ERCOT requests that FPL take prompt action to correct the deficiencies identified at the end of this letter. Please respond to me in writing by September 19, 2003 with the status of corrective actions and a date for completing any remaining work with these signals at that time. If FPL staff have technical questions on this, contact Art Boecker or Sinoun Sot at ERCOT (512-225-7000)...

Your cooperation in this matter is appreciated.

Mark R. Henry, P.E. ERCOT Compliance (512)-225-7021

Specifics on data ERCOT is not receiving correctly or needing tests:

FPL
Frequency
Frequency Bias
Regulation Feedback (has a 1 MW deadband, should not have any deadband)
Responsive Feedback
Governor Response Feedback
DC Curtailment Feedback
Regulation Participation Feedback
Frequency Target Feedback
K Factor Feedback
L10 Feedback
NSP ramping (test signal)
LPCCS (LAMAR) breaker status
FRNYPP (FORNEY) breaker status

FPL\_BASTROP
Frequency
Frequency Bias
Regulation Feedback (has a 1 MW deadband, should not have any deadband)
Responsive Feedback
Governor Response Feedback
DC Curtailment Feedback
Regulation Participation Feedback
Frequency Target Feedback
K Factor Feedback
L10 Feedback
NSP ramping (test signal)
BASTEN (BASTROP) MWH & MWL both reflect 0 MW but unit is running.

FPL\_WIND
Frequency Bias
Regulation Feedback
Responsive Feedback
Governor Response Feedback
DC Curtailment Feedback
Limits for King Mt. windfarms questionable

**FRE 00262**4



August 31, 2005

Mr. Lloyd Prichard BPTX 501 Westlake Park Blvd Houston, TX 77079

RE: BPTX QSE Audit Results and Follow-up

Dear Mr. Prichard:

On July 27, 2005, ERCOT's Compliance Office conducted a site visit to expand and verify information supplied by BPTX to a pre-audit questionnaire dated May 10th, 2005. Our questions covered applicable measurements in the NERC Compliance program, and several items from the ERCOT Operating Guides and Protocols. More than anything, the audit was aimed at verifying that plans and procedures are updated and in use, on the operating floor or in the IT area. ERCOT appreciates the time and effort spent by BPTX staff to support this review, and more importantly the time spent to provide for a reliable grid. Below is a summary of our findings and follow-up items, many of which were discussed as tentative findings at the conclusion of the site visit.

#### Key Findings;

The audit team believes that BPTX meets, or will meet with continued efforts in progress, the minimum levels required to be in compliance with many of the NERC and/or ERCOT standards reviewed during the audit. The review indicates BPTX plans and practices meet a variety of requirements including:

- 7x24 Staffing of QSE control facility
- Handling of VDI's and VDE's
- Capacity and Energy Emergency Planning (OCN's through EECP)
- Black Start Planning
- Outage Coordination
- Forced and Planned Outage Reporting
- Resource Plan Preparation
- Provision of Real Time Data and Support
- Ancillary Services Performance and Related Contingency Planning

We commend BPTX for it efforts to: improve qualification of real-time operators; provide training to their generating resources on ancillary services performance criteria; set availability targets and monitor performance for IT systems, both internal to BP and for contracted services, and; encourage the installation of automatic generation control systems.



However, we found that the following two items did not meet requirements at the time of the audit and appear to be compliance violations. These are subject to posting at the ERCOT or NERC website. BPTX should affirm whether they are in disagreement with the findings, or confirm the corrective actions taken or planned (along with a schedule for completion.)

