Laura S. Olton
General Counsel
Rhode Island

March 3, 2008

VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 3789 – Long Range Gas Supply Plan
Responses to Division Data Requests – Set 2

Dear Ms. Massaro:

Enclosed please find ten (10) copies of National Grid's responses to the Division's second set of data requests issued on January 30, 2008 in the above-captioned proceeding.

This filing contains responses to Division Data Requests 2-3, 2-8 through 2-10; 2-13 through 2-15. The remaining responses (Division 2-4, 2-11, 2-12, and 2-17 through 2-23) will be forthcoming.

Thank you for your attention to this filing. If you have any questions, please feel free to contact me at (401) 784-7667.

Very truly yours,

Laura S. Olton

Laura S. Olton

Enclosures

cc: Docket 3789 Service List

280 Melrose Street, Providence, RI 02907
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Division Data Request 2-3

Request:

For each year included in the Company's long range plan, please provide the Company's forecasted demand for each area within its system which "has no LNG production and the pipeline has a delivery constraint". For each other area for which planning is performed, for each year, reconcile the forecasted demands for the identified areas within the Company's Rhode Island system with its forecasted total system supply requirements for:

a. Design Peak Hour demands;
b. Design Peak Day Demand;
c. Cold Snap Requirements;
d. Design Winter Requirements;
e. Annual Normal Weather Supply Requirements

Response:

The forecasted demand for these areas in the system is contained in the Company's forecast for the entire system. However, the Company monitors historical peak hour demand for each of theses areas and explicitly models all significant new customer additions, incorporating any significant new loads in each area as they are approved by system planning and engineering. For certain engineering studies a 1% per year growth factor may be added to account for general growth on an annual basis. The addition of large new customers in smaller areas such as these can lead to extraordinary growth in those areas. Because growth rates can vary on specific parts of the system, they are evaluated on a case by case basis to capture any variation from the Company's overall growth rates.

a. Hourly Demand – Design condition - DT per hour

Portsmouth	1,081
Tiverton	44
Warren	506
Westerly	268

b. Peak Day Demand – Design condition – DT per day

Portsmouth	20,100
Tiverton	998
Warren	10,120
Westerly	5,340

c., d. and e. – Not Available

Prepared by or under the supervision of: Gary Beland

Division Data Request 2-8

Request:

Please provide analyses that demonstrate the dollar impacts of using a 1 in 50 year criteria (as opposed to a 1 in 100 year criteria) for planning the Company's gas supply for design day and design winter on its forecasted overall gas supply costs for each forecast year addressed in the Company's long range gas supply plan.

Response:

There are no studies available that demonstrate the dollar impact of altering the design day or design winter criteria. Moreover, because the cold snap is the design condition which is causing the need for additional supply capability, the use of a lesser standard for peak day or design winter would not result in savings without a significant restructuring of the portfolio. The cold snap has become the focus of supply planning because the Company lost access to the peaking supply from Pawtucket Power (25 days at 12,600 DT/day) and because the propane facility (6,000 DT/day, 85,000 DT of storage) in Cumberland, RI was taken out of service as a result of its age and location. Those two supply sources played a significant role in meeting cold snap conditions.

Prepared by or under the supervision of: Gary Beland

Division Data Request 2-9

Request:

Please provide data upon which the Company relies from "research" that documents a significant correlation between temperatures in the U.S. and sea surface temperature changes.

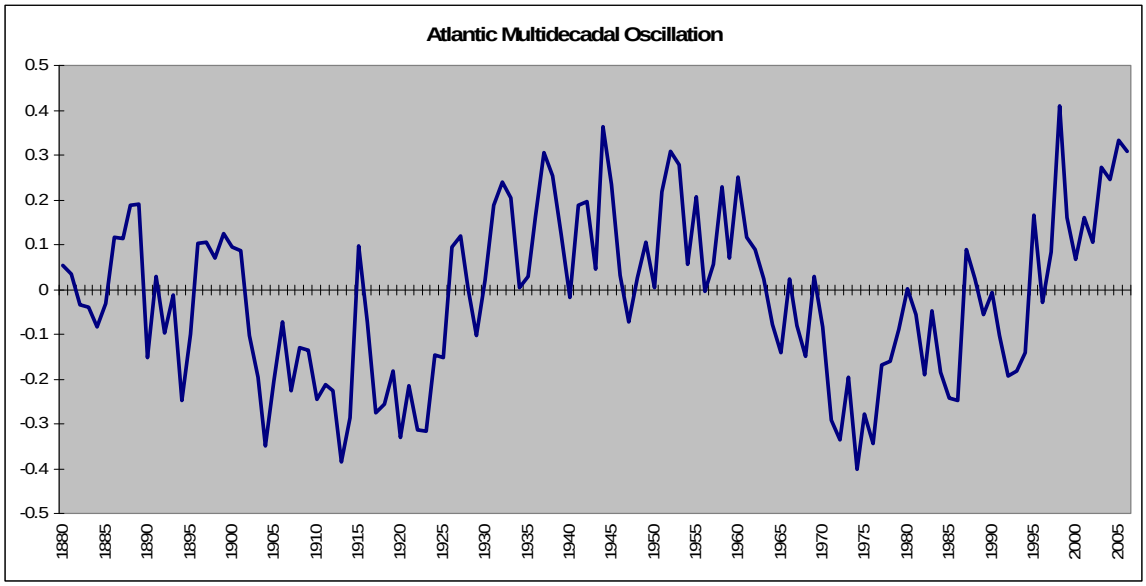
Response:

Attached is a report from Dr. Todd Crawford of Weather Services Inc. explaining the correlation between sea surface temperatures and temperatures experienced in Rhode Island. Dr Crawford is a Weather Services expert on climate.

The relationship between sea surface temperatures and observed weather has been heavily researched and documented in explaining El Nino-Southern Oscillation phenomena.

Influence of Atlantic Ocean Cycles on US Temperatures
Todd Crawford
WSI Corporation

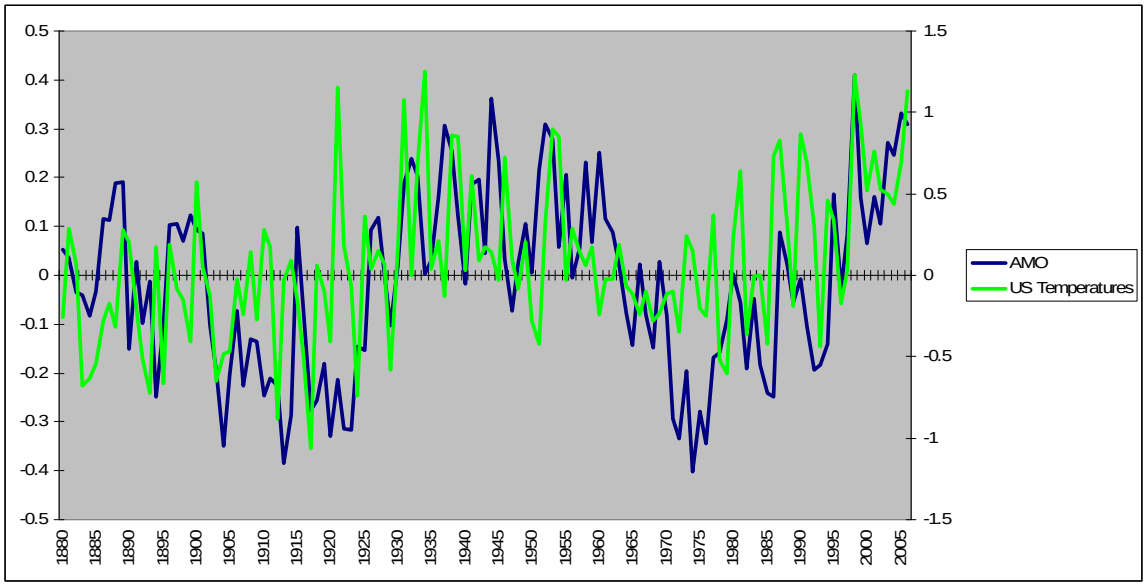
During the past 150 years, the Atlantic Ocean has undergone a cyclical variation in temperatures. One measure of the temperature of the Atlantic Ocean is an index called the Atlantic Multidecadal Oscillation (AMO). The AMO is defined as the area-averaged Atlantic Ocean temperature from the equator to 70 degrees north latitude. A yearly time series of the AMO is shown below.



Yearly-averaged values of the AMO, using data from
http://www.cdc.noaa.gov/Correlation/amon.us.long.data

More information on the AMO can be found at http://www.cdc.noaa.gov/Timeseries/AMO/, along with a citation describing the index in further detail.

Due to the size of the Atlantic Ocean, the AMO has a profound impact on global weather patterns and temperatures. The plot below compares average US annual temperatures and the annually-averaged AMO, and reveals a rather striking relationship in the long-term trends.



