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February 11, 2015

Justin B. Green
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399
Justin.B.Green@dep.state.fl.us

Re: Site Certification Application, Duke Energy Florida, Citrus County, Florida; PA77-09A3,
Agency Report

Dear Mr. Green:

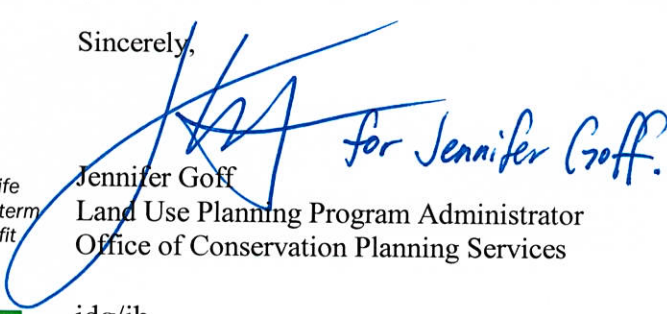
Florida Fish and Wildlife Conservation Commission (FWC) staff has coordinated our agency's review of the Site Certification Application, Citrus County Combined Cycle and associated linear facilities portion of the Duke Energy Florida Citrus County Combined Cycle and provides the attached Agency Report and Recommendations for Conditions to be included in the Citrus County Combined Cycle Certification in accordance with 403.507(2)(a)4, Florida Statutes.

Duke Energy Florida will need to comply with the State of Florida's listed species requirements found in Chapter 68-27A, Florida Administrative Code (F.A.C.), prior to construction of the Citrus County Combined Cycle, associated non-linear facilities, and associated linear non-transmission facilities. This also includes requirements specified in the Bald Eagle Management Plan.

We recommend approval of the Duke Energy Florida Citrus County Combined Cycle Site, associated non-linear facilities, and associated linear non-transmission facilities with the inclusion of recommended conditions related to listed species and their habitat; biological survey and monitoring (pre- and post-construction); and mitigation for impacts.

We appreciate the opportunity to review this project. If you would like to coordinate further, please contact Ms. Jane Chabre at (850) 410-5367 or by email to FWCConservationPlanningServices@myfwc.com, and she will be glad to make the necessary arrangements. If you should have technical questions regarding the information in the attached report, please contact Jason Hight at (850) 413-6966 or by email at Jason.Hight@myFWC.com.

Sincerely,


Jennifer Goff
Land Use Planning Program Administrator
Office of Conservation Planning Services

jdj/jh

Duke Energy Florida Citrus County Combined Cycle_19622_02112015
ENV 1-3-2

Enclosure

cc: Amy Dierolf, Duke Energy Florida (Amy.Dierolf@duke-energy.com)
Bobby Bull, Florida Department of Environmental Protection
(Robert.Bull@dep.stat.fl.us)
Brooke Lewis, Hopping, Green & Sams, P.A. (BrookeL@hgslaw.com)

Agency Report and Proposed Conditions to be Included in the State Certification

Project Description

Duke Energy Florida proposes to build and operate two gas-fired generating units, each with an approximate electrical output of 830 megawatts; and supporting buildings, facilities, and equipment at a site adjacent to the existing coal-fired Units 4 and 5 of the Crystal River Energy Complex. The project includes two new units and associated linear facilities including: closed-cycle mechanical draft cooling towers, an administration/warehouse building and parking, an auxiliary boiler, emergency diesel generators, a firewater pump, water treatment and storage tank facilities, a switchyard, a stormwater management system and detention ponds, and a wastewater percolation pond. Linear facilities include four 230-kilovolt (kV) and three 500-kV transmission lines, pipelines for cooling water makeup and blow down water, flow-augmentation water, and a well water supply.

Affected Resources

Effects on State-Listed Species

The Citrus County Combined Cycle Project, associated non-linear facilities, and associated linear facilities will likely impact federally and state-listed species, as described in the application. A listing of all the state- and federally listed species potentially impacted by the proposal and their listing status is included in the proposed conditions.