- 1) Loss of primary control center plans, Operating Guide 3.1.3.1. BPTX's plan to rely on APX for initial support and ultimately relocate to back-up facilities is conceptually fine, although the document itself lacks sufficient detail. The approach is a viable means to address voice communications and provide a base for operations. Our concern is that a problem at APX Dallas site, where all real-time data from BPTX's portfolio is concentrated, would result in loss of real-time data and computer communications. We didn't see this possibility addressed which effectively shuts down essential QSE functions. Nor does it appear that APX has anything arranged today that would prevent a loss of these communications with ERCOT from placing a prolonged burden on operations. ERCOT Compliance requests that BPTX work with APX (or independently of them) to develop a plan for possible loss of APX' Dallas site and integrate it into an overall disaster recovery plan that includes consideration of real time data and computer communications with ERCOT. The updated plan peeds to also address training of personnel at BPTX and APX.
- 2) Frequency bias (Protocols 6.5.1.1 (1), Operating Guides 2.2.3.1). BPTX provides no value for a frequency bias in its signal. This contributes to SCE error and creates other problems for ERCOT and the QSE. The frequency bias signal provided to ERCOT now is a null placeholder. We request that BPTX furnish a plan to send frequency bias values, based on review of governor performance, settings, and other relevant factors.

The following items are recommendations, which we do not believe are matters of noncompliance at this time (but may become so in the future). Several involve documentation, which will become more important over time as NERC and ERCOT standards mature.

- 3) Documented 40 hours of emergency training. Operating Guidel. 8.2. We believe that BPTX's QSE will meet this requirement, by year-end. BPTX will need to have records documenting what training each individual receives and when. They do not need to be elaborate. ERCOT will request these records or a self-certification at year-end; no other response is needed at this time.
- 4) Shift Operator training objectives and process, Operating Guide 1.8.1 and 1.8.6. BPTX's training overall relies heavily on a hands-on, on-the-job approach. This is acceptable as long as core duties and responsibilities are addressed, for both normal and emergency conditions. This recommendation is to continue the initial checklists

**RE 002626** 



shown to document a set of objectives and outline a training process - again, not necessarily elaborately. This is also likely to become an auditable item in the future, at least for those training items related to reliability. Similarly, we recommend that BPTX consider including NERC Operator Certification in its program, which may become a requirement for QSE shift operators.

- 5) Authority of BPTX QSE operators, Protocol 4.3.4. While the interviews support the QSE authority to direct Resources as needed by ERCOT, we did not see any documentation in job descriptions or procedures. Contracts did not appear to detail anything specific, either. A document that clearly states the authority of QSE operators is recommended, ideally posted by the real-time desk, with management signature. This should also cover the need for plant personnel to report Resource status changes to the QSE so that they can be forwarded to ERCOT.
- 6) Reactive power. Protocol 6.5.7.2 (4) and (5). BPTX QSE operators should have training and readily available information about assigned voltage profile, reactive power (MVar) capability and Unit Reactive Limits (URL's) for their generators. Even if the transmission operator is typically contacting the plants directly for routine adjustments, any ERCOT-issued instructions related to reactive output will pass through the QSE. BPTX should also consider adding AVR status to its operator displays, and again ensure that plant personnel are prepared to log AVR issues if the QSE operators don't.
- 7) Unit reactive power, governor and AVR tests (Operating Guides 2.2.4(4)-(5) & 3.1.4.3. The QSEs duty is to report to ERCOT what its portfolio has tested. BPTX is fulfilling this reporting role so far for seasonal net dependable capability (MW) and working on reactive tests (leading and lagging MVar) for its portfolio. We also recommend that BPTX QSE encourage its generating facility to examine requirements for 2-year governor and 5-year AVR tests, and consult with manufacturers if necessary to plan for these.
- 8) Governor response issues (Protocols 5.8.1.2, Operating Guides 2.2.5 and 3.1.4.1). Recent disturbance surveys conducted by the Performance, Disturbance, Compliance Working Group (PDCWG) identified performance issues with BPTXSQ1's portfolio response. BP's audit response indicates some generators may not be free to respond-to frequency as required now, although investigation is in progress. The plants are responsible for providing governor response to frequency excursions, but the QSE needs to be ready to communicate any issues that affect this governor system (status changes) as well as forward tests and other data to ERCOT. We request that the plants and QSE review governor performance, test requirements, droop settings, deadbands and related requirements, and make appropriate notification to ERCOT through the QSE. We also recommend that QSE real-time operators be trained to have a basic understanding of the requirements and be prepared to discuss governor status changes with plant personnel and ERCOT.

