PP response sent as two separate emails

Message 1

On the matter of testing and calibration of the official billing meters, The National Transmission Corporation (TransCo) conducted tests on the billing meters randomly to assure that the quantities delivered were correct. Although the Philippine Grid Code stipulates at least once a year for meter testing and calibration (excerpts of the Code and OATS rules are hereto attached as Annex 1), TransCo performed actual testing more often. For the record, the meter installed now is the third unit after TransCo/ERC replaced the original meter twice already and had performed nine accuracy tests for the entire period since the plant was put to operation. Below is a summary of when the tests were conducted on which meter and the results of which are also attached as Annex 2.

1. Schlumberger Meter type Q1000 (S/N 19665417) original meter installed sometime March 2005:

a. May 05, 2005
b. June 09, 2005
c. August 11, 2005
d. November 09, 2005
e. December 08, 2005 (replaced with Nexus 1272, S/N 53-105693)

Note that the replaced Schlumberger meter Q1000 was re-calibrated and installed later by TransCo as back-up official meter unit.

2. EIG Meter type Nexus 1272 (S/N 53-105693)

a. January 11, 2006
b. January 19, 2006
c. March 23, 2006 (meter replaced with Nexus 1272, S/N 411-94876)

3. EIG Meter type Nexus 1272 (S/N 411-94876)

a. June 06, 2006
b. September 06, 2006
c. November 22, 2006

4. Schlumberger Meter type Q1000 (S/N 19665417) the back up official meter

a. November 22, 2006

On the issue of counter-checking of Northwind deliveries, a meter requested by INEC was installed by Northwind at the same TransCo Laoag substation during the construction phase of the project. The said meter was installed inside the control room of TransCo substation in Laoag. It had been and still is being used by TransCo taking hourly logs manually. Sample logsheets are hereto attached as Annex 1 for reference. The specifications of the meter are as follows:

Brand: - Electro Industries / Gauge Tech Westbury NY
Model: - DMMS300-3E-H-DNP-M10.0
Back Module :
Model - DSP3-75-115-NL2-M10.0
Max Voltage - 75V
L-N - 150V
L-L - 150V
Max Current - 10A
Frequency - 45 to 75 Hz

Input - 115VAC +/- 20%
Communication Converter:
Model - SS485 DB3 RS485

Please note that we could not retrieve any record with regards accuracy tests conducted on this check meter.

Aside from the official billing meters and the check meter mentioned above, the plant is provided with computer software metering system, which includes remote access from the manufacturer's home site and Northwind's head office in Manila. The computer software measures data obtained instantaneously and logs the average every ten minutes.

Message 2:
Basically, the Vestas SCADA system has the capability to measure instantaneously the individual generation of the 15 wind turbine units and logs 10-minute average data in the data bank. The system is also equipped with a totalizer that similarly measures instantaneously the total for the 15 units that likewise logs 10-minute average data. This totalizer is located at the 69kV side of the system at the plant substation, meaning it captures the total generation of the plant prior to the delivery to Laoag via the 57km 69kV transmission line.

The data at the totalizer is our main reference at the plant side, which is then used to compare with the quantities delivered at the Laoag substation. The difference in quantities is the transmission line loss, which based on our experience runs up to an average of 2%. The monitoring is performed by both our plant site personnel as well as in the head office in Manila.

Also, since about 2 months ago, Northwind participated in the wholesale electricity spot market (WESM) and as such we were provided data representing Northwind's hourly delivery to the system for dispatch to the customer on a daily basis. The data given us by the WESM administrator provided another way of counterchecking Northwind's generation and delivered electrical energy to the customer.

Northwind's procedure for counterchecking electrical energy deliveries per billing period using the Vestas SCADA system are as follows:

1. Establish initial meter reading or the reading at the start of the billing period every 2400H of the 25th day of the preceding month;
2. Determine the meter reading at the end of the billing period or 2400H of the current month;
3. The difference in the current and preceding month's meter readings represent the kwh generated by the plant for the billing period as measured at the high voltage (69kV) side of the plant substation;
4. The kwh generation multiplied by 98% (2% transmission line loss) shall more or less be equal to the quantity delivered by Northwind as measured in the official billing meters at the Laoag substation.
5. Substantial difference in readings of say 10% indicates something must be wrong with the meters.

Relating this to the two deviations detected as reported in the “Periodic Verification of the Project Activity”, item 5.3-Internal Verification, the January 2006 incident was not immediately detected because during that time the communication system at the plant site had not been fully restored when it was damaged together with the underground cabling system. Unlike in the June incident that we immediately knew it and therefore Northwind decided to report the corrections ahead of the corrections to be made by NPC. This is one proof that a deficiency could immediately be detected using the counter-checking meters in-place at the plant.