Yearly-averaged values of AMO, using data from http://www.cdc.noaa.gov/Correlation/amon.us.long.data, and yearly-average US temperature data from http://data.giss.nasa.gov/gistemp/graphs/Fig.D.txt

CONCLUSION

There is ongoing debate about the cause of the warming of US temperatures during the last 30 years. Much of the debate is centered upon the impact of increased levels of carbon dioxide in the atmosphere. However, carbon dioxide levels were much lower in the 1930s than they are now, and US temperatures were at least as warm then as they are now. Further, it is likely no coincidence that maxima in Atlantic Ocean temperatures have coincided with the US temperature maxima in both the 1930s and the 2000s. **While it may be the case that increased carbon dioxide levels are contributing to a baseline warming trend, the data presented here suggests that oceanic cycles play a more significant role in decadal temperature trends then carbon dioxide increases.**

Even if we assume that the Atlantic Ocean will begin to cool off at some point, it is difficult to predict when that will occur. Certainly, at least over shorter time horizons, we should experience a continuation of the relatively warm temperatures we've experienced recently. Whether a return to cooler temperatures begins in 5, 10, or 30 years is beyond the current state of the science to address.

Division Data Request 2-10

Request:

Please provide the data and analyses upon which the Company relies to assess the correlation between temperatures in Rhode Island and sea surface temperature changes.

Response:

As described in the Long Range Plan on page 13, the Company relied on its weather forecast provider, Weather Services, Inc. The information provided by the professional weather forecast service is also consistent with other information sources and the relationship between sea surface temperatures and local climate.

Prepared by or under the supervision of: Gary Beland

Division Data Request 2-13

Request:

Please provide the data upon which the Company relies to assess expected wind speeds on a design day, as well as any changes in those wind speed expectations in recent years.

Response:

There is no way to assess expected wind speeds on a design day. Design days are rare events, by definition. The point of the discussion regarding wind speeds on pages 13-14 of the Long Range Plan was that the Company has not traditionally incorporated any allowance for wind in design conditions, in part because it is difficult to do so.

Prepared by or under the supervision of: Gary Beland

Division Data Request 2-14

Request:

Please document the referenced "more recent outbreaks of severe cold weather" that have "included very high winds." For each referenced outbreak, please provide:

a. The dates affected
b. The wind speeds experienced on each day of the affected period
c. The degree days reported for each affected day
d. The system sendout required on each affected day

Response:

a., b, c. and d. Below are recent cold spells in 2007, 2005, and 2004 that included winds that were above average. Winds speeds and degree days are the average of the observations made by the US Weather Service at T.F. Green Airport at three hour intervals. The observations used to calculate the average are the 10:00 am., 1:00 pm., 4:00 pm., 7:00 pm., and 10:00 pm.; and 1:00 am., 4:00 am., 7:00 am. of the following day in order to approximate the gas day which runs from 10:00 am. to 10:00 am. Note that in some instances the winds were significantly above average for only a portion of the day. Sendout is the total system sendout for the day including exempt loads.

Date	HDD	Wind Speed - MPH	Sendout – MMBtu
2007			
March 6	54	15.3	305,920
March 7	48	7.8	260,313
March 8	49	14.4	278,848
February 4	47	12.6	255,399
February 5	50	14.0	289,743
February 6	47	10.4	264,007
February 7	46	11.3	264,835
February 15	47	18.8	277,801
January 25	48	11.9	255,069
January 26	54	12.6	300,304

Prepared by or under the supervision of: Gary Beland

Division Data Request 2-14 (continued)

Date	HDD	Wind Speed - MPH	Sendout – MMBtu
2005			
January 17	48	13.5	266,097
January 18	57	11.1	315,036
January 20	47	11.4	251,559
January 21	59	10.3	313,315
January 22	47	17.9	270,303
January 23	56	19.4	306,445
January 24	47	11.1	265,717
January 26	47	18.0	263,042
January 27	56	11.3	296,394
January 28	52	6.9	277,710
2004			
December 20	54	12.8	294,464
December 27	48	12.1	257,435
January 8	50	11.4	274,196
January 9	60	12.8	323,727
January 10	58	11.5	317,632
January 13	46	17.6	264,081
January 14	59	9.9	319,420
January 15	64	15.4	351,459
January 16	53	14.1	329,396
January 19	46	12.9	263,440
January 20	46	13.8	271,731
January 23	51	11.4	291,351
January 24	56	12.3	308,794
January 25	53	9.3	303,811
January 26	48	10.3	280,730
January 29	46	16.4	269,295
January 30	46	14.4	258,955

Division Data Request 2-15

Request:

Please provide the data, analyses, and studies upon which the Company relies to support a "historical normal wind speed of approximately 9 mph."

Response:

January winds averaged 9.2 MPH for the period from 2001 to 2007 based on National Weather Service data that the Company has collected.

Certificate of Service

I hereby certify that a copy of the cover letter and / or any materials accompanying this certificate has been electronically transmitted, hand-delivered and mailed to the individuals listed below.

_____ March 3, 2008

Joanne M. Scanlon Date

Docket 3789 – National Grid – Long-Range Energy Plans
Service List as of 11/27/06

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