**TRE 002627** 



I ask that you consider the above items and respond by September 19 (on letterhead, either electronic or hardcopy). Make it clear if you disagree with these findings; otherwise a corrective action plan and schedule (on letterhead, either hardcopy or e-mail document), especially for liems 1 and 2 above. We also ask you to comment on implementing the recommendations. Call me or Robert Potts (512-225-7022) if you have any questions.

Sincerely yours,

Mark R. Henry, P.E. ERCOT Compliance

(512) 225-7021

### SOAH DOCKET NO. 473-08-1153 P.U.C. DOCKET NO. 34738

NOTICE OF VIOLATION OF INTERNATIONAL POWER AMERICA, § INC., HAYS ENERGY LIMITED PARTNERSHIP, MIDLOTHIAN ENERGY BEFORE THE STATE OFFICE OF LIMITED PARTNERSHIP, AND ANP **FUNDING I, LLC OF PURA §36.151(j)** ADMINISTRATIVE HEARINGS AND PUC SUBST. R. §25.503(f) AND (g), RELATING TO FAILURE TO ADHERE TO ERCOT PROTOCOLS §5.8.1.1, AND 6.5.1.1(1)(e) CONCERNING GOVERNOR IN SERVICE REQUIREMENTS AND FREOUENCY BIAS REQUIREMENTS AND OF PUC SUBST. R. 25.503(f)(10), RELATING TO FAILURE TO COMPLY WITH REQUESTS FOR INFORMATION BY ERCOT WITHIN THE TIME SPECIFIED BY ERCOT INSTRUCTIONS

### **CUSTODIAN OF RECORDS AFFIDAVIT**

Before me, the undersigned authority, personally appears Mark Henry, who, being by me duly sworn, deposed as follows:

"My name is Mark Henry, I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated. I am employed by Texas Regional Entity (Texas RE) and my title is Manager, Compliance Audits. I am a custodian of records for Texas RE. Texas RE's business address is 7620 Metro Center Drive, Austin, Texas, 78744.

Attached hereto are 2 pages of records from Texas RE. These said pages are in my custody or subject to my control, supervision or direction. I am able to identify these records as the originals or true and correct copies of the originals of documents created or received and maintained by Texas RE. These records were kept in the regular course of business of Texas RE and it was in the regular course of business of Texas RE for a person with knowledge of the acts, events, conditions, or opinions recorded to make or receive the record or to transmit information thereof to be included in such record. The entries on these records were made at or shortly after the time of the transaction recorded. The method of preparation and retention of these records is trustworthy."

Mark Henry, Manager, Compliance Audits

SWORN TO AND SUBSCRIBED before me this 17th day of November

Shila L. Massenback Notary Public – State of Texas SHEILA L. MASSENBURG Notary Public, State of Texas My Commission Expires September 29, 2010

TRE 00235

From:

Grimm, Larry < Larry. Grimm@texasre.org>

Sent:

Friday, June 20, 2008 3:30 PM

To:

Vincent, Susan <Susan.Vincent@texasre.org>

Subject:

FW: ANP Governor Response performance during July 19, 2005 disturbance

From: Henry, Mark

Sent: Tuesday, February 14, 2006 4:44 PM

To: Healy, Jeff; Staples, Robert

Cc: Myers, Steven; Dumas, John; Villanueva, Elias; Grimm, Larry

Subject: RE: ANP Governor Response performance during July 19, 2005 disturbance

In general, thanks, Jeff. A response to ANP is needed. Mr. Staples, please get with Operations Engineering on this to draft this, target Friday. Call me first.

#### A couple of points:

Please do not distribute ANP's response outside ERCOT at this time.

