CASE sponsors research and will, when appropriate, file law suits in pursuit of proper action by responsible parties. Public support is sought by letter and email writing and by funding of our work through $50 membership per household, more or less, depending on circumstances.

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Legal Clerical Editorial Scientific Lobbyist

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Good Afternoon...My name is Stan Smilan -- I'm a retired airline pilot.... And, I'm a resident of Palm Beach County in Southeast Florida where we currently have 80% of Florida's nuclear power plants... Remarkably, we can't buy insurance to protect ourselves from a nuclear disaster...Ironically, the legacy utility requires 100% loan guaranties from the Federal government to shield it from risks of a terrorist attack if it builds new reactors for a nuclear power plant here.

My reason for appearing here this afternoon is to object to the inadequate Environmental Report submitted in the FPL Application in this licensing proceeding.

As a resident, and as a citizen in this democracy, I appeal that the NRC should require an Environmental Impact Statement that provides a comprehensive assessment of the consequences that would result from a terrorist attack on the proposed Turkey Point reactors and nuclear waste storage sites.

The Union of Concerned Scientists contends that a terrorist attack on such a facility and its on-site storage of nuclear waste in cooling ponds could result in the release of 20-30 times the amount of radioactive material that was released into the atmosphere at Chernobyl in 1986.

It is noted on page 154 of the Barnes and Nobel edition of the Official 9/11 Commission Report that the initial conceptualization of the Al-Queda Plot was to hijack 10-11 airplanes and crash some of them into nuclear power plants -- in addition to the national symbols Al Queda attacked on 9/11.... Also the 9/11 Commission Report states that Mohammed Atta was considering a nuclear plant just north of the World Trade Center as his secondary target.

Those pieces of information are sufficient cause for concern -- especially so -- when coupled with the site-specific facts, that prior to 9/11 Mohammed Atta, a Muslim Brotherhood Jihadist, was living in Delray Beach -- in shared apartments -- with other members of his Al Queda terrorist group. Mohammed Atta was the lead pilot who crashed into the World Trade Center.

(1) The NRC should be made aware that Delray Beach is situated at the mid-point, equi-distant, between the St. Lucie and Turkey Point nuclear reactors. St. Lucie and Turkey are 135-miles apart.

(2) Alarmingly, the 2nd largest Jewish population in the United States is concentrated in the Tri-County Area consisting of Miami-Dade, Broward and Palm Beach Counties – between the two power plant sites.

(3) A cascading effect of a terrorist attack on the nuclear power plants would have been a trans-

generational genocidal event due to the unleashing of ionizing radiation from radioactive fallout -- causing irreversible genetic damage and genetic mutations that manifest into cancer over long latency periods.

(4) Additionally, it should be noted that all major roads pass thru the ten-mile evacuation zones of St. Lucie and Turkey Point. In a worst-case scenario of simultaneous attacks on St. Lucie and Turkey Point that disrupted the water supply to the cooling ponds – the human population could be subjected to lengthy exposure periods that would increase total body absorption of ionizing radiation. Such attacks could be launched by relatively small aircraft evacuating from the Caribbean in advance of an impending hurricane, and manned by suicide bombers functioning as kamikaze pilots.

(5) The NRC knows full well that in 1988 and 1990 Congress passed the Radiation Exposed Veterans Compensation Act, and stipulated that 21-categories of cancer are attributable – either as a causative or contributory factor -- to exposure to ionizing radiation from radioactive fallout.

(6) The NRC knows full well that induced genetic-damage and genetic mutations are the precursors for manifesting over 21 categories of cancer

(7) The NRC knows full well that cancer is a genetic process; that ionizing radiation causes genetic damage; and that genetic damage and cancer are inextricably intertwined.

(8) However, the NRC disingenuously avoided mention in its Supplemental Environmental Impact Statement of August, 2007, in a Diablo Canyon license proceeding that small children, pregnant women, women of childbearing age and the elderly are seriously impacted and vulnerable to acquiring induced genetic damage from exposure to ionizing radiation of a magnitude of as little as 5 REMS.