There are a number of listed species either observed within the Citrus County Combined Cycle Project Site, associated non-linear and linear non-transmission facilities or with a moderate to high likelihood of occurring including the least terns, eastern indigo snake, and gopher tortoise. The application identifies an eagle nest on site; while the bald eagle has been both state and federally delisted, it is still governed by the state bald eagle management plan and the federal Bald and Golden Eagle Protection Act. The site lies within the secondary range of the Florida black bear. The Florida black bear has been delisted from the state's Endangered and Threatened Rule; however, the species is still governed by the Florida Black Bear Management Plan and addressed by the bear conservation rule.

Each impacted species must be addressed on a case-by-case basis. If there is evidence that any individuals of these species are present, then the applicant must report the findings to the FWC. If impacts to these species cannot be avoided, then the applicant must contact the FWC before taking any action that might result in an impact to those species.

Proposed Conditions

We recommend approval of the Duke Energy Florida's Citrus County Combined Cycle Project Site, associated non-linear facilities, and associated linear non-transmission facilities with inclusion of the following proposed conditions. We request these conditions be included in the

special conditions as part of the certification related to specific listed species and their habitat; biological survey and monitoring (pre- and post- construction); and mitigation for impacts.

CITRUS COUNTY COMBINED CYCLE CONDITIONS OF CERTIFICATION

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

A. *Listed Species Conditions*

The following table contains state and federally listed species that occur in the State of Florida and may occur within the Duke Energy Florida's Citrus County Combined Cycle Project Site and associated linear facilities right-of-way. The table below contains species that are potentially impacted by the activities proposed on the Duke Energy Florida Citrus County Combined Cycle Project Site and associated linear facilities right-of-way. Therefore, these conditions of certification apply to the species listed in these tables.

Table 1. Terrestrial Species

Common Name	Scientific Name	Status
Gopher frog	<i>Lithobates capito</i>	SSC
American alligator	<i>Alligator mississippiensis</i>	FT(SA)*
Eastern indigo snake	<i>Drymarchon corais couperi</i>	FT
Gopher tortoise	<i>Gopherus polyphemus</i>	ST
Bald eagle	<i>Haliaeetus leucocephala</i>	**
Florida sandhill crane	<i>Grus canadensis pratensis</i>	ST
Limpkin	<i>Aramus guarauna</i>	SSC
Little blue heron	<i>Egretta caerulea</i>	SSC
Red-cockaded woodpecker	<i>Picoides borealis</i>	FE
Snowy egret	<i>Egretta thula</i>	SSC
Southeastern American kestrel	<i>Falco sparverius paulus</i>	ST
Tricolored heron	<i>Egretta tricolor</i>	SSC
White ibis	<i>Eudocimus albus</i>	SSC
Wood stork	<i>Mycteria americana</i>	FT
Florida black bear	<i>Ursus americanus floridanus</i>	***
Florida mouse	<i>Peromyscus floridanus</i>	SSC
Sherman's fox squirrel	<i>Sciurus niger shermani</i>	SSC

Table 2. Coastal/Marine Species

Gulf sturgeon	<i>Acipenser oxyrhynchus desotoi</i>	FT
Green sea turtle	<i>Chelonia mydas</i>	FE
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	FE
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	FE
Leatherback sea turtle	<i>Dermochelys coriacea</i>	FE
Loggerhead sea turtle	<i>Caretta caretta</i>	FT
Least tern	<i>Sterna antillarum</i>	ST
West Indian manatee	<i>Trichechus manatus</i>	FE

FE = Federally designated Endangered; FT = Federally designated Threatened; ST = State-designated Threatened; SSC = State Species of Special Concern

* Due to similarity to another federally threatened species

** While the bald eagle has been both state and federally delisted, it is still governed by the state bald eagle management plan and the federal Bald and Golden Eagle Protection Act.

*** The Florida black bear has been delisted from the state's Endangered and Threatened Rule; however, the species is still governed by the Florida Black Bear Management Plan and protected by the bear conservation rule.

Note: Florida's Endangered and Threatened species rule changed in November 2010. The list is now comprised of federally designated endangered and threatened species or state-designated threatened species. Additionally, the Species of Special Concern (SSC) designation has been retained in the rule until those species designated as SSC are evaluated for listing as state-designated threatened species.