2) Have we accounted for units that are at or near the high limits and should not expect much if any governor response to increase MW? I didn't check the limits on these machines

It is problematic to enforce governor response on individual units, but in this case you have a whole QSE. Is this what happens when they provide RRS or Regulation as well?

ANP is doing us a service – in the long run - by "telling it like it is". I would have guessed that their governors might be blocked due to limits (again, I didn't check). From my perspective, I have to "tell it like it is" too, - there is no exception recognized in the Protocols for the admittedly imperfect criteria on governor response. Good utility practice should have dictated that governors be enabled whether AS were sold or not (including whether governor service itself becomes an AS). I am concerned that ANP believes, per their letter, that ERCOT did not expect them to provide governor response. Has Operations in any way reviewed governor response on new units other than the check box on the synchronizing checklist (which probably wasn't in place when these were commissioned anyway)?

MRH

(512) 225-7021

From: Healy, Jeff

Sent: Tuesday, February 14, 2006 11:08

To: Henry, Mark; Staples, Robert

Cc: Myers, Steven; Dumas, John; Vilianueva, Elias

Subject: FW: ANP Governor Response performance during July 19, 2005 disturbance

I've put together some slides to illustrate the issue Compliance has raised with ANP. The response for this 660 MW trip reflects the performance we normally observe from ANP.

From: Bennett, Tina [mailto:TBennett@anpower.com]

Sent: Tuesday, January 31, 2006 2:12 PM

To: Henry, Mark

Cc: Staples, Robert; Healy, Jeff; Preston, Dwayne; Levy, Bruce; Helton, Bob Subject: ANP Governor Response performance during July 19, 2005 disturbance

Please find ANP's response to ERCOT's request for information regarding its Governor Response performance during July 19, 2005 disturbance. If you have any questions, please let me know.

HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. 34738

Tina Bennett 508 382-9521

This message is intended only for the recipient. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

Exhibit TB-7

Highly Sensitive Filed Under Seal

	SCPS 1	SCPS 2
May-04	187.7	100
Jun-04	NR	NR
Jul-04	NR	NR
Aug-04	NR	NR
Sep-04	202	94
Oct-04	182.4	97.3
Nov-04	NR	NR
Dec-04	NR	NR
Jan-05	194.8	100
Feb-05	194.7	99.7
Mar-05	173.5	98.5
Apr-05	153.3	94.4
May-05	176	90
Jun-05	187.1	92.7
Jul-05	186.8	92.9
Aug-05	189	95
Sep-05	189	91
Oct-05	211.7	82.9
Nov-05	198.5	88.5
Dec-05	181.9	77.7
Jan-06	181.8	96.2
Feb-06	183.4	95.5
Mar-06	187.7	95.7
Apr-06	179.3	95
May-06	190.9	95.9

## SOAH DOCKET NO. 473-08-1153 P.U.C. DOCKET NO. 34738

NOTICE OF VIOLATION OF § § INTERNATIONAL POWER AMERICA. INC., HAYS ENERGY LIMITED PARTNERSHIP, MIDLOTHIAN ENERGY LIMITED PARTNERSHIP, AND ANP BEFORE THE STATE OFFICE OF FUNDING I, LLC OF PURA §36.151(i) AND PUC SUBST. R. §25,503(f) AND (g), ADMINISTRATIVE HEARINGS RELATING TO FAILURE TO ADHERE TO ERCOT PROTOCOLS §5.8.1.1, AND 6.5.1.1(1)(e) CONCERNING GOVERNOR IN SERVICE REQUIREMENTS AND FREQUENCY BIAS REQUIREMENTS AND OF PUC SUBST. R. 25.503(f)(10), RELATING TO FAILURE TO COMPLY WITH REQUESTS FOR INFORMATION BY ERCOT WITHIN THE TIME SPECIFIED BY ERCOT INSTRUCTIONS

### **CUSTODIAN OF RECORDS AFFIDAVIT**

Before me, the undersigned authority, personally appears Parvix Adib, who, being by me duly sworn, deposed as follows:

"My name is <u>Parvit Adib</u>, I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated. I am employed by APX and my title is <u>Director</u>. I am a custodian of records for APX. APX's business address is <u>5201 Great American Parkway</u>, <u>Suite</u> 522, Santa Clara, CA 35054.

