



Cleco Power LLC

JOINT FACILITIES STUDY

**Between
RW Beck for the City of Alexandria
And
Cleco Power LLC**

TRANSMISSION SERVICE REQUEST

OASIS 71956063

1. Purpose

All terms capitalized herein are defined in the Cleco Power's Open Access Transmission Tariff ("OATT") or this document.

The purpose of this Joint Facilities Study is to outline the agreed upon solution to allow the City of Alexandria ("Alexandria") to be served by Cleco Power LLC ("Cleco") Firm Network Integration Transmission Service ("NITS"). The facilities identified in a joint study with RW Beck are outlined in this report and are being proposed as the chosen solution for service to Alexandria under NITS Transmission Service Request #71956063 ("TSR"), the Transmission Customer being Cleco Power LLC, Wholesale Energy Services. The TSR was submitted for 203 MW of Yearly Firm NITS across Cleco Power's Transmission System. The requested time period for the service in the TSR is from October 1, 2008 through October 1, 2020.

The COA-CLECO Joint Transmission Study ("Joint Transmission Study") issued by RW Beck on behalf of Alexandria contains an alternative solution which recommends construction by Alexandria of a new 138 kV transmission line between Alexandria's Twin Bridges substation and Alexandria's Prescott substation ("Twin Bridges to Prescott 138 kV line"). The Twin Bridges to Prescott 138 kV line will be constructed instead of constructing the Cleco identified Network Upgrades required to grant the service requested in the TSR. The April 2008 System Impact Study ("April SIS") identified transmission violations on Alexandria's transmission system (the "Affected System") as well as on the Cleco Transmission System that would result from the granting of the requested service in the TSR. Cleco subsequently conducted a Facility Study to provide cost estimates and schedules for the construction of the Network Upgrades on Cleco's Transmission System required to grant the requested service. These Network Upgrades included replacing the existing conductor on the Pineville to Sherwood 138 kV line and on the Hunter to Pineville 138 kV line, as well as the terminal equipment to facilitate these larger conductor sizes. Cleco issued a draft of the Facility Study on June 20, 2008 ("June Facility Study"). Per the April SIS and the June Facility Study, an Affected System study was required on the part of Alexandria. To meet that need, Alexandria and Cleco agreed to perform a Joint Transmission Study with updated load, generation and transmission assumptions to investigate the potential for transmission violations on the Alexandria system, as well as identify possible alternatives to the Network Upgrades.

2. Sensitivities and Assumptions

Alexandria submitted an updated load forecast to Cleco Transmission for inclusion in the load flow models to be used for purposes of the Joint Transmission Study. This updated Alexandria load forecast substantially lowers the Alexandria load forecast values set forth in the original load forecast that was used by Cleco as the basis of the April SIS.

The reduction from the original forecast submitted is due to:

- lower economic growth forecasts;
- use of normal weather year as opposed to severe weather case; and
- use of Alexandria coincident peak loads as opposed to substation peak non-coincident loads.

The D. G. Hunter generating units were assumed to not be dispatched for this analysis.

Due to the updated Alexandria load forecast, the Joint Transmission Study identified only one violation on the Alexandria transmission system during the ten (10) year planning horizon. This violation was on the Twin Bridges to Bayou Rapides Switch 138 kV line for the loss of either the Pineville 230/138 kV transformer or the Pineville to Sherwood 230 kV line. The proposed construction of the new Twin Bridges to Prescott 138 kV line would alleviate the identified thermal violations. The Joint Transmission Study indicated that the proposed Twin Bridges to Prescott 138 kV line would eliminate the identified thermal violation if completed before Alexandria reaches a peak load of 194 MW, which, according to the updated Alexandria load forecast, is projected to occur during the 2010 summer peak.

As part of the Joint Transmission Study, the Alexandria system was evaluated under different load growth scenarios to determine the sensitivity of future violations to differing Alexandria load levels. These sensitivity analyses identified violations on two facilities that occur beyond the ten (10) year planning horizon based on Alexandria's updated load forecast:

- Alexandria's Bayou Rapides Switch to Prescott 138 kV line with Alexandria loads at 229 MW and above; and
- Cleco's Pineville to Sherwood 230 kV line with Alexandria loads at 260 MW and above.

These same violations were identified in the April SIS, but occurred during the ten (10) year planning horizon based on Alexandria's original load forecast. Alexandria's proposed new Twin Bridges to Prescott 138 kV line would eliminate the thermal violation on the Bayou Rapides Switch to Prescott 138 kV line. Therefore, the Network Upgrades identified in the April SIS and the June Facility Study would not be required to grant the requested Transmission Service, if Alexandria constructs the proposed Twin Bridges to Prescott 138 kV line and an operating guide is implemented as follows.

