



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Rick Scott  
Governor

Jennifer Carroll  
Lt. Governor

Herschel T. Vinyard Jr.  
Secretary

## NOTICE OF ADMINISTRATIVELY CORRECTED AIR CONSTRUCTION PERMIT

*Sent Electronically*

Tampa Electric Company (TEC)  
P.O. Box 111  
Tampa, FL 33601-0111

Authorized Representative:

Karen Sheffield, Director Polk Power Station

Project No. 1050233-033-AC  
Polk Power Station  
Administrative Correction to:  
Permit No. 1050233-027-AC  
Hillsborough County

Dear Ms. Sheffield

Enclosed is an administrative correction for Air Construction Permit No. 1050233-027-AC for the TEC Polk Power Station, which is an electrical generating plant categorized under Standard Industrial Classification No. 4911 and located in Polk County at 9995 State Route 37 South in Mulberry, Florida. This action removes references to carbon dioxide sequestration in the referenced permit. This administrative correction is issued pursuant to Rule 62-210.360, Florida Administrative Code (F.A.C.), and Chapter 403, Florida Statutes (F.S.). This corrective action does not alter the effective dates of the existing permit. The Department will consider the above-noted action final unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. Mediation under Section 120.573, F.S., will not be available for this proposed action.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions must be filed within 14 days of receipt of this administratively corrected permit. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

## NOTICE OF ADMINISTRATIVELY CORRECTED AIR CONSTRUCTION PERMIT

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this written notice. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Judicial Review:** Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida  
(*Electronic Signature*)

### CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Administratively Corrected Air Construction Permit was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Ms. Karen Sheffield, TEC: [kasheffield@tecoenergy.com](mailto:kasheffield@tecoenergy.com)  
Mr. Paul L. Carpinone, TEC: [plcarpinone@tecoenergy.com](mailto:plcarpinone@tecoenergy.com)  
Mr. Byron Burrows, TEC: [btburrows@tecoenergy.com](mailto:btburrows@tecoenergy.com)  
Mr. Robert Wong, DEP SWD: [robert.wong@dep.state.fl.us](mailto:robert.wong@dep.state.fl.us)  
Ms. Cindy Mulkey, DEP Siting Office: [cindy.mulkey@dep.state.fl.us](mailto:cindy.mulkey@dep.state.fl.us)  
Ms. Alisa Coe, Earth Justice: [acoe@earthjustice.org](mailto:acoe@earthjustice.org)  
Ms. Heather Ceron, EPA Region 4 ([ceron.heather@epa.gov](mailto:ceron.heather@epa.gov))  
Ms. Barbara Friday, DEP OPC: ([barbara.friday@dep.state.fl.us](mailto:barbara.friday@dep.state.fl.us))  
Ms. Lynn Scarce, DEP OPC: ([lynn.scarce@dep.state.fl.us](mailto:lynn.scarce@dep.state.fl.us))

Clerk Stamp  
**FILING AND ACKNOWLEDGMENT FILED**, on this date,  
pursuant to Section 120.52(7), Florida Statutes, with the  
designated agency clerk, receipt of which is hereby  
acknowledged.  
(*Electronic Signature*)

JFK/dlr

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Tampa Electric Company.  
Administrative Correction

Project No. 1050233-033-AC  
Permit Corrected: 1050233-027-AC

The following descriptions and permit conditions are revised as indicated for each section and subsection. ~~Strikethrough~~ is used to denote the deletion of text while Double-underlines are used to denote the addition of text. All changes are emphasized with **yellow highlighting**.

**Placard Page**

**PROJECT**

This is the final air construction permit, which authorizes the installation and operation of a high-temperature syngas cleanup system (HTSC) and an **integrated** carbon capture ~~and sequestration (CCS)~~ system. The proposed work will be conducted at the existing Polk Power Station, which is a electrical generating plant categorized under Standard Industrial Classification No. 4911. The existing facility is located in Polk County at 9995 State Route 37 South in Mulberry, Florida. The UTM coordinates are Zone 17, 402.45 km East, and 3067.35 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions). As noted in the Final Determination provided with this final permit, no changes were made to the draft permit.

**Page 3 of 5, Section 1, General Information**

**PROPOSED PROJECT**

The project consists of installation and operation a pre-commercial scale demonstration high-temperature syngas cleanup system (HTSC) and an **integrated** carbon dioxide (CO<sub>2</sub>) capture ~~and sequestration (CCS)~~ system at the Polk Power Station. The demonstration project will include a high-temperature desulfurization process, trace contaminant removal process and direct sulfur recovery process. These cleanup systems will be integrated with the existing IGCC Unit 1. Emission sources associated with this demonstration project includes two small heaters, one sorbent storage hopper, on regenerator fines storage bin and one amine surge drum.

A slipstream of syngas from the IGCC plant will be treated in the cleanup systems to simulate commercial operations. The high-temperature desulfurization process will remove 99.9 percent (%) of the sulfur in the syngas. The trace contaminant removal process will reduce arsenic, selenium and mercury concentrations in the syngas. The direct sulfur recovery process will convert sulfur dioxide (SO<sub>2</sub>) to commercial-grade elemental sulfur. The high level of sulfur removal in the high-temperature desulfurization process will provide a syngas stream from which activated methyldiethanolamine (aMDEA) will be used to capture up to 90% of the CO<sub>2</sub> in the cleaned syngas. ~~A pressurized pipeline will transfer the compressed CO<sub>2</sub> to an onsite injection well for injection and sequestration in a deep saline aquifer geologic formation.~~

The demonstration project is planned to commence construction in March 2012 and be completed by April 2013. The goal for the operation phase is to achieve at least 8,000 hours of operation during the approximate 18 month demonstration period, which is expected to be completed in the third quarter of 2015.

This project will add the following emissions units.

<b>EU No.</b>	<b>Emission Unit Description</b>
015	High-Temperature Syngas Cleanup System (HTSC) and Carbon Capture <del>and Sequestration</del> System <b>(CCS)</b>

Page 5 of 5, Section 3, Emissions Unit Specific Conditions

HEADER

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B. HTSC and ~~CCS~~ Carbon Capture System Demonstration Project (EU 015)

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
015	High-Temperature Syngas Cleanup System (HTSC) and Carbon Capture <del>and Sequestration</del> System <del>(CCS)</del>

*{Permitting Note: The temporary cleanup systems will be integrated with the existing integrated coal gasification combined-cycle (IGCC) Unit 1 to remove more than 99.9% of sulfur in the synthetic gas (syngas) slipstream and capture 90% of the carbon dioxide (CO<sub>2</sub>) in the clean syngas slipstream for subsequent geological sequestration. The demonstration project is planned to commence construction in March 2012 and be completed by April 2013. The goal for the operation phase is to achieve at least 8,000 hours of operation during the approximate 18 month demonstration period, which is expected to be completed in the third quarter of 2015.*

EQUIPMENT

2. Carbon Capture and Sequestration System: The permittee is authorized to install and operate the following processes:
  - a. Water gas shift reactor system;
  - b. Low-temperature gas cooling system.
  - c. Activated amine CO<sub>2</sub> capture system.
  - d. CO<sub>2</sub> compression and drying system.
  - ~~e. CO<sub>2</sub> deep well injection sequestration system.~~[Application No. 1050233-027-AC]

PERFORMANCE RESTRICTIONS

6. Hours of Operation: The hours of operation for the temporary high-temperature syngas cleanup system and ~~integrated~~ CO<sub>2</sub> capture ~~and sequestration~~ system are not limited (8,760 hours per year).