[Article IV, Sec. 9, Florida Constitution; Chapters 68A-27 and 68A-16, Florida Administrative Code (F.A.C.)]

B. General Listed Species Survey

1. The Licensee shall coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) to obtain and follow the current survey protocols for all listed species that may occur within the Duke Energy Florida's Citrus County Combined Cycle Project Site, associated non-linear facilities, and associated linear non-transmission facilities rights-of-way, as well as accessible appropriate buffers within Duke Energy Florida property or rights-of-way as

defined by the listed species' survey protocols, prior to conducting detailed surveys.

2. Surveys shall be conducted prior to clearing and construction in accordance with the survey protocols. The results of those detailed surveys shall be provided to FWC in a report, and coordination shall occur with the FWC on appropriate impact avoidance, minimization, or mitigation methodologies.

[Article IV, Sec. 9, Florida Constitution; Section 379.2291 Florida Statutes (F.S.); and Rule 68A-27, F.A.C.].

C. Specific Listed Species Surveys

Before land clearing and construction activities within the Duke Energy Florida's Citrus County Combined Cycle Project Site and associated linear facilities right-of-way occurs, the Licensee shall conduct an assessment for terrestrial listed species and shall note all habitat, occurrence or evidence of listed species. Listed species to be included in this survey shall include those species listed in Table 1 in paragraph A above. Wildlife surveys shall be conducted during the reproductive or "active" season for each species that falls before the projected clearing activity schedule unless otherwise approved by FWC. For species that are difficult to detect, the Licensee may make the assumption that the species is present and plan appropriate avoidance/mitigation measures after consultation with FWC. The Licensee will submit avoidance/mitigation measures for FWC post-certification review and approval at least 60 days prior to commencing clearing or construction activities within the surveyed area. The surveys required by these conditions of certification may be conducted prior to issuance of the final order of certification, in which case this condition would be considered satisfied.

1. This survey shall be conducted in accordance with U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) or FWC guidelines and methodologies by a person or firm that is knowledgeable and experienced in conducting flora and fauna surveys for each potentially occurring listed species.
2. This survey shall identify any wading bird colonies within the Duke Energy Florida's Citrus County Combined Cycle Project Site, associated non-linear facilities, and associated linear non-transmission facilities rights of way that may be affected.
3. This survey shall identify locations of breeding sites, nests, and burrows for listed wildlife species. Nests and burrows shall be recorded with global positioning system (GPS) coordinates, identified on an aerial photograph, and submitted with the final listed species report. Although nests and burrows may be recorded individually with GPS, the FWC prefers that any applicable protection radii surrounding groups of nest sites and burrows be included on a site-specific basis, rather than around individual nests and burrows, and be physically marked so that clearing and construction shall avoid impacting them.
4. This survey shall include an estimate of the acreage and percent cover of each existing vegetation community (Florida Land Use, Cover and Forms Classification System, or FLUCFCS, at the third degree of detail) of each community that is contained within the Duke Energy Florida's Citrus County Combined Cycle Project Site, associated non-linear

facilities, and associated linear non-transmission facilities rights of way prior to land clearing and construction activities using a geographic information system (GIS). Examples of such wildlife-based habitat classification schemes include Florida's State Wildlife Action Plan (FWC 2012), Descriptions of Vegetation and Land Cover Types (FWC 2004), or Natural Communities Guide (Florida Natural Areas Inventory 2010)*.

[Article IV, Sec. 9, Florida Constitution; Section 379.2291 F.S.; and Rules 68A-27, 68A-4, and 68A-16, F.A.C.]

*Florida Fish and Wildlife Conservation Commission. 2012. Florida's State Wildlife Legacy Initiative: Florida's State Wildlife Action Plan. Tallahassee, Florida.

Florida Natural Areas Inventory. 2010. Guide to the natural communities of Florida: 2010 edition. Florida Natural Areas Inventory, Tallahassee, Florida.