3. Conditions of Service - Operating Guide

If Alexandria's instantaneous load in any hour exceeds 194 MW, or Alexandria's load is forecasted to exceed 194 MW in any hour within any five-consecutive-day reliability forecast (with a proportionate increase in Cleco load in the surrounding regions) before the new Twin Bridges to Prescott 138 kV line is constructed and operational, an operating guide may be implemented for the single contingency outage of the Pineville 230/138 kV transformer or

Issued by: Cynthia B. Guillot, Director Transmission Policy & Contracts
Issued on: September 24, 2008

the Pineville to Sherwood 230 kV line. This operational guide can be implemented under the aforementioned conditions at Cleco's sole discretion, at the request of Alexandria, or at the request of the Transmission Customer. In any case, Alexandria shall solely be responsible for compliance with all applicable reliability standards and criteria regarding its role as the owner and operator over its assets, including, Alexandria's transmission system. Cleco, Alexandria and Transmission Customer shall notify one another immediately prior to implementing (or releasing) this operating guide. Once implemented, the generation dispatch at Rodemacher will be reduced to lower the flow of power across the Twin Bridges – Bayou Rapides Switch 138 kV line as a post-contingency operation until the outaged facility is restored or Alexandria's hourly load falls and remains below the 184 MWH level for the entire next clock hour. Any reduction at Rodemacher will be made in increments that reduce flow on the Twin Bridges-Bayou Rapides Switch 138kv line by approximately 5%.

As a condition for granting service, Transmission Customer shall provide to Cleco as the Transmission Provider, (1) a copy of a fully executed agreement which provides for the construction of a new Alexandria Twin Bridges to Prescott 138 kV line that includes commitments to complete construction and place into operation Alexandria's new Twin Bridges to Prescott 138 kV line prior to June 1, 2011; and (2) Alexandria's agreement to an operating guide as outlined herein. If Alexandria's new Twin Bridges to Prescott 138kv line is not in service and Alexandria's load is greater or equal to 194 MW, Transmission Customer shall be subject to any redispatch expense that may be experienced by Cleco made necessary due to actual or potential excessive line loading within Alexandria during an outage of the Cleco Pineville to Sherwood line until such time as (a) the new Twin Bridges to Prescott 138kv line is fully in service, or (b) the NITSA is terminated, whichever occurs first. Should Alexandria not place the Twin Bridges to Prescott 138 kV line into service by May 31, 2012, the Network Integration Transmission Service Agreement ("NITSA") shall immediately terminate effective at the end of hour ending 2400 on May 31, 2012.

Notwithstanding the forgoing, the terms and conditions of the above mentioned operating guide are subject to further agreement by the parties and will ultimately be implemented via the Network Operating Agreement.

4. Cost

4.1 Network Upgrades

For the purpose of this Facilities Study, and subsequently the NITSA, the Transmission Customer shall acknowledge and agree that the cost listed hereafter is only an estimate using Good Utility Practices. Cleco stipulates that the estimates quoted herein are as accurate as possible considering the information available. The Transmission Customer shall protect, indemnify and hold harmless Cleco from the cost consequences of any current tax liability imposed against Cleco as the result of payments made by the Transmission Customer to Cleco. Cleco's tax gross up rate is 61.52%, which will be applied if applicable, but is not included in the cost estimate.

Estimated costs including overheads and interest for Network Upgrades and Alexandria improvements are:

- Not Applicable on the Cleco Transmission System.
- Alexandria, at its sole expense, will construct a new Twin Bridges to Prescott 138kv line instead of Cleco constructing the Network Upgrades identified in the April SIS and the June Facility Study.

4.2 Direct Assignment Facilities

Data Acquisition Equipment

All data acquisition equipment shall be paid for by the Transmission Customer or their assignee and owned by Cleco.

Data acquisition equipment required is as follows:

- One GE-Harris D20 Remote Terminal Unit (RTU) shall be installed at Alexandria's Hunter Generating Plant. Alexandria is to provide a 19" rack for mounting the RTU, with access to both front and rear of rack in a climate controlled room.
- The RTU CPU at Twin Bridges Substation shall be replaced with a D20ME processor module for DNP communication to the meters.

Communications Equipment and Circuits

All telephone equipment, leased telephone circuits, fiber optic circuits, and other communications equipment necessary to provide for the telemetry requirements shall be paid for and owned by the Transmission Customer or their assignee unless otherwise noted.

Communications equipment and communications circuits required are as follows:

- A 4-wire fiber optic data circuit will be required to communicate with the RTU at the Hunter Generating Plant to Cleco. The Transmission Customer or their assignee shall pay for this equipment and Cleco will own and maintain.
- Dial-up connections will be required to all six meters to be installed at the Hunter Generation Plant.
- Dial-up connections will be required to the two meters to be installed at the Twin Bridges Substation.
- A two-wire RS-485 shielded data link is required between each meter and the RTU at the locations listed above. The data links for the meters at the Pineville Substation shall be paid for by the Transmission Customer or their assignee, but owned and maintained by Cleco.