Because of concerns linking ionizing radiation to genetic damage the Atomic Energy Commission provided the initial funding for the Human Genome Project -- that project, today, is jointly funded by the Dept. of Energy and the National Institutes of Health.

Whereas, the Department of Energy has a legitimate role in promoting atomic energy, the NRC is tasked solely with the regulation of safe practices for the use of nuclear materials.

However, it appears that the NRC has overstepped its authority and is illegally and actively engaging in promotion of nuclear power -- by obfuscating and omitting from Environmental Impact Statements, the true risks and consequences of a terrorist attack on a nuclear plant.

The perception is that the NRC is on an unauthorized rescue mission to provide the legacy utilities with a profitable means to survive as a monopolistic growth industry. Nuclear power is three times more profitable for the electric utility industry than conventional power plants. Aside from saddling the taxpayers with extraordinary risks, nuclear power will crowd out dramatically, energy efficient competition from decentralized co-generation such as the 21-megawatt plant that provides the entire campus at the Massachusetts Institute of Technology with electricity, heating and cooling –by extracting twice as much useful energy and using only half as much fuel as a conventional power plant.

I URGE THE NRC TO INCLUDE IN THE EIS A COMPREHENSIVE ASSESSMENT OF THE ENVIRONMENTAL IMPACTS OF A TERROIST ATTACK. THERE IS A GREATER PROBABILITY OF A TERROIST ATTACK THAN AN ACCIDENT AT A NUCLEAR PLANT IN SOUTHEAST FLORIDA.

RICHARD ACCURSIO'S

Capri Restaurant, Inc.

935 N. Krome Avenue * Florida City, Florida 33034
Telephone: 305-247-1542
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Dear Nuclear Regulatory Commission,

As a resident of the Homestead/Florida City Area since 1955 and a person who regularly swam and fished in Biscayne Bay; over the course of 50 years I have never noticed even the slightest degree of damage as a result of the nuclear power plant. I can only imagine the amount of damage that would've been made had we used fossil fuels to supply our area with the needed electricity.

In my experience with FPL, I can only commend them for their hard work and their interest in the customer's finances seeing as how they went through the trouble of examining my restaurant's power consumption on site and providing comprehensive advisement on how to save electricity and money. Since the FPL staff visited my restaurant, our savings have been substantial.

As it stands, nuclear power is a far cleaner alternative to fossil fuels or conventional coal-powered plants. The preventive measures taken to veil the public from radioactive materials used in nuclear fission is far greater than with oil, as we can plainly see with the crisis happening in the Gulf at this moment. South Florida can prevent upwards of 6,500,000 gallons of C02 emissions a year by utilizing nuclear power plants and in the process save over $2,000,000,000.00 a year from the tremendous efficiency that comes standard with this type of power source.

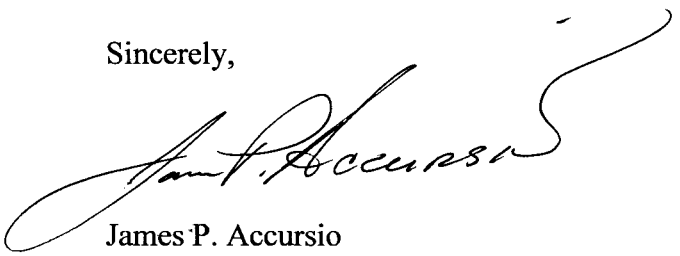
Another great reason to consider building two new reactors would be to imagine just how many jobs it would create. In a downed economy such as this, jobs are a hard thing to come by; but upon the unveiling of two nuclear reactors, a significant job growth is to be expected – good jobs to boot, not just a medley of entry level positions. This will in turn spike the cash flow in the South Florida area and analogously pass on to corporate and private businesses alike.

In addition to jobs, it will also stimulate the economy by commencing the required construction spending to the county which thusly stimulates millions of dollars in property tax. These taxes are passed on to schools, colleges, educational institutions, economic growth firms, and many other governmental organizations; giving them the financial injection they need in these hectic times.

