Exhibit No.:	
Issues:	Calculation of Weather Normals
Witness:	Curt Wells
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Surrebuttal Testimony
Case No.:	GR-2006-0422
Date Testimony Prepared:	December 11, 2006

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

SURREBUTTAL TESTIMONY

OF

CURT WELLS

MISSOURI GAS ENERGY

CASE NO. GR-2006-0422

Jefferson City, Missouri
December 2006

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area	))))	Case No. GR-2006-0422

AFFIDAVIT OF CURT WELLS

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Curt Wells, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 5 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Curt Wells

Subscribed and sworn to before me this 8th day of December, 2006.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086

Susan L. Sundermeyer
Notary Public

My commission expires 9-21-10

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Q. Please state your name and business address.

A. My name is Curt Wells and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri, 65102.

Q. Are you the same Curt Wells who has submitted direct and rebuttal testimony in this case?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony?

A. I will address the written rebuttal testimony of Missouri Gas Energy (MGE or Company) witness Russell A. Feingold.

EXECUTIVE SUMMARY

Q. What issues in Mr. Feingold's Rebuttal Testimony will you address?

A. I will address Mr. Feingold's concerns regarding 1) the relevance of a 30-year history in calculating a company's weather normal; 2) the foundation of Commission policy regarding the use of NOAA's official normals for the time period 1971 through 2000 in this case; 3) the relevance of Staff analyses; and 4) the appropriate use of weather normals.

STAFF RECOMMENDATIONS

Q. What are the Staff's recommendations for calculating normal weather?

A. The Staff continues to recommend the use of the National Oceanic and Atmospheric Administration (NOAA) normals based on the most recent three-decade time period in rate cases before the Commission. This period is currently the years 1971 through 2000.

Q. Why does the Staff continue to recommend this standard?

A. Staff recommends this standard not simply because it is "officially generated," as Mr. Feingold implies (Feingold Rebuttal, page 10, line 13). As stated in my Rebuttal Testimony, the normals calculated using three-decades of history possess the required stability with sufficient updating to account for climate changes.

Q. How do you reply to Mr. Feingold's statement that "NOAA attaches no significance to this average other than it is an historic average." (Feingold Rebuttal, page 10, lines 18-19)?

A. Mr. Feingold is implying that this average has no importance. Its importance is exactly *as* an historic average – the very purpose to which the normals are being applied.

Q. Do you agree with Mr. Feingold that "use of the 30-year average by the Commission is effectively a policy without foundation" (Feingold rebuttal, page 12, lines 3-4)?

A. No, I do not. This policy's foundations were first laid in Case No. GR-92-165 by Staff witness Missouri State Climatologist Dr. Wayne Decker. Dr. Decker recommended that the Commission use the NOAA 30-year normals. This position was reaffirmed by State Climatologist Dr Steve Qi Hu in 1996 in Case No. GR-99-315. As stated in my Rebuttal Testimony, the policy was formalized in 1996 in the Commission's Report and Order in Case No. GR-96-285.

Importantly, this policy provides a uniform standard baseline for all regulated gas, electric, and water utilities in Missouri. Any weather normalization change would not be unique to MGE nor just to gas utilities. Moving away from this standard by allowing unique baseline normals for each utility would have far-reaching repercussions.

Q. What might be some impacts?

A. While the Commission is free to consider each case on its own merits, departure from this long-standing policy should occur only after careful consideration of the impact on other utilities, both gas and electric. A policy setting a shorter normals period jurisdictionally could be detrimental to other utilities, depending on their type (gas or electric), location, and load structure. Alternatively, given the freedom to choose a normals period, gas and electric companies could tend toward longer or shorter periods depending upon their load structure and desired outcome. As a consequence, should each utility be permitted to select for its normal weather period any time period it chooses, based on whatever justification it can muster, the result could be significantly different weather normalization adjustments for a gas and electric company serving the same territory based on the same weather station. In essence, weather would somehow be "different" for a gas company than for an electric company in the same area. Any measurement baseline would be lost.