Stys, B., R. Kautz, D. Reed, M. Kertis, R. Kawula, C. Keller, and A. Davis. 2004. Florida vegetation and land cover data derived from 2003 Landsat ETM+ Imagery. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida.

D. Listed Species Locations

Where any suitable habitat or evidence is found of the presence of listed species, including but not limited to those specified in 3 through 7 below, within the Duke Energy Florida's Citrus County Combined Cycle Project Site and associated linear facilities' right-of-way, the Licensee shall report those locations to, and confer with, the FWC to determine whether additional pre-clearing surveys are warranted, and to identify potential mitigation, or avoidance recommendations. If pre-clearing surveys are required by FWC as appropriate and as specified in these conditions of certification, they shall occur in the reproductive season prior to the anticipated date for the start of construction within the Duke Energy Florida's Citrus County Combined Cycle Project Site and associated linear facilities' right-of-way. The Licensee shall not construct in areas where evidence of listed species was identified during the initial survey until the particular listed species issues have been resolved as follows:

1. Listed Wildlife Species: If listed wildlife species are found, their presence shall be reported to the DEP Siting Coordination Office, the FWC, USFWS, and NMFS.
2. Species Management Plan: If total avoidance of state-listed wildlife species is not feasible, the Licensee shall consult with the FWC to determine the steps appropriate for the species involved to avoid, minimize, mitigate, or otherwise appropriately address potential impacts. For wildlife species, these steps shall be memorialized in a Species Management Plan and submitted to the FWC for review and approval.

[Article IV, Sec. 9, Florida Constitution; Section 379.2291 F.S.; and Rule 68A-27, F.A.C.]

E. Bald Eagle

1. The Licensee shall avoid impacts to bald eagle (*Haliaeetus leucocephalus*) nests where possible. If construction activities cannot be avoided within a 660-foot nest buffer zone, construction activities shall be conducted consistent with the FWC Eagle Management Guidelines as outlined in the FWC-approved Bald Eagle Management Plan dated April 9, 2008 (or any subsequent FWC-approved versions). In areas where bald eagle nests are present, all reasonable and practicable efforts shall be made to avoid construction activities during the nesting season (October 1 - May 15, or when eagles are present before October 1 or after May 15).
2. In accordance with the FWC Eagle Management Guidelines, for construction areas that fall within 330 feet of an active or alternate bald eagle nest, as defined in the Bald Eagle Monitoring Guidelines, construction activities shall be conducted only during the non-nesting season (May 16 - September 30). Any construction activities that fall within 660 feet of the nest during the nesting season shall be conducted following USFWS-approved Bald Eagle Monitoring Guidelines, dated 2007, or subsequent USFWS-approved versions.
3. In areas where adverse impacts to nests cannot be avoided, resulting in nest disturbance, the information required for an FWC Eagle Permit shall be obtained from the FWC, as authorized by Rule 68A-16.002, F.A.C., and minimization and conservation measures outlined in the FWC Bald Eagle Management Plan shall be followed, as applicable.

[Article IV, Sec. 9, Florida Constitution; Rules 68A-27, and 68A-16.002, F.A.C.]

F. Gopher Tortoise

1. The Licensee shall conduct surveys for gopher tortoises (*Gopherus polyphemus*), in accordance with the FWC-approved Gopher Tortoise Management Plan (as revised) and the FWC-approved Gopher Tortoise Permitting Guidelines, or subsequent FWC-approved versions of the Plan or Guidelines. A burrow survey covering a minimum of 15% of the potential gopher tortoise habitat to be impacted by development is required in order to apply for a relocation permit. Immediately prior to capturing tortoises for relocation, a 100% survey is required to effectively locate and mark all potentially occupied tortoise burrows and to subsequently remove the tortoises. Burrow survey methods are outlined in Appendix 4 of the Gopher Tortoise Permitting Guidelines, "Methods for Locating Gopher Tortoise Burrows on Sites Slated for Development." Surveys must be conducted as described in F.3 below. Surveys shall not be conducted within 30 days of any ground disturbance or clearing activities on the donor site. All surveys completed by authorized agents or other licensees are subject to field verification by the FWC.
2. The FWC is not required to provide a monitoring compliance assessment for activities that occur more than 25 feet from a gopher tortoise burrow entrance, provided that such activities do not harm gopher tortoises or violate rules protecting gopher tortoises. Examples of such violations noted in the past by the FWC include, but are not limited to, killing or injuring a tortoise more than 25 feet away from its burrow, harassing a tortoise

by blocking access to its burrow, and altering gopher tortoise habitat to such an extent that resident tortoises are taken.