Attached hereto are <u>5</u> pages of records from APX. These said pages are in my custody or subject to my control, supervision or direction. I am able to identify these records as the originals or true and correct copies of the originals. These records were kept in the regular course of business of APX and it was in the regular course of business of APX for a person with knowledge of the acts, events, conditions, opinion, or diagnoses, recorded to make the record or to transmit information thereof to be included in such record. The entries on these records were made at or shortly after the time of the transaction recorded. The method of preparation of these records is trustworthy."

Y. M. Addison of Records)

SWORN TO AND SUBSCRIBED before mothis 4 day of November, 2008.

Notary Public - State of Texas

420765

CARYN BOETICHER
My Commission Expires
September 8, 2010



# The following materials are identical to what appears in pages 15 through 17 (Second E-mail from Dr. Jian He) of the APX's response to the Commission Staff's First Request for Information (PUCT-Case 2007120001)

From: Katherine Williams [mailto:KWilliams@apx.com]

Sent: Friday, April 14, 2006 1:36 PM

To: Bennett, Tina

Cc: Ulyett, Keith; Jian He Subject: RE: SCE Bias

Tina and Keith,

We will be putting the frequency bias number in today but will not make it effective in the SCE calculation until Monday just in case there are some issues. Best to not have this occur over the weekend.

Please start monitoring though on Monday and let us know how it looks.

Thanks!

Katherine Williams office (408) 986-2204 cell (408) 823-2769

From: Bennett, Tina [mailto:TBennett@anpower.com]

Sent: Tuesday, April 11, 2006 1:42 PM

**To:** Katherine Williams **Cc:** Ulyett, Keith **Subject:** RE: SCE Bias

That's fine. Please let us know as soon as the change has been made, so that we can monitor the impact.

Thanks Tins

From: Katherine Williams [mailto:KWilliams@apx.com]

Sent: Tuesday, April 11, 2006 4:29 PM

To: Bennett, Tina; Ulyett, Keith

Subject: RE: SCE Bias

All,

5201 Great America Parkway, Suite 522, Santa Clara, CA 95054 USA Phone 408.517.2100 Fax 408.517.2985 www.apx.com



Sorry but we had something come up last minute yesterday that needed to be completed immediately. Therefore, we will need to delay this to Thursday, April 14<sup>th</sup>.

I hope this is still okay.

Katherine Williams office (408) 986-2204 cell (408) 823-2769

**From:** Bennett, Tina [mailto:TBennett@anpower.com]

**Sent:** Friday, April 07, 2006 9:19 AM **To:** Katherine Williams; Ulyett, Keith

Subject: FW: SCE Bias

Katherine - Please note the unit level frequency bias information below required for the SCE algorithm

Keith – Katherine called to let us know APX could probably get the change in place at a unit level by April 12<sup>th</sup>. In addition, APX will need a frequency reading from the RTUs. Please let us know when we would be able to provide this signal. In the meantime, APX will get the signal from another plant. The issue will be if the plant goes off-line the signal will be lost so we need to get our signal over to APX as soon as practical (they will try to pick a plant that is base loaded).

Thanks Tina

From: Ulyett, Keith

Sent: Friday, April 07, 2006 11:11 AM

To: Bennett, Tina Subject: SCE Bias

Tina

Based on a 5% droop and only the GT giving a response we need APX to apply on a per unit basis a SCE bias of 5MW per 0.1 Hz.

Keith

Office: +1 508 382 9333 Cell: +1 508 294 0440

This message is intended only for the recipient. If you are not the intended recipient you are

5201 Great America Parkway, Suite 522, Santa Clara, CA 95054 USA Phone 408.517.2100 Fax 408.517.2985 www.apx.com



notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited.