As mentioned, I have been a long-time citizen of South Florida, and I have shared a close relationship with FPL since 1955 and they have powered my business for only 3 years less than that. It is without question that there is not a single company I would recommend over them to oversee such an exciting undertaking as this. After Hurricane Andrew struck in 1992, FPL made a tremendous effort in seeing to it that my business was up and running as soon as possible so I could make a living. Within 30 days I had my power back, and when considering the damage wrought by that disastrous storm, I was left very pleased and am forever grateful for their outstanding work and their unshakeable penchant for the consumer's welfare from both a financial *and* individual standpoint.

In closing, I and this committee wish that the Nuclear Regulatory Commission proceeds with this project, as its benefits far outweigh the risks. Nuclear Power is one of the most highly-regulated industries in the United States, and with our advances in technology, we can have a brighter, greener, and more financially-free future. As far as South Florida is concerned... it starts here. Thank you for your consideration.

Sincerely,



James P. Accursio
President
Capri Restaurant, Inc.

Board of County Commissioners
Miami-Dade County - Florida
DISTRICT 9

Dennis C. Moss
CHAIRMAN

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July 15, 2010

Ms. Laurel Bauer, Acting Chief
U.S. Nuclear Regulatory Commission
Environmental Projects Branch 2
Division of Site and Environmental Reviews
Office of New Reactors
Washington, D.C. 20555-0001

Dear Ms. Bauer:

I am writing to express support for FPL's application before the U.S. Nuclear Regulatory Commission to expand Turkey Point. The use of nuclear energy is important in order to reduce our dependence on foreign oil and other fossil fuels.

The Miami-Dade ~~County~~ Board of County Commissioners, where I am the Chairman, recently approved a land use change in order to accommodate their expansion plan which is the subject of the request that is before you.

FPL has been a good provider of electrical services in our community over the years, and has done a lot to be good stewards of the environment. They have acquired for conservation purposes, large sections of environmentally sensitive land in South Dade, and have provided an excellent habitat for crocodiles in the ponds surrounding their facility.

I am therefore stating for the record, that I am in full support of their request to expand the **nuclear power plant at its Turkey Point site.** I am sure that they will adhere to all of the requirements imposed on them by the regulatory commission. Further, I fully expect FPL to have a safety first philosophy in order to protect their employees and the community as they embark upon expanding their nuclear power capabilities, if approved.

Sincerely,

Dennis C. Moss
Chairman
Miami-Dade Board of County Commissioners

cleanenergy.org
Southern Alliance for Clean Energy

Environmental Scoping Comments on FPL's Turkey Point Combined License Application
Mandy Hancock, High Risk Energy Organizer, Southern Alliance for Clean Energy
July 15, 2010 – Homestead, Florida

My name is Mandy Hancock and I am the high risk energy organizer with Southern Alliance for Clean Energy. We are a regional non-profit organization with members here in Florida, in FPL's service region, and across the Southeast concerned about the impacts energy choices have on our health, economy and environment. Thank you for having this meeting.

We have serious concerns about FPL's push to build two new reactors here in Miami-Dade County that the Nuclear Regulatory Commission (NRC) must address as they prepare the draft environmental impact statement (DEIS). The uncertainties continue to escalate, putting ratepayers, taxpayers, and the environment at increasing risk. Turkey Point has a long history of infractions with the NRC, including three violations in its storage of radioactive nuclear waste just last month.[1] With vast amounts of radioactive waste already onsite, allowing more reactors to be built that will generate more waste is irresponsible when FPL cannot safely manage what has already been produced. Despite the NRC's Waste Confidence Rule, communities in South Florida do not have confidence in FPL's ability to manage this toxic waste.

The NRC should be aware that FPL ratepayers aren't happy about the tens of millions they have been forced to pay for in advance given the pre-payment scheme in place to finance new reactors in Florida. And FPL is again asking the troubled Florida Public Service Commission (PSC) for tens of millions more with hearings set for the end of August.