Q. Mr. Feingold questions the relevance of these climatologist's "analyses". Please respond.

A. Mr. Feingold questions Dr Qi Hu's testimony in Case No. GR-99-315, attached to my rebuttal testimony as Schedule CW-3. The implication is that Dr. Hu performed no "analysis" in this area. In his testimony, Dr. Hu describes his responsibilities as including research into developing and improving our understanding of the regional climate

variations. His research in regional climate variations used various methods in analyzing climatic data and understanding regional climate variations.

Mr. Feingold then questions Dr. Decker's testimony because he recommends the NOAA 30-year normals period rather than a longer period. Contrary to Mr. Feingold's opinion that Dr. Decker's rationale is also supportive of a 10-year normal (Feingold Rebuttal, page 12, lines 19-20), the 10-year period fails at least two of Dr. Decker's criteria: 1) it is not in line with techniques used by the National Weather Service and other States; and 2) it is not long enough to produce statistics that are stable without major variations from decade to decade.

Q. Mr. Feingold states that you apparently disagree that the "choice of a weather normal should best reflect the weather expected to occur when its rates in this case go into effect." Please respond.

A. I disagree that a method exists that can predict weather accurately years into the future. A chart of Mr. Feingold's 10-year moving average depicted in Schedule CW-4 of my Rebuttal Testimony shows the extreme difference in normals depending on the 10-year period selected. Further, using Mr. Feingold's figures from his direct testimony's Schedule RAF-2, I compared Heating Degree Day (HDD) differences between actual weather for the 1971-2000 period with the NOAA 30-year and Mr Feingold's rolling 10-year normals for Kansas City and Springfield (Schedule CW-1 and CW-2, respectively). The schedules show that for Kansas City, the 30-year normal is closer to actual in 17 of the 30 years, with the 10-year closer in 13. Interestingly, for Springfield, the reverse is true. I then compared each of the normals each year to the next year's actuals (Schedules CW-3 and CW-4). The 30-year normal was closer in a slight majority of the years for Kansas City and for half of the years for

Springfield. This demonstrates the shortcomings of using normals as predictors of the weather for the next year.

Rather than attempting to predict the weather, the normals should reflect temperatures that would occur in an average year. The period of the average should contain enough years to provide stability and not be unduly influenced by a few extreme years. I admire Mr. Feingold's confidence that "the odds of returning back to the colder climate conditions represented by the current NOAA 30-year average are very low (Feingold Rebuttal, page 17, lines 2-3) but he provides no basis for his statement. Schedule CW-5 in my Rebuttal Testimony shows the year-to-year fluctuations from normal that have occurred during the most recent NOAA 30-year normals period. I am equally confident that these fluctuations will continue to occur in the future – periods of warmer than normal years followed by periods of colder years.

