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July 2, 2008

**Via US Mail and Email [NAESB@NAESB.org](mailto:NAESB@NAESB.org)**

Ms. Rae McQuade  
Director  
North American Energy Standards Board  
1301 Fannin, Suite 2350  
Houston, TX 77002

Re: Comments to AP 2007 Item 7C/AP 2008 Item 4C:  
FERC Order 698 Directive: Intraday Nomination Timeline  
Proposals

Dear Ms. McQuade,

In addition to being a signatory to the “Joint Comments: Ensuring Value of Firm Capacity Contracts in a Changing Industry” also filed today, Arizona Public Service Company respectfully requests that its attached Supplemental Comments, in the form of an Affidavit of John S. Taggart, be included in the record in response to the June 3, 2008 Recommendation of the Business Practices Subcommittee.

Please post this to NAESB WGQ committee webpage.

Sincerely,

*/s/Kelly A. Daly*

Kelly A. Daly  
Attorney for Arizona Public Service Company

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**AP 2007 ITEM 7C/AP 2008 ITEM 4C  
FERC ORDER 698 DIRECTIVES**

**Affidavit of John S. Taggart  
Commodity Consultant  
Arizona Public Service**


John S. Taggart, being first duly sworn, deposes and says,

1. My name is John Taggart and for the last five (5) years I have served as a Commodity Consultant on the gas desk in the Fuels Department of Arizona Public Service Company ("APS"). In that capacity, I am responsible for the day to day operations relating to the transportation and scheduling of gas and the communication interface with the pipeline. I have been employed by APS since 1986 when I was originally hired as a nuclear startup engineer. I have also held the positions of nuclear licensing engineer and nuclear system engineer.
2. Prior to joining APS I worked for the Bettis Atomic Power Laboratory as a Nuclear Plant Engineer and Shift Supervisor at the Naval Reactors Facility, Subsequent to that I was also employed by the Department of Energy as a Nuclear Safety Engineer and by Combustion Engineering as a Principal Engineer working on the startup of the Palo Verde Nuclear Generating Station. I hold a Bachelors Degree in Nuclear Engineering from the University of Arizona.
3. The purpose of my affidavit is to explain why the NAESB gas nomination timeline needs to be modified in order to facilitate the late day operational and reliability needs of electric utilities in the southwest and to provide holders of firm service contracts (including premium service-hourly contracts) adequate access to such capacity to insure its operational value.
4. APS is an electric utility that purchases and schedules gas for approximately 3700 MW of generation needed to serve its residential, commercial and industrial load in Maricopa County, Arizona. APS is required to provide reliable electric service to its customers. To provide reliable electric service, APS holds both firm daily (FT-1) capacity contracts as well as firm, premium hourly service (FTH-8) capacity contracts on the El Paso Natural Gas pipeline system.
5. APS uses a combination of nuclear, coal and natural gas fired generation to satisfy its electric demand. As an electric utility in the desert southwest, it is not uncommon to experience a 25-degree temperature change throughout the day with frequent highs in excess of one hundred ten degrees Fahrenheit. APS relies on natural gas to satisfy its peak electric generation demands. APS' peak demands for natural gas fluctuate on a daily and even hourly basis depending various factors. In order to provide a reasonable estimate of the projected electric demand, APS conducts a detailed analysis that incorporates the best available information for the next day's anticipated usage. This

analysis incorporates several factors including: 1) the projected hourly temperature profile; 2) the historical electric load profile for the day of the week; 3) the expected cloud coverage; 4) the projected humidity level; 5) the projected precipitation level; 6) the wind conditions; and 7) any generation unit and/or transmission outages scheduled for the day. During the actual energy day, these factors are subsequently monitored, recorded and updated on a regular basis, which in most instances occurs in hourly intervals.