There are more affordable ways for FPL to meet energy demand while protecting the environment and tackling global warming. As Southern Alliance for Clean Energy and the Natural Resource Defense Council testified to the PSC in 2009, simply increasing energy efficiency goals by 1% could save enough energy to eliminate the "need" for new reactors, while saving ratepayers money.[2] Additionally, investing more resources in solar, wind and clean bio-energy instead of costly new reactors would benefit FPL and offer economic development opportunities for Florida, without draining our water resources or pocketbooks. The NRC must evaluate updated information using a combination of these sustainable energy choices, including energy efficiency, before allowing FPL to commit billions of dollars, billions of gallons of water, and nearly an entire decade or more to building these reactors when that time and money could be better spent on less risky options.

Energy efficiency measures preserve our water resources, save consumers money and also pose no health or safety risks to the public. Florida utilities have significant resources to tap in these areas as outlined in a recent extensive report, "Energy Efficiency in the South," by Georgia Tech and Duke University[3] and our report, "Yes We Can: Southern Solutions for a National Renewable Standard."[4]

Renewable energy technologies, such as solar and wind, do not require extreme manipulation of our precious water resources. The Environmental Report overlooks the potential for FPL to pursue a combination of wind and solar resources within its service territory and states that there is no renewable technology alternative that could mitigate the need for nuclear power.[5] The alternative analysis is based on the archaic assumption that base load power is needed. Last April, Federal Energy Regulatory Commission Chief Jon Wellington told the U.S. Energy Association that saying we need base load energy is like saying we need mainframe computers. The technology currently exists for distributed energy systems that negate the need for base load power.[6]

Further, the NRC must use updated information to reevaluate FPL's 2008 analysis for the new reactors in terms of the need for power given the economic downturn and significant reduction in demand.

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[1] Miami Herald, "Regulators Cite FPL Over Nuclear Waste Storage at Turkey Point." June 23, 2010. See: http://www.miamiherald.com/2010/06/23/1695022/regulators-cite-fpl-over-nuclear.html
[2] Florida Public Service Commission Docket 080407-EG, Document 06865-09. Amended direct testimony of William Steinhurst, p. 48, July 8, 2009.
[3] See http://www.seealliance.org/se_efficiency_study/full_report_efficiency_in_the_south.pdf
[4] See http://www.cleanenergy.org/images/files/SERenewables022309rev.pdf
[5] Florida Power and Light, Turkey Point COL Application, Rev. 0, p. 8.1-5, June 30, 2009.
[6] New York Times, "Energy Regulatory Chief Says No New Coal, Nuclear Plants May be Necessary." April 22, 2009. See: http://www.nytimes.com/gwire/2009/04/22/22greenwire-no-need-to-build-new-us-coal-or-nuclear-plants-10630.html

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Water Impacts

The NRC needs to acknowledge that this area is an extremely sensitive hydrological environment. The history of the Everglades and the current costly restoration projects illustrate the long-term shortsightedness that has scarred Florida's waterways. When comparing types of energy generation, nuclear power has higher rates of both water withdrawal and consumption than coal and natural gas and far more than renewable energy sources, such as wind and solar.[7] The April 2010 report I mentioned earlier by Georgia Tech and Duke University examined energy efficiency in the South and illustrated ways to substantially reduce energy needs, while simultaneously reducing water consumption. According to the report:

> *"In the North American Electric Reliability Council (NERC) regions in the South, 8.6 billion gallons of freshwater could be conserved in 2020 (56% of projected growth in cooling water needs) and in 2030 this could grow to 20.1 billion gallons of conserved water (or 45% of projected growth)."*[8]

Instead, we see FPL's projected figures for water demand in 2025 to include a 35% increase for public and commercial needs and a whopping 3224% increase for thermoelectric power generation.[9] The NRC needs to fully evaluate less water intensive energy alternatives—efficiency and renewables—including using a combination of these energy options. The NRC also needs to analyze the impacts such a drastic increase in water demand from the power sector could cause to this area.