\* This message has been checked for all known viruses by the Cable & Wireless E-mail Virus Protection service, powered by MessageLabs for APX. \* This message is intended only for the recipient. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. \* This message has been checked for all known viruses by the Cable & Wireless E-mail Virus Protection service, powered by MessageLabs for APX. This message is intended only for the recipient. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. \* This message has been checked for all known viruses by the Cable & Wireless E-mail Virus Protection service, powered by MessageLabs for APX. \*



#### Confidential

When did APX start providing services to ANP/IPA? For each month APX has provided services to ANP/IPA, describe each of the services provided to ANP/IPA, including the services provided to ANP/IPA QSEs and sub-QSEs. For each month for each entity, specify whether APX provided ERCOT the frequency bias of portfolio generation resources.

#### **RESPONSE TO DJ-2-4**

APX began providing its services to ANP/IPA in December 2001. At that time, the first two units of the Midlothian power plant (Units 1 and 2) were already in commercial operation for several months. The third unit of the Midlothian power plant (Unit 3), both units of Hays County power plant (Units 1 and 2), and Coleto Creek power plant were added later to the APX contract. The following individual contracts were signed to continue APX services:

#### Agreement between APX and ANP Funding I, LLC

Services for ANP under an APX QSE ID for the Hays and Midlothian plants

Start Date: 12/3/01

End Date: Approximately 4/01/02

Description of Services: APX provided ANP with Level 4 QSE services under an APX QSE ID. These services included scheduling, bid submission, WAN connection, 24/7 operations support, SCADA telemetry between plants and ERCOT, and settlement. APX interacted with ERCOT as the QSE for all scheduling, operations, credit and financial settlement.

#### 2. Agreement between APX and ANP Funding I, LLC

Services for ANP under an ANP QSE ID for the Hays and Midlothian plants (ANP QSE)

Sign Date: 12/3/01

Actual Service Start Date: Approximately 4/01/02

End Date: Still in effect today

Description of Services: APX provided ANP OSE with a scheduling and bidding application, WAN connection, SCADA telemetry between plants and ERCOT, and settlement technology for the viewing of ANP QSE ERCOT invoices and settlement data.

#### 3. Agreement between APX and ANP Marketing Company

Bridge letter of Authorization to serve Coleto Creek plant (IPA Marketing SQ1)

5201 Great America Darkway, Suite 522, Santa Clara, CA 95054 USA Phone 408.517.2100 Fax 408.517.2985 www.apx.com

Denry-16 Orional Exhibit
SEP 23 2000
SEP 23 2000
SEP 23 2000



Confidential

Sign Date: 6/30/06

Actual Service Start Date: 7/12/06

End Date: 1/23/07

Description of Services: APX provided IPA Marketing sub-QSE with a scheduling and bidding application, WAN connection, SCADA telemetry between plants and ERCOT, and settlement technology for the viewing of IPA Marketing sub-QSE ERCOT invoices and settlement data.

# Agreement between APX and IPA Marketing Inc.

Services for ANP under an ANP QSE ID for the Coleto Creek plant (IPA Marketing SQ!)

Sign Date: 1/23/07

Actual Service Start Date: 1/23/07 (continuation of service)

End Date: Still in effect today.

Description of Services: APX provided IPA Marketing sub-QSE with a scheduling and bidding application, WAN connection, SCADA telemetry between plants and ERCOT, and settlement technology for the viewing of IPA Marketing sub-QSE ERCOT invoices and settlement data.

Because APX could not get Frequency Bias from ANP/IPA plants, Frequency Bias equal to zero was submitted for both plants from the time APX began providing its services to ANP/IPA with regard to each unit until April 2006. Such submission was simply indicating to the ERCOT Operators that ANP/IPA plants could not provide Frequency Response.

Response Provided by Wendy Brown and Jian He Response Sponsored by Jian He