3. The Licensee shall coordinate with and provide the FWC detailed gopher tortoise relocation information in accordance with the FWC-approved Gopher Tortoise Management Plan and Gopher Tortoise Permitting Guidelines as a post-certification submittal. This information shall provide details on the location for on-site recipient areas and any off-site FWC-approved temporary contiguous habitat, as well as appropriate mitigation contributions per tortoise, as outlined in the Gopher Tortoise Permitting Guidelines.
4. Any commensal species observed during the burrow excavations that are listed by the FWC shall be handled in accordance with the applicable guidelines for that species in accordance with Appendix 9 of the Gopher Tortoise Permitting Guidelines.
5. To the maximum extent practicable or feasible, all staging and storage areas shall be sited to avoid impacts to gopher tortoise burrows and habitat.

[Article IV, Sec. 9, Florida Constitution; Section 379.2291, F.S.; and Rule 68A-27, FA.C.]

G. Least Tern

1. The Licensee shall coordinate with the FWC before construction to develop and implement an FWC-approved plan to avoid attracting least terns to the construction site as a result of the temporary placement of gravel substrates.

[Article IV, Sec. 9, Florida Constitution; Section 379.2291, F.S.; and Rule 68A-27, FA.C.]

H. Florida Black Bear

1. The Licensee shall take proper precautions during clearing and construction to protect Florida black bears from accidental injury due to conditions on site during construction. These precautions may include:
 - covering open trenches while dormant to reduce the likelihood bears becoming trapped
 - creating areas within the trench to aide in exiting, such as berms or sides with a shallow gradient to allow the bear or other animal to escape
 - electric fencing along the construction boundary.
2. FWC literature concerning the use of electric fencing as a black bear deterrent has been provided to the Licensee and this effort shall be coordinated with an FWC biologist.
3. If there is any chance that food waste will be stored on or near the site at any time, bear-resistant garbage containers or dumpsters shall be used.
4. Additional construction policies and practices to protect bears shall be used whenever feasible. These include:

- a. Prohibit clearing, blasting and burning of forested habitat during the December-March denning season for bears while in a primary or secondary bear range.
- b. Require clean construction sites with wildlife-resistant containers for workers to use for food-related and other wildlife attractant refuse; require frequent trash removal and the use of proper food storage and removal on work sites.
- c. Adjust trucking activities and material delivery schedule to mandate slower speed in wooded zones, at dawn and dusk, and during the June and July breeding season for bears.
- d. Conduct frequent and unannounced site inspections and reward site managers that keep a bear-smart worksite.
- e. Incorporate preferential purchasing policies and bid selection guidelines to select consultant, contractor, sub-contractor, and material suppliers with progressive ecological policies, conservation strategies, and use of materials appropriate for wildlife habitat.

[Article IV, Sec. 9, Florida Constitution; Rule 68A-4.009(b), F.A.C.]

I. *Eastern Indigo Snake*

1. The Licensee shall consult with the USFWS and the FWC to develop a plan to avoid the “take” of eastern indigo snakes on Duke Energy Florida’s Citrus County Combined Cycle Project Site and associated linear facilities right-of-way during construction and operation.

[Article IV, Sec. 9, Florida Constitution; Rule 68A-27, F.A.C.]

J. *Florida Manatee*

1. Manatee identification cataloging and visual monitoring of manatees utilizing the Crystal River Energy Center (CREC) discharge canal under these general guidelines:
 - a. Monitoring will be performed during at least one winter period prior to cessation of all once-through condenser cooling water flow at the CREC. Duke Energy Florida will endeavor to monitor for two winter periods based on the timing of certification and approval of the Manatee Management Plan.
 - b. Monitoring after full cessation of once-through condenser cooling water flow during two or three winter periods, depending on observed manatee response.