Cumulative Impacts

As the NRC is aware, FPL already operates three reactors here in Florida and is proposing to build two more. FPL also proposes to build an onsite storage facility to deal with high level radioactive waste already over-flowing in the spent fuel pools. This amount of radioactivity clustered in such a population-dense, hurricane-prone area could create significant safety and health concerns for Floridians. The NRC must address these cumulative impacts to water resources and human health.

Miami-Dade County is an extremely dense population area with 1158 people per square mile.[10] Although FPL and Westinghouse state that the "probability of a severe accident is very low for the AP1000,"[11] this reactor design has never been built or operated anywhere in the world. Can they guarantee that an accident will never occur? Let's remember that the oil disaster Gulf communities are now grappling with was also supposed to be a very unlikely event. A recent technical report by Mr. Arnold Gundersen, a nuclear engineer with decades of industry experience, raises serious concerns about the safety of the AP1000 reactor design, concluding that the containment vessel is less safe than current reactors that have had a history of containment failures.[12] This concern, coupled with the high population density of the region, should be fully evaluated by the NRC. This is especially urgent in light of FPL's accident analysis scenarios, which assume that 95% of the population will be evacuated if an accident occurs.[13] In such a highly populated area, it seems unlikely that 95% of the population could be evacuated in a timely enough manner to avoid exposure in the event of a severe accident. Would this be possible if a serious storm or hurricane were threatening the area at the same time? I think not. A 1982 Congressional report estimated that if a meltdown occurred ***at just one*** of the existing Turkey Point reactors it could cause 29,000 peak early fatalities, 45,000 peak early injures, 4,000 peak cancer deaths, and $48.6 billion in property damage.[14]

In light of the ongoing, devastating BP oil disaster, the last thing Florida and this country needs is to approve another risky energy technology such as the proposed Turkey Point reactors. We demand that utilities utilize technologies to create an energy system that does not threaten public health and safety nor devour economic, environmental, and water resources. The inherent power in the Earth's environmental systems along with measures to reduce overall energy demand can provide the energy needed without degrading ecosystems and depleting life-necessary resources. There is an opportunity to do things differently and in smarter, non-radioactive ways. That opportunity must be seized for the sake of our communities and future generations.

Thank you.
Mandy Hancock, 229-563-6090

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[7] Hoffmann, J., S. Forbes, T. Feeley, U.S. DOE, Estimating Freshwater Needs to Meet 2025 Electrical Generating Capacity Forecasts, June 2004.
[8] Brown, Marilyn A; Etan Gumerman; Xiaojing Sun; Youngsun Baek; Joy Wang; Rodrigo Cortes and Diran Soumonn, "Energy Efficiency in the South." p. vii, April 12, 2010. http://www.seealliance.org/se_efficiency_study/full_report_efficiency_in_the_south.pdf
[9] Florida Power and Light, Turkey Point COL Application, Rev. 0, p. 2.5-34, June 30, 2009.
[10] Florida Power and Light, Turkey Point COL Application, Rev.0, p. 2.5-1, June 30, 2009.
[11] Florida Power and Light, Turkey Point Application, Rev. 0, p. 7.2-21, June 30, 2009.
[12] See: http://www.cleanenergy.org/index.php?/Press-Update.html?form_id=8&item_id=168
[13] Florida Power and Light, Turkey Point Application, Rev. 0, p. 7.2-5, June 30, 2009.
[14] U.S. Congress, *Consequences of Reactor Accident (CRAC-2) Report*, Nov. 1, 1982. Figures based on 1982 dollars and 1980 population data. Available at http://www.nirs.org/reactorwatch/accidents/crac2.pdf.

Proposed Alternative Path for Power lines

Use SR 836,
NW 36th St.
CSX Rail
NW 7th Ave
N River Dr.
to
FPL Station

Western portion uses existing FPL Right-of-Way

This route will go primarily through Industrial and Agricultural areas as opposed to residential neighborhoods.

It will greatly reduce opposition to the project.

Rogelio Maolan
Rogelito84@comcast.net
email me for more details on the route.