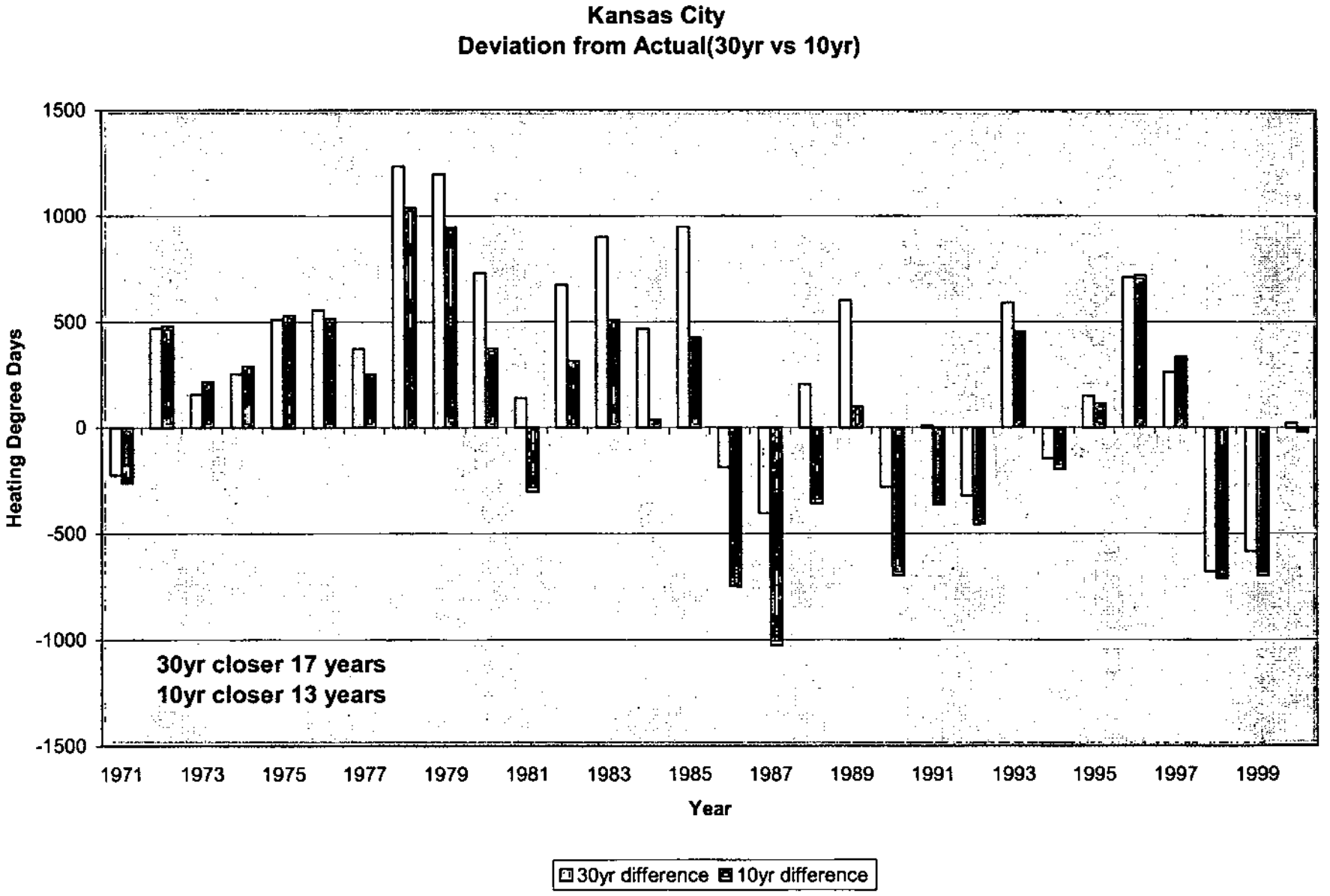
CONCLUSIONS