- c. Monitoring protocols will include a visual assessment of external cold-stress signs along with behavioral assessments of animals in the field.
- d. Discharge canal temperature monitoring, including ambient temperature, cooling tower blowdown discharge temperature, and temperature of any significant natural thermal spring seeps present in the discharge canal.
- e. Plan communications, contacts, response to cold-stress animals, and reporting requirements.
- f. For all project components in and/or over water accessible to manatees, Duke Energy Florida will implement the Standard Manatee Conditions for In-Water Work, July 2011 and/or other specific Manatee Management Plan requirements.

[Article IV, Sec. 9, Florida Constitution; and Rule 68A-27, F.A.C.]

K. *Smalltooth sawfish, Gulf sturgeon, Sea turtles*

- 1. For all project components in and/or over water accessible to smalltooth sawfish, Gulf sturgeon, or sea turtles, Duke Energy Florida will implement the Sea Turtle and Smalltooth Sawfish Construction Conditions, March 2006.

[Article IV, Sec. 9, Florida Constitution; and Rule 68A-27, F.A.C.]

L. *Biological Survey and Monitoring Conditions*

The Licensee may request modification of the following applicable conditions upon issuance by the Department of Environmental Protection, in consultation with the FWC, of Final National Pollution Discharge Elimination System permit FL0000159-014-IWS.

- 1. **Discharge Monitoring** - Within 180 days following certification of the Citrus Combined Cycle (CCC) Project or such other date as agreed to by Duke Energy Florida and FWC, Duke Energy Florida will submit to FWC and the Department a CCC Project Discharge Monitoring Plan (DMP) for review and approval in accordance with Condition XX, Postcertification Submittals. Unless otherwise agreed to by Duke Energy Florida and FWC, the DMP will include the following components:
 - a. Preoperational surveys of seagrass and hardbottom resources starting 1 year in advance of the CCC Project beginning commercial operation.
 - b. Postoperational surveys for 1 year following the shutdown of Crystal River Units 1 and 2 in conjunction with commercial operation of the CCC Units.

- c. Surveys and monitoring of stations within the historical thermally-affected areas of Crystal Bay with a pre- and postoperational comparison of survey and monitoring results.
 - d. Schedules, specific survey and monitoring locations, sampling frequencies and methods, and specific parameters to be surveyed.
 - e. Surveys will include protocols to monitor seagrass and hardbottom resources. Monitoring of physical and chemical parameters shall include surface and bottom temperature, salinity, dissolved oxygen, and water column transparency data collection.
 - f. Preparation of reports, including all data and statistical analyses resulting from the surveys and monitoring, will be included as part of the DMP.
2. **Intake Monitoring** - Within 180 days following certification of the CCC Project or such other date as agreed upon by FWC and Duke Energy Florida, Duke Energy Florida will submit to FWC and the Department a CCC Project Intake Characterization and Monitoring Plan (ICMP) for review and approval in accordance with Condition XX, Postcertification Submittals. Unless otherwise agreed to by Duke Energy Florida and FWC, the ICMP will include the following components:
- a. A detailed outline and schedule for the submittal of ICMP components.
 - b. A narrative description of source water bodies, physical water body configuration data, location and configuration of the intake structure, operation of the cooling water system, and proportions of water used.
 - c. Source water baseline biological characterization data including the relative diversity and abundance of species potentially susceptible to impingement and entrainment based on existing identified historic records and data, including any threatened and endangered or other protected species.
 - d. Description and schedule for any proposed additional studies or data collection, if needed, to fill any potential data gaps in of support of the biological characterization component.
 - e. A narrative description of the impingement and entrainment mortality reduction plan utilizing a closed-cycle recirculating cooling system and cooling water intake structure that has a maximum through-screen design intake velocity of 0.5 fps or less.
 - f. Demonstration requirements that the closed-cycle cooling system flow reduction and cooling water intake structure are operating and functioning as designed.

[Article IV, Sec. 9, Florida Constitution; and Rule 68A-27, FA.C.]