Metering Equipment

Metering equipment consists of high accuracy (0.2% accuracy or better) solid state four quadrant meters, metering cabinets, metering panels, conduits, cabling, metering accuracy (ANSI 0.3% accuracy class or better) current transformers (CT), and metering accuracy (ANSI 0.3% accuracy class or better) potential transformers (PT) which, directly or indirectly, provide input to meters or transducers, meter recording devices (e.g., solid state data receivers), signal or pulse dividers, transducers, pulse accumulators, and any other equipment necessary to implement the provisions of the Network Operating Agreement (“NOA”).

All metering equipment shall be paid for, installed, maintained, and owned by the Transmission Customer or their assignee unless otherwise stated. The meters will be tested yearly by Cleco regardless of the meter location and the Transmission Customer or their assignee must notify Cleco before any maintenance is performed on the meters.

- Items currently in place that meet or exceed requirements:
 - Metering CTs on Generator #3 at the Hunter Generating Plant
 - Metering PTs on Generator #3 at the Hunter Generating Plant
 - Metering CTs on Generator #4 at the Hunter Generating Plant
 - Metering PTs on Generator #4 at the Hunter Generating Plant
 - Metering CTs on Generator 3 Reserve Auxiliary Transformer (RAT) at the Hunter Generating Plant
 - Metering CTs on Generator 4 RAT at the Hunter Generating Plant
 - Metering CTs on Generator 3 Main Auxiliary Transformer (MAT) at the Hunter Generating Plant
 - Metering CTs on Generator 4 MAT at the Hunter Generating Plant
 - Metering CTs at the Twin Bridges to Rapides tie point
 - Metering PTs at the Twin Bridges to Rapides tie point
 - Metering CTs at the Pineville to Hunter tie point
 - Metering PTs at the Pineville to Hunter tie point

- Items that need to be replaced or added to meet requirements:
 - Generator 3 meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.
 - Generator 4 meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.
 - Generator 3 MAT meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.
 - Generator 4 MAT meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.

- Generator 3 RAT meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.
- Generator 4 RAT meter at Hunter needs to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem
- Tie point meters at the Twin Bridges Substation need to be replaced with (2) Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem.
- Tie point meters at the Pineville Substation need to be replaced with Maxsys 2510 meters with firmware version 5759, DNP card, and internal modem. These meters shall be paid for by the Transmission Customer or their assignee, but owned, installed, and maintained by Cleco.
- The (4) PTs on the two MAT buses to be replaced with 0.3% accuracy class (4200/120 V).
- The (4) PTs on the two RAT buses to be replaced with 0.3% accuracy class (4200/120 V).

This study includes only Generators 3 and 4 at D.G. Hunter generating facility, since these are the only units defined in the NITS Application. If in the future, should the D. G Hunter Generator 1 or Generator 2 become operational, all metering associated with Generator 1 and 2 would have to be updated accordingly before bringing units on-line.

The estimated costs of the Direct Assignment Facilities are itemized in Attachment 1.

5. Other Contractual Arrangements

Prior to execution of the NITSA, the Transmission Customer and Cleco shall enter into good-faith negotiations for the establishment of necessary contract terms within the NOA that clearly allocate responsibilities regarding compliance with reliability related criteria and any charges that may be appropriate for integration of Transmission Customer into the Cleco Balancing Authority Area.

Attachment 1**Data Acquisition Equipment**

RTU at Hunter	\$10,000
RTU CPU at Twin Bridges	\$4,000

Communications Equipment and Circuits

Data circuit for Hunter RTU	\$25,000
Dial-up connection to meters at Hunter	\$200 install plus \$60/month
Dial-up connection to meters at Twin Bridges	\$200 install plus \$60/month
RS-485 meter data links to RTU at Hunter (6)	\$1000
RS-485 meter data links to RTU at Twin Bridges (2)	\$100
RS-485 meter data links to RTU at Pineville (2)	\$100

Metering equipment

Maxsys 2510 meters at Hunter (6)	\$30,000
Maxsys 2510 meters at Twin Bridges (2)	\$10,000
Maxsys 2510 meters at Pineville (2)	\$10,000
4200/120V PTs for Unit 3 and 4 MAT buses (4)	\$6,000
4200/120V PTs for Unit 3 and 4 RAT buses (4)	\$6,000

Total estimated installed cost is \$102,600, plus \$120/month for communications circuits.

All costs are estimates and include material and installation.

Lead time is estimated to be 12 weeks.