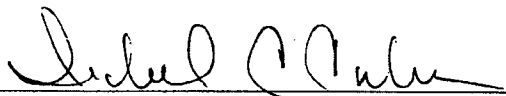
6. APS' peak electric period usually occurs in the third quarter of the calendar year. During the third quarter of 2007, APS burned almost 30,000,000 Dekatherms (Dth) of natural gas. The day to day variations in burn averaged 35,000 Dth/d. The maximum day to day variation was in excess of 150,000 Dth.
7. I would like to explain a couple examples of the problems APS faces with the current NAESB nomination timeline. On November 24, 2007 at 6:28 pm MST (*i.e.*, 1828 hours) (after the Intraday 2 Nomination cycle), the Control Area operator contacted the APS real time power desk to inform them that APS's two combined cycle generating units would be designated as "must run" units during the off peak hours. This "must run" designation required an increase in APS' daily gas burn in excess of 25,000 Dths. Because APS' real time desk was informed of this "must run" requirement after Intraday 2, there was no guaranteed cycle or even an effective opportunity for APS to nominate and schedule the additional gas into the pipeline system. This problem, created by the lack of a late day NAESB nomination cycle to respond to a Control Area directive, is further exacerbated by two issues: 1) the objective of certain pipelines to now strictly impose flow control measures on electric utility generators that are out of balance; and 2) penalties tied to commodity prices that have now reached historical high levels.
8. Another problem occurred on July 19<sup>th</sup> and 20<sup>th</sup>, 2007. On July 19, 2007 APS' performed its daily analysis and accordingly purchased and scheduled approximately 360,000 Dth of gas for delivery on July 20, 2007. On the evening of the 19<sup>th</sup> an unexpected monsoon thunderstorm occurred that brought rain to the Phoenix area at approximately 11:00 pm (*i.e.*, 2300 hours). Since this time of night is typically a low electric use period, the monsoon only reduced the gas use for the remainder of the July 19<sup>th</sup> Gas Day (*i.e.*, the last nine hours of the Gas Day ending at 7:00 a.m. MST on the morning of the 20<sup>th</sup>) by approximately 30,000 Dth. However this resulted in APS incurring a daily imbalance of 30,000 Dth.
9. On the Gas Day of July 20<sup>th</sup>, although the early morning had a lower temperature than anticipated, prior to the Intraday 1-Cycle 3 nomination deadline (of 8:00 a.m. MST in Phoenix) it was too early to determine whether the previous night's rain would have a major impact on the anticipated peak late afternoon temperature profile. As a result, APS only reduced it's previously scheduled 360,000 Dth/d nomination to 310,000 Dth/d. Unfortunately, by mid to late afternoon, it became apparent that the cloud coverage was not going to clear as forecasted resulting in lower temperatures and a daily gas day burn of only 243,000 Dth/d. As a result, APS incurred an additional imbalance of 67,000 Dth.

10. Monsoon thunderstorms occur frequently in the Southwest and this is just one example of the effect these storms have on projected gas burn. It is important to emphasize that as little as a one degree difference in the projected high temperature can result in a gas burn variation of 10,000 Dth in a day. In August of 2007, APS experienced major temperature fluctuations from it daily high temperature of 114 degrees F to 90 degrees F. More recently, APS experienced a high temperature on May 19<sup>th</sup> of 110 degree F with a forty degree swing to a high temperature just three days later on May 23<sup>rd</sup> of 72 degrees F. This dramatic and unpredictable weather swing caused a variation in the APS gas burn from 343,000 Dth on the 19<sup>th</sup> to a low of only 45,000 Dth three days later.
11. APS takes its responsibility to balance it nominations and its actual burns (*i.e.*, to minimize its imbalances) very seriously. While the current NAESB timeline has one afternoon nomination opportunity (Cycle 4), this cycle cannot be relied upon because it is a "no bump" cycle. Similarly, efforts by an individual pipeline to offer additional scheduling cycles later in the Gas Day have minimal, if any, value for two reasons. First, they too are no bump cycles, which means that firm capacity holders have no guarantee that there will be sufficient capacity during peak periods. And second, unfortunately, without a standardized, late day, NAESB nomination cycle, there is no effective opportunity or common time for buyers, sellers and the interconnecting pipelines/storage operators to all be available to make trades after the existing NAESB cycles. To make an additional cycle useful it must be supported by all pipeline and storage operators.
12. The addition of late day nomination cycles will allow electric utility generators to better match their actual burns during the weekdays to their nominated volume. Improvements in this area make more efficient use of pipeline capacity and increase the reliability of the electric system.

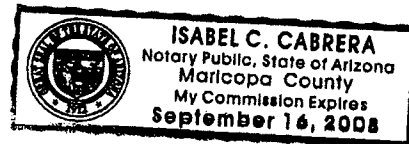
  
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John S. Taggart

SWORN TO AND SUBSCRIBED before me this 2nd day of July, 2008

  
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Notary Public



My Commission Expires: Sept 16, 2008