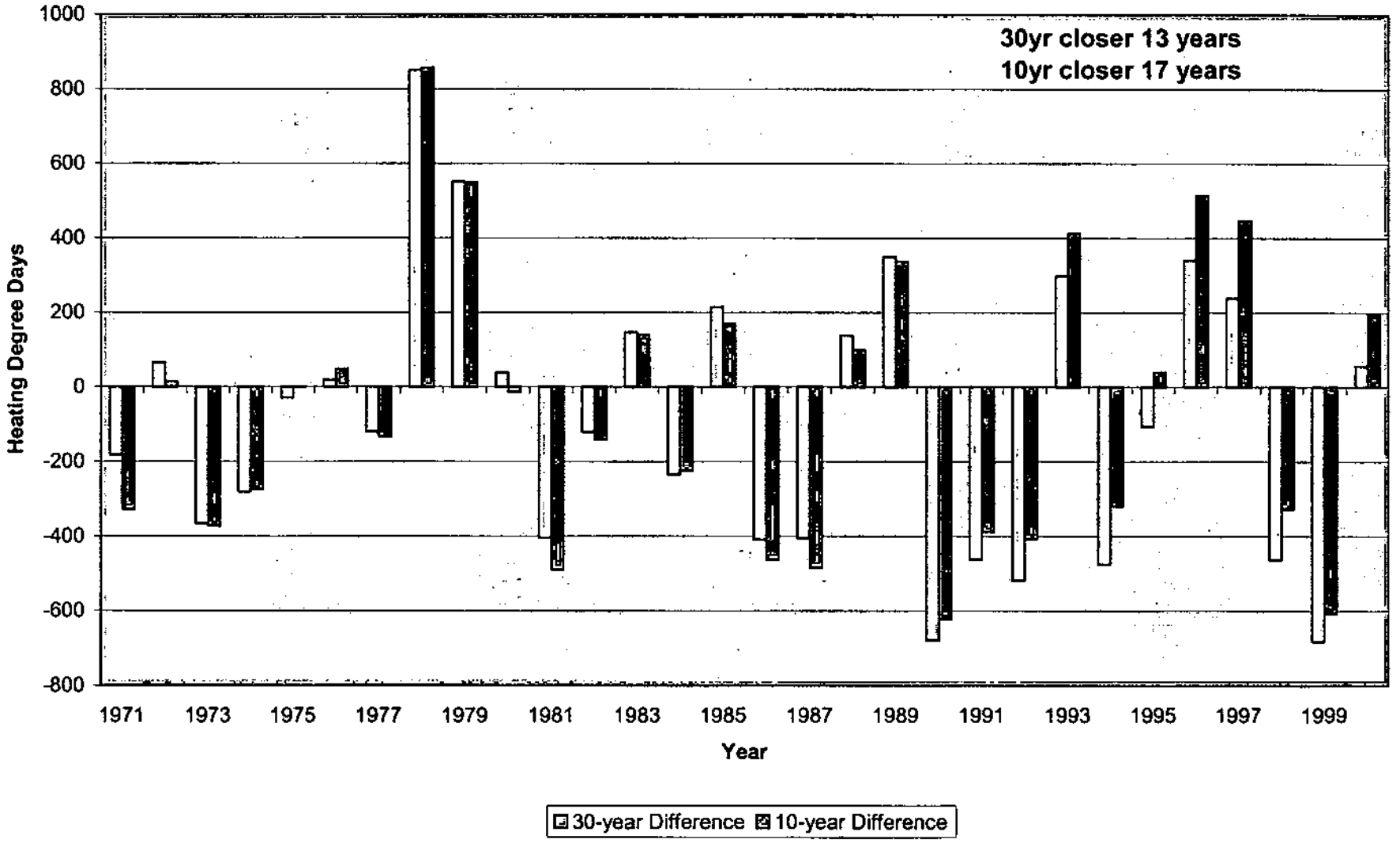
Q. Please summarize your Surrebuttal Testimony.

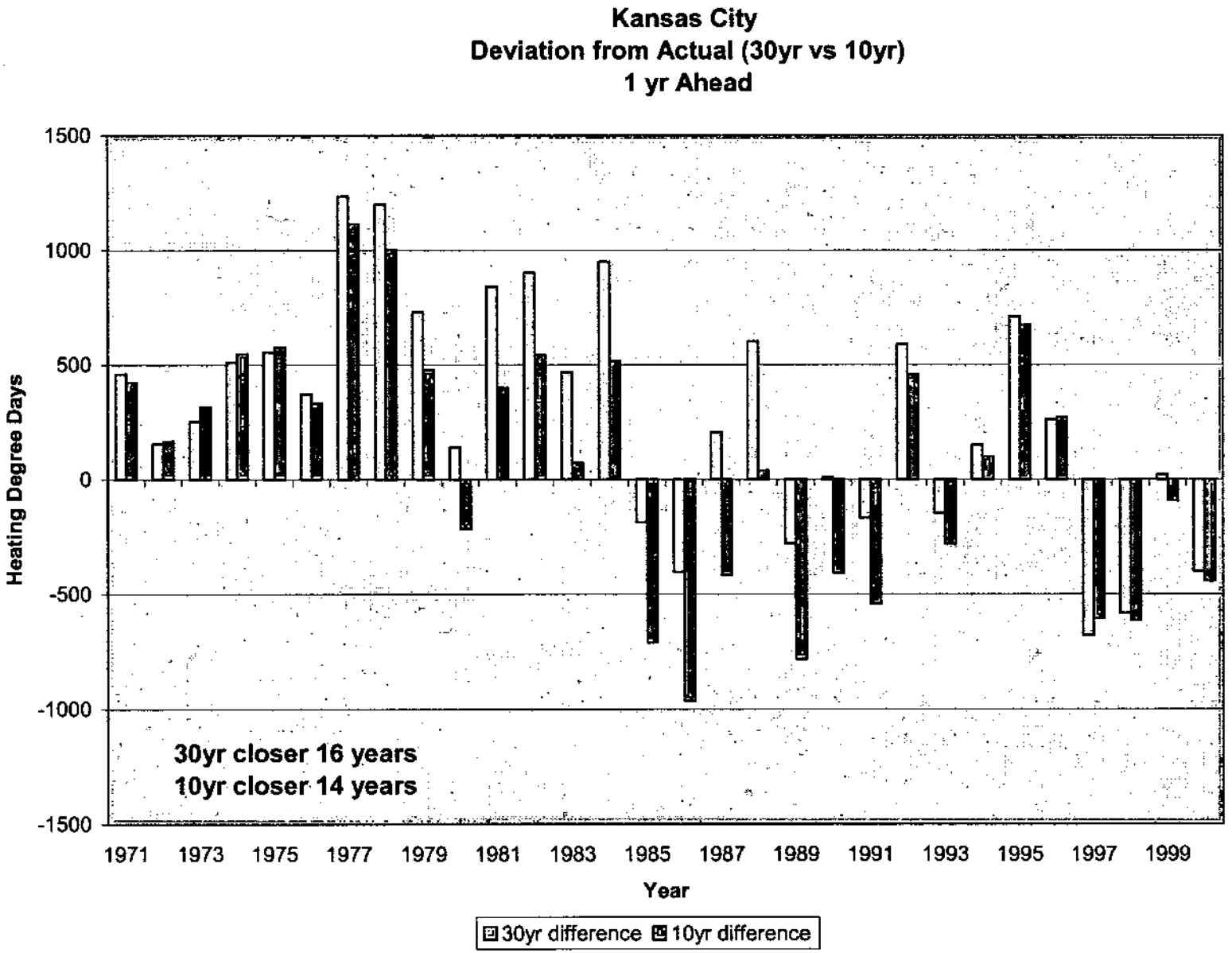
A. First, in response to the concerns voiced in Mr. Feingold's Rebuttal Testimony, I have attempted to demonstrate that the three-decade time period used by NOAA is the most appropriate climatology standard. It should not be abandoned arbitrarily. Second, the Commission's policy on the 30-year normal has a scientific foundation endorsed by several of our state Climatologists, and formalized by the Commission. Lastly, MGE's 10-year rolling normal lacks the stability necessary to provide the appropriate normal. For these reasons, the Staff continues to recommend that the current 1971-2000 edition of NOAA's Monthly Station Normals be used as the basis for weather normalization in the present MGE rate case.

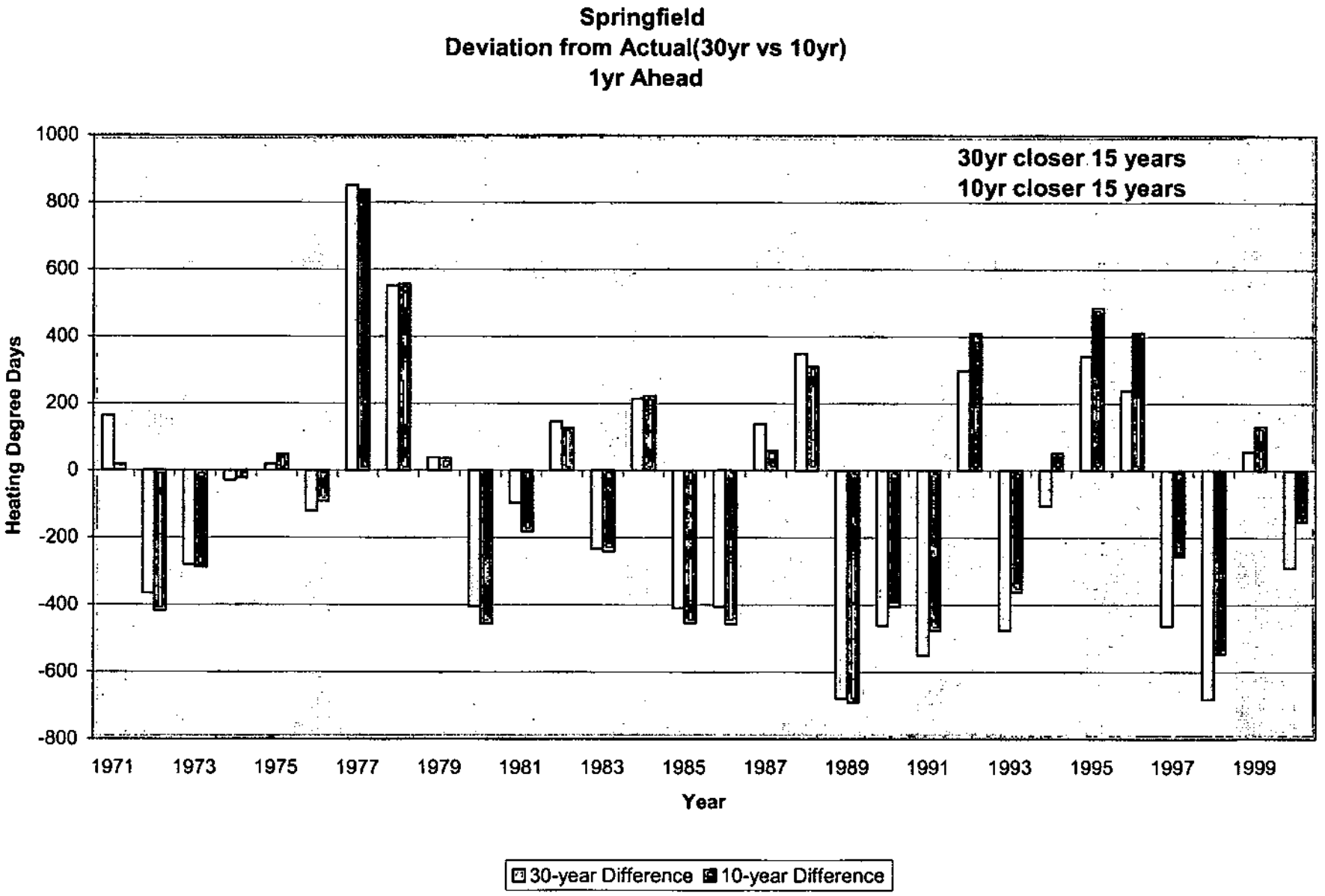
Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.


Kansas City
Deviation from Actual(30yr vs 10yr)
Heating Degree Days
1500
1000
500
0
-500
-1000
-1500
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
Year
30yr closer 17 years
10yr closer 13 years
30yr difference
10yr difference


Springfield
Deviation from Actual(30yr vs 10yr)
30yr closer 13 years
10yr closer 17 years
Heating Degree Days
1000
800
600
400
200
0
-200
-400
-600
-800
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
Year
30-year Difference
10-year Difference


Kansas City
Deviation from Actual (30yr vs 10yr)
1 yr Ahead
Heating Degree Days
1500
1000
500
0
-500
-1000
-1500
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
Year
30yr closer 16 years
10yr closer 14 years
30yr difference
10yr difference



